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Patient Satisfaction Relative to Rural Population Trends in AJK, Pakistan

Abdul Razzaq Khan | Assistant Professor, Department of Social Sciences, Shaheed Zulfikar Ali Bhutto Institute of Science and Technology, Islamabad, Pakistan.
Email: dr.razzaqszabist-isb.edu.pk *(Corresponding Author)*

Abstract: *The present study was conducted in rural areas of Azad Jammu and Kashmir (AJK). New Basic Health Units (BHU) was introduced for primary health care that was ruined completely in the Earthquake of 2005. The study focused on measuring the satisfaction of patients from these new BHUs in rural areas of AJK. Furthermore, the study compares patient satisfaction across different demographic factors. The satisfaction was measured by the standard scale Key Quality Characteristics for Assessment of Hospitals (KQCAH). Measured patient satisfaction was compared across gender and marital status using independent samples t-test and correlation. The study showed that female patients were less satisfied than male patients. Being housewives, they utilise nearby health services more than males. Patients of higher age were more satisfied than of lower age, while more educated people were less satisfied than educated ones. Single patients were less satisfied than married ones. Hence, there is needed to fulfil the needs of the population, considering their different demographic characteristics.*

Key Words: Basic Health Facilities, Patient Satisfaction, Demographic Characteristic, Commercialization of Healthcare

Introduction

Primary health care services are gaining significant importance in most countries in the world, and concern that patient satisfaction should be received at the appropriate level against the primary care services delivered. Moreover, monitoring customer perceptions is a simple tool to assess the success and competitiveness of a health care organisation and to improve its performance. Patient satisfaction in relation to a medical facility should assess through standard tools because improved patient satisfaction could help hospitals in cost reduction by resulting in fewer complaints (Al-Abri, 2014).

In the present era, health care providers are under high pressure to integrate the scrutiny of users at the stage of planning and evaluating services. With the rapidly increasing demand for primary health care, there is a need for a high rate of evaluation of patients' reactions to improve their performance. Literature showed that patients' dissatisfaction with health care providers helps managers to improve the quality of hospitals. Because the gap between patients' expected services from hospitals and available services in the hospitals affects the performance of the hospitals (Ali, Aslam, & Rafi, 2011), however, patient satisfaction could not only be achieved by meeting their expectations from a physician but also the whole situation handled by a health care provider. Patient satisfaction varies from area to area, so surveys conducted in one area could not help to improve patient satisfaction in the other area because patient satisfaction is determined by their cultural background as well (Khan, 2009).

The health prospects of humanity depend on sustainable development of the health, natural and social environment (UN, 2001). United Nations (UN) reaffirmed its commitment to eradicate poverty and improve the health and welfare of developing and less developed countries by 2015. Health improvements in poor countries are now one of the main considerations of the Millennium Development

Goals (MDGs) (Zere et al., 2006). Primary health care services are now getting significant importance in many governments in the world, and they are concerned that patient satisfaction should be received at the appropriate level against the primary care services delivered (Rebba & Rizzi, 2007).

Patient satisfaction depends on certain demographic characteristics of patients (Cleary & McNeil, 1988; Hall & Dornan, 1990). The most common variables from a demographic perspective involved were age, sex, educational level, income, marital status and health status (Fontana & Vargas). Hence in the present study, patient satisfaction was measured across different demographic characteristics, i.e. age, education, gender and marital status. The idea of assessing satisfaction with respect to demographic background factors comes from Rahmqvist's (2001) study. He reveals that patient satisfaction is impacted by the background demographic factors of patients.

By incorporating the requirements of beneficiaries in the system and measuring whether or not their satisfaction is achieved continuously, one could decide the success of a particular system (Ismail & Gadar, 2008). The beneficiary assessment approach provides reliable qualitative, in-depth information on the socio-cultural conditions of a beneficiary population that is used by managers and policymakers responsible for improving people's lives (Salmen, 1999).

Beneficiaries played a vital role in determining the success or failure of service by sharing their perception of the services. Hence, to sustain in a competitive environment, delivering quality services to the customer has now become one of the key strategies of most organisations (Parasurman et al., 1985; Zeithaml et al., 1990; Reichheld & Sasser, 1990; Dawkins & Reichheld, 1990). Therefore, to compete with others in the market, the delivery of superior quality services is most important (Parasurman et al. 1985; Zeithaml et al. 1990). In this regard, for a health care organisation to be successful and competitive, monitoring customer perceptions is a simple tool to assess and improve their performance (Sultana et al., 2009). Bhuttacharya suggested that patient satisfaction in relation to a medical facility should assess through standard tools because improved patient satisfaction could help hospitals in cost reduction by resulting in fewer complaints (Press et al., 1991).

Patient satisfaction is basically a reaction of patients towards the actual service provided to them and their experiences (Pascoe, 1983). Patients with different demographic backgrounds could have different experiences. Hence, satisfaction depends on certain demographic characteristics of patients (Cleary & McNeil, 1988; Hall & Doran, 1990). In this regard, the most common variables from a demographic perspective involved are age, sex, educational level, income, marital status and health status (Fontana & Vargas). However, there had been a contradiction in the results regarding the relationship between these variables and the client's satisfaction. There is a slight tendency that shows that older people were more satisfied with health services and women value health services more, but those results were not common in all investigations (Mira & Aranaz, 2000). Hence, in the present study, patient satisfaction was measured across different demographic characteristics to have a more in-depth evaluation of patients' expectations according to their needs.

Health care providers are now under increasing pressure to incorporate the views of users at the stage of planning and evaluating services (Edwards, 2000). With the rapidly increasing demand for primary care, there is an increasing need to evaluate the reactions of patients to proposed services in practice (Mcdonald, 2000). It has shown that hospital managers used patient dissatisfaction to improve service quality (Al-Omar, 2000). Because the difference between patient expectations and the services received showed a gap to fill by hospital managers (Mckinley and Roberts, 2001; Jackson & Kroenke, 2001). It has been demonstrated that patients benefit from physicians who keep the focus on them (Kiyohara et al., 2001). However, patient satisfaction could not only be achieved by meeting the expectation of a physician but also by how the whole situation is handled by the health delivery team (Qidwai, Dhanani, & Khan, 2003). Patient satisfaction surveys done elsewhere could not help to improve patient satisfaction because patient satisfaction is determined by their cultural background (Mendoza, Piechulek, & Al-Sabir, 2001).

The objectives of the study are given as under:

I. To measure patient satisfaction from BHUs in rural areas
II. To compare patient satisfaction across different demographic factors and to check their relationships with age and education.

Conceptual Framework

A number of researchers like Carman, Ford, Bach, Fottler, and others used the five SERVQUAL dimensions to measure the patient's satisfaction with the services of health care units. The Scardinal also used the SERVQUAL instrument in his study to measure the patient's satisfaction with nursing care, but patients were not involved in the determination of validity. Afterwards, Coddington and Moore proposed five factors of quality for health care providers from a beneficiary's perspective. These were warmth/caring/concern, medical staff, technology equipment, specialisation and scope of services available, and outcome. Later, The Joint Commission on Accreditation of Healthcare Organization (JCAHO) identifies nine quality dimensions for hospitals, i.e. efficacy, appropriateness, efficiency, respect and caring, safety, continuity, effectiveness, timeliness and availability. Finally, the nine JCAHO dimensions were selected as the theoretical framework by Sower et al. to develop a new instrument for hospital service quality called KQCAH (Key quality characteristics assessment for hospitals) to measure specifically patient satisfaction. The scale was developed using input from 12 hospital administrators, over 100 hospital employees, and 23 recent patients and family members. The KQCAH scale was empirically tested on more than 600 recently discharged patients from three separate hospitals using factor analysis, regression, and estimation of Cronbach alpha. The questionnaire contains 75 items to measure hospital service quality developed using focus group data. Patients' responses were recorded using a 7-point Likert scale, and some demographic information was included in the questionnaire. The 75 items in the questionnaire were used to define eight dimensions or factors. Reliability as measured by Cronbach Alpha for the first six factors, i.e. respect & caring, effectiveness and continuity, appropriateness, information, efficiency, and effectiveness, were extremely good, i.e. ranged from 0.87-0.98, for the seventh and eighth scale Cronbachs Alpha was not applicable because they were single-item scales. Reliability and validity are critical for any measurement system. Currently, there was no other instrument that checked for reliability and validity. KQCAH instrument is applied to a number of different measures of validity and reliability and has been shown to be both reliable and valid (Sower et al., 2001). Because of the reliability and validity of the KQCAH instrument, the present study also used that scale to measure the service quality of Basic Health Units developed for primary health care in rural areas.

The most common variables from a demographic perspective involved are age, sex, educational level, marital and health status (Fontana & Vargas, 2010). If different health care units are compared, it is necessary to collect additional background demographic data along with the quality of care data (Rahmqvist, 2001). Hence, in the present study, patient satisfaction was measured across different demographic characteristics to have a more in-depth evaluation of patients' expectations according to their needs. The hypothesis was developed on the basis of previous literature findings.

H1. Beneficiary level of satisfaction is different across genders
H2. Beneficiary level of satisfaction is different across marital status
H3. There is an association between age and Beneficiary level of satisfaction
H4. There is an association between education and Beneficiary level of satisfaction.

Methodology

A questionnaire-based survey design was adopted to measure patients and to examine its difference or association with some demographic variables like gender, marital status, age, and education. A reference letter for data collection was issued by the Head of the Department and supervisor; further, it was stamped and recommended by the Health departments of the concerned districts. Finally, we started our data collection on the basis of that letter.

The population of the study comprises of BHUs completed after the earthquake of 2005 and handed over to the Health Department of Azad Jammu and

Kashmir till 2010. So far, 20 BHUs in Muzaffarabad and 19 in Bagh have been completed and handed over to the Health Department. Based on road access and logistical support in the area, a convenient sample of 32 BHUs (16 from each of the districts) was selected. In order to measure patient satisfaction, a total of 160 patients were selected from each district by filling 10 questionnaires from each BHU. However, data was collected from 8-12 patients from each BHU and finally, 150 questionnaires were filled from each district against a target of 160 each. This happened because the patient's arrival rate was too low due to the village population.

'Patient satisfaction was measured through a structured questionnaire to be administered by interviewers. It is based on the *Key Quality Characteristics Assessment for Hospitals* (KQCAH) scale developed by Sower et al. (2007) to measure patient satisfaction. For this purpose, a convenient sample of 300 patients (150 patients each from the district) was selected during the field visits. In this regard, questionnaires got filled from 8 to 12 patients from each BHU. Data were collected from patients after the researchers were introduced to them by BHU staff. Prior to this, researchers were introduced to staff through representatives of the local community. This was done to ensure the genuineness of the primary data collected. Software like SPSS and MS Excel was used to analyse the data. Independent samples t-test was performed to examine the difference in patient satisfaction across gender and marital status. A correlation test was used to see the association of age and education with satisfaction.

Findings

Reliability of Patient s Satisfaction

In the present study total of 29 items in the questionnaire were used to measure the satisfaction level of the patients in the study area. Table 4.1 shows the reliability statistics of Cronbach's alpha. All questions were tested together, and the Cronbach alpha of all 29 items was 0.918. The value was much higher than Nunnally's reliability criteria of 0.70. Hence the data collected for patient satisfaction is reliable.

Table 1. Reliability statistics

Cronbach's Alpha	No. of Items
.918	29

Source: Study Survey 2013

The data normality of patient satisfaction was checked by plotting a histogram with a normal curve, as shown in figure 1.

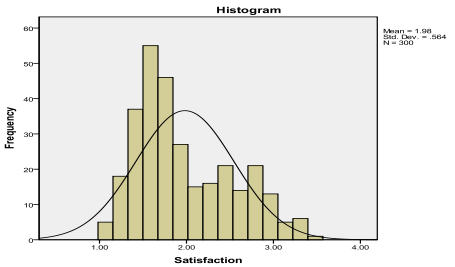

Figure 1: Data Normality of Patient Satisfaction
Source: Study Survey

The above figure shows that most of the data reside near the mean, hence data collected from the normal population.

Testing of Hypotheses

Patient Satisfaction

The sample size for this study was 300 patients. Out of which 64.3 per cent were male and 35.7 per cent were females. Age data showed different age groups were visiting BHUs. 63 per cent of respondents were under the age of 45 years, and the rest 37 per cent of respondents had an age of 45 years and/or above. The mean age was 4.57, the minimum age was 15 years, and the maximum age was 72 years. Out of the total 300 respondents, 70 per cent were married, and the rest 30 per cent were single. Education plays a very vital role in understanding the provision of facilities/services provided by BHUs. In the current data, only 28.3 per cent of respondents were illiterate or under primary level, but the rest of 71.7 per cent were educated and had schooling from 5 years to 16 years. Details are shown in table 1.

Table 2. Demographic Information of Respondents.

Demographic	Cluster Classification	Frequency (n)	Percentage %
Gender	Male	193	64.3
	Female	107	35.7
Marital status	Married	210	70
	Single	90	30
Education in Years	0 to 4	85	28.3
	5 to 8.	58	19.3
	9 to 12.	104	34.7
	13 to 16	53	17.7

Source: Study Survey

As the first objective of the study was to measure the overall satisfaction of patients from the services of Basic Health Units. Hence, descriptive statistics for the satisfaction of patients are shown in Table 3. According to table 3, the mean value of patient satisfaction is 1.98, which is too low than the maximum satisfaction level of 5. Hence, overall the patients were not satisfied with the services of the Basic Health Units.

Now, the second objective of the study was to examine the difference in patient satisfaction across different demographic factors and to check their relationships with age and education. Hence independent samples t-test was used to test relevant hypotheses.

Satisfaction is a complicated phenomenon that affects the efficiency of health units. Hence, depending on the literature, difference in patient satisfaction was checked across demographic factors. The t-test results in table 3 show how satisfaction varies across different demographic factors. The satisfaction level was tested across genders to better understand the priorities of male and female patients. The mean values show that females were less satisfied than males. Moreover, the p-value corresponding t-value shows that the difference is significant at 0.01, and hence hypothesis 1 patient level of satisfaction is different across gender is supported. The reason behind the lower satisfaction level of females was their higher expectations and greater health needs. As in Weisman's study, it was argued that the satisfaction of female patients depends upon three variables of health service quality, whereas the satisfaction of male patients depends on one variable only (Weisman, 2001). This shows that individuals are more dependent and have more expectations and hence low satisfaction.

Table 3. Showing t-test results for the difference in Patients Satisfaction across gender and marital status along with descriptive statistics of patient satisfaction from BHUs.

Category	Group	Number	Mean	Std. Dev	T-value	P-Value
Gender	Male	193	2.15	.612	8.014	0.000
	Female	107	1.66	.244		
Marital Status	Single	90	1.80	.438	-3.71	0.000
	Married	210	2.05	.594		
Descriptive Statistics		N	Minimum	Maximum	Mean	Std Deviation
	Satisfaction	300	1.07	3.48	1.9820	.56399
	Valid N (listwise)	300				

Source: Study Survey

Furthermore, the satisfaction level was tested across marital status to understand the priorities of married and single patients. The mean values show that married patients were more satisfied than singles. The t-test statistics show that the difference is significant at 0.01. Hence, the satisfaction of married

patients were significantly greater than that of singles. Patient s perceptions vary according to their education and age, to measure the relationship of satisfaction with age and years of schooling Pearson correlation test was applied as shown in Table 4.

Table 4. Showing Correlation of Patient Satisfaction with Age and Years of Schooling

		Age H3	Years of Schooling H4
Satisfaction	Pearson Correlation	.253**	-.258**
	Sig. (2-tailed)	.000	.000
	N	300	300

Source: Study Survey

The statistics of correlation show a significant positive relationship of age with satisfaction (r = 0.253, p = 0.000) and a significant negative relationship of years of schooling with satisfaction (r = -0.258, p = 0 .000). The Pearson correlation value of 0.253 implies a weak association of age with patient satisfaction. It means that an increase in age is accompanied by an increase in patient satisfaction and vice versa. Pearson correlation coefficient of -0.258 indicates the weak inverse relationship of years of schooling with satisfaction. It indicates that highly educated patients tend to be less satisfied than lesser educated people, and the results were significant at 0.01.

Discussion

Conclusion and Recommendations

The study reveals a significant difference in patient satisfaction across gender. Men and women have significantly different patient service needs (Blizzard, 2002). Weisman (2000) found that women's overall satisfaction with visits was more dependent than men on informational content, continuity of care, and multidisciplinary. Men's overall satisfaction was more dependent on the personal interest shown in them by providers. They conclude that quality improvement and research in women's primary care could benefit from a gender analysis of patient satisfaction data and gender-sensitive patient satisfaction measures (Weisman et al., 2000). Rahmqvist, 2001 developed a hypothesis to assess satisfaction across gender. His study found differences but not significant ones. The present study analysed the difference in satisfaction across gender based on existing literature. In the present study, women mostly belong to rural areas, and their problems were mostly dealt with by Lady Health Visitors(LHV). LHV has limited knowledge and cannot respond to complicated problems and deal with anger. This makes rural women less satisfied than men. This means that by focusing on the female's needs, the efficiency of BHUs could improve to some extent. The national nutritional survey also explained that women of AJK were facing serious health problems due to nutritional deficiencies.

The results of the study prove a significant difference in patient satisfaction across the marital status. (Sharma et al., 2012) and (Narenjiha et al. 2012) both assess satisfaction across marital status, although they found no significant difference.

In the present study, the difference in satisfaction shows that married were significantly more satisfied than singles. Patients' perceptions changed with their education and age. In the present study, various married respondents were of higher ages and had low years of schooling. Following hypothesis tests of the relationship between age and education will clear these phenomena.

The study process showed a significant positive relationship (r= .253) between age with patient satisfaction. The idea of assessing satisfaction with respect to demographic background factors comes from Rahmqvist's (2001) study. He revealed that patient satisfaction is impacted by the background demographic factors of patients. In Rhamqvist 2001, study satisfaction increases with increasing age. Similarly, Sharma et al. 2012 study show a direct relationship between age and satisfaction. Bleich et al. (2009) found in their study that individuals with higher ages were more likely to be satisfied with their health systems than individuals with lower ages (Bleich et al. 2009).

The study also reveals a significant negative association (r = -.258) of years of schooling with patient satisfaction. Generally, empirical evidence points to lower satisfaction among more qualified individuals (Albert & Davia, 2005). Bleich et al.2009, found out in their study that people with some college education were less likely to be satisfied with the health system than people without a high school diploma. With the increase in education, people become aware of good and bad facilities and are able to distinguish whether they are enjoying relevant facilities or not (Bleich et al. 2009). Moreover, they move over to developed areas to seek education and to work. Hence their vision is broad, and expectations are high. In comparison, old people are less qualified people who reside within the village and could not enjoy high facilities, so they could not distinguish.

Conclusion

Analysis of determinants of satisfaction from a demographic perspective showed that satisfaction is directly correlated with age but indirectly correlated with education. This was because most educated people were of lower ages, had more understanding and were able to differentiate services available and proposed by policymakers. Whereas, old aged people have limited knowledge to compare services available. Besides that, most of the singles have lower ages with higher education years, and hence according to the positive relationship between age and satisfaction and the negative relationship between education and satisfaction, most of the singles were less satisfied. Likewise, most married have higher ages and have comparatively lower years of schooling; hence, married were more satisfied according to relationships of satisfaction between age and education.

Recommendations

Depending on the findings and conclusions, the researcher recommends the following suggestions;

1. Before launching BHU projects, it is important to assess the local needs of the population.
2. The staff of BHUs should be trained according to the basic needs of all populations.
3. The BHUs should be facilitated with the required types of equipment and basic medication for basic emergency treatment.
4. The staff of BHUs should be trained to deal with available types of equipment, and their training should be updated regularly to satisfy the needs of local people.
5. The condition of BHUs and pieces of equipment and availability of staff should also monitor regularly to ensure continuity of basic health services.

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