

# Patient Satisfaction Through Social Health Insurance: A descriptive cross sectional study

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## Abstract

**Background:** Patient satisfaction is a term well followed across the globe yet not explored in Pakistan. With the advent of the public health insurance systems in place as the PMNHP, concepts like patient satisfaction could help further solve problems of our health system shortcomings and make health care delivery systems more efficient. Study was conducted on patients who had utilized PMNHP health insurance for inpatient care at different hospitals of Islamabad and adjoining Rawalpindi.

**Methodology:** A descriptive cross-sectional study of 134 discharged inpatients of various public and private hospitals of Islamabad and adjoining Rawalpindi selected by universal sampling technique from the secondary data of the PMNHP discharged patients from March 2017 to July 2017. PSQ-18 questionnaire was adopted to collect data from patients to assess their level of satisfaction.

**Result:** The result concealed that average patient satisfaction was recorded in the PMNHP health insurance inpatient users but overall higher satisfaction was found among patients. Patients' hospital preference was any hospital either public or private sector hospitals and was neither influenced by their patient satisfaction scores.

**Conclusion:** The results also reveal that satisfaction relating doctor's interpersonal manner, communication and time spent with doctors were low. To improve these indices, professional development of the doctors needs to be reinforced.

**Keywords:** Social Health Insurance; Private Hospitals; Public Hospitals; Patient Satisfaction; Patient Perception; Pakistan

## Introduction

In the evolving health care delivery system of Pakistan, and in prospects of initiatives such as the Prime Minister National Health Program, the need to

embrace and explore prospective more modern concepts into the health system is the need of the hour to achieve universal health for all. Concepts such as patient satisfaction are much neglected in our health system. 'Patient satisfaction' broadly defined as a measure of the extent to which a patient is content with the health care, they received from their health care provider. In order to evaluate health care quality, patient satisfaction is taken as a main performance indicator. More over according to research clinical effectiveness and patient safety was found to be positively associated with patient satisfaction (Doyle et al, 2016).

As World Health Organization suggests, responsiveness of a health care systems is to be measured in terms of the people's experience while utilizing health care services (WHO,2005). In Pakistan the public sector is gravely underutilized and there is no concept of quality improvement and quality service provision whereas the private health care delivery has shown to be more lucrative in this regard as indicated by some studies done locally(Nasser et al,2012). Patient satisfaction research findings at national and provincial level need to be incorporated into the health system so as to enhance patient satisfaction with health care system in Pakistan. Government financed health insurances as piloted in Pakistan exhibit a totally different health insurance model, one largely influenced by the 'The National Health Insurance Model', but its premium or pooling mechanism are yet to be clearly defined. The WHO as part of its SDG commitment has time and again emphasized on universal health coverage to its more impoverished members. In adaptation of which, almost all countries of our adjoining region, including Afghanistan, have started their state backed health insurance programs (WHO,2010).

A developing country like Pakistan has long been offering national health coverage for the poor under the social system from the 1970s and more recently the Waseela-e-Sehat of the Benazir Income Support program. According to an official figure through the poverty index survey 38.8 %(UNDP, 2016) of the country's populations earns less than \$2 a day. Based on data from the Benazir Income Support Programme , health insurance cards were to be

distributed amongst the beneficiaries through a separate national health insurance system for the poor under the banner of the PMNHP (The Dawn, 2016). Utilization is defined as the quantity of health care services used (WHO,2010) Utilization of private hospitals is creating gaps for the public sector health care service delivery, especially in context of revenue shift and profitability. Unlike the Bismarck Insurance model and the social Insurance model funded by employers and employees and administered by "sickness funds" or the Beveridge Model where tax is utilized for health insurance pool, Pakistan has opted for a more daring approach more like the National Health Insurance Model, but a government funded health insurance for the poor. Keeping in mind the successful implementation and functioning of government financed health insurance programmes the health system of Pakistan is but only beginning to mature. One or more of the health systems' objectives will not be achieved unless the concept of universal coverage is finally put into play (Doetinchem et al, 2010). According to Ministry of Health, KPK an estimated amount of up to 484 million Rupees could be generated by allowing hospitals to hold and utilize 75% of their earnings through insurance generated funds as revenue for the hospital. Social health protection according to Scheil-Adlung, et al. (2005) stands to remain the most important instrument that could not only reduce barriers in access to health services but also allow for a just burden sharing amongst the whole nation.

In the context of the government funded health insurance systems currently piloted in Pakistan, only inpatient care can be utilized. Here it is to be stressed that since the insurance coverage is only for inpatient treatment and the majority inpatient care caters to the tertiary care, whereas it is suspected to be found that Pakistan's tertiary care utilization is a mere 15% to the 85% utilization of primary care services. We would like to explore the trends here and emphasize on the primary health cover and decrease the cap on tertiary care treatments. It has been found that private sector contributes to 77% of the country's health expenditure (Taufiq et al, 2014). It is largely found to suggest that there is an 80% overall utilization of private healthcare facility to the 20% of public facilities in

Pakistan (Taufiq et al, 2014). According to BT Shaikh, over 70% of all health care is delivered by the private sector (Shaikh, 2015). Our aim here is to extrapolate the utilization of healthcare facility under the mentioned government funded health insurances and how their figure could influence public and private health service provision.

Present day hospital researchers base research activities around a conceptual framework where patient satisfaction is regarded as an indication of quality care (Nelson, 2012); One study indicates that solely focusing on doctor-patient interactions are an insufficient solution to the deteriorated patient-provider relationships unless a systems approach to accountability be established including all stakeholders the government, health insurances, medical education, health professionals and the general public (Health Program Database, 2009). Likewise in a Malaysian setting, it was found that increasing health insurance overages resulted in better health care access particularly inpatient services. National health insurances may therefore be able to cater to sustainable public health care (Thayaparan and Mahdi, 2013). For Pakistan, studies suggest lack of effort and will to address patients' views on the care provided rather not even exposing them the concept of patient satisfaction (Imam et al, 2007).

After thorough elaborate literature review going through different tools and scales of measuring patient perceptions and experiences, from the HCAHPS to NORPEQ to NHS IS, it was found that for a quantitative study could be best supported by HCAHPS with the highest validity and reliability (PREMS, 2015 ;LaVella and Gallan,2014). Healthcare policies through the providers and managers for services improvement are better identified by patient satisfaction surveys, which in turn enhance not only the patient experience but eventually improved health (Health Program Database, 2009). As cited earlier as well the more suitable concise and resource friendly questionnaire displaying good reliability and validity to be of consideration is the PSQ-18 (Thayaparan and Mahdi, 2013). A key role in determining 'Patient Satisfaction' was found to be through the PSQ-18.

The 18 item PSQ 18 maintains major characteristics of its full length form despite

being converted to a very compressed form (Marshall and Hays,1994) Moreover patient satisfaction in inpatient care is often associated to reflect the performance indicators of a hospital. Inpatient services and the association of patient satisfaction being influenced in the presence of better health insurance coverage (as in this case free public health insurance) has been shown to show more satisfaction (Shan et al, 2016). Through the study we were also able to judge the project utilization patterns showcasing way forward towards universal health care as of the SDG 3.8.

### Data and Methods:

We searched papers published in English from The study design is descriptive cross sectional . Study area was Islamabad, Pakistan, the capital of the country and the adjoining hospitals of Rawalpindi. Study was conducted over a period of four months that is data from June 2017 to October 2017. Secondary data from the PMNHP from March 2017 to June 2017 was considered for patient selection. Survey Questionnaires were filled mostly by telephonic contact (mobile) and in person contact. A pilot study was performed by taking the standard sample of 10% of sample size, to check the plausibility of the study. The 'PSQ-18' Patient Satisfaction Questionnaire (Short Form) is a valid and reliable tool and well received by patients (Thayaparan and Mahdi, 2013). It was reviewed by the supervisor and peer reviewed at Health Services Academy Islamabad. Written approval was taken from the Health Services Academy, Islamabad ethical review board and the study has been performed in accordance with the ethical standards as laid down in the 1964 declaration of Helsinki and its later amendments or comparable ethical standards. Approved and supervised by the Director, Prime Minister National Health Program Pakistan. The Data was collected after proper consent of the subjects. Data was used solely for the purpose of the study. There was no monetary compensation to study participants. There was no direct benefit to the individual study participant but in the long run there will be benefit to the community and country.

### Results

The results show that overall patients responded with average satisfaction with the services received through the PMNHP. Overall,

patients responded with higher satisfaction to the patient satisfaction questionnaire. Only 15.7% of patient availed public hospital services whereas 84.3% availed private hospital services. But patients were found to prefer any (public or private) hospital highest at 48.5%, while 24.6% respondents preferred to choose a private hospital for treatment, 26.9% the lowest preferred public hospital. Lowest scores were found in the Interpersonal Manner, followed by Technical Quality and Time Spent with doctor and highest scores for Financial Aspects. Respondents (the discharged patients) responses were conducted with complete animosity assured, as per the research ethics.

More than half (34.3%) of the respondents availed services of private hospitals and only 15.7% availed public hospitals, as presented through Table 1 .

On towards the questionnaire, some PSQ-18 items are worded so that agreement reflects satisfaction with medical care, whereas other items are worded so that agreement reflects dissatisfaction with medical care. All items were scored so that high scores reflect satisfaction with medical care. After item scoring, items within the same subscale were averaged together to create the 7 subscale scores.

The frequencies and percentages of various variables and Sub Scales of patient satisfaction as devised by the Patient Satisfaction Questionnaire (PSQ-18). There are a total of 7 subscales, each representing separate domain of patient satisfaction. General satisfaction (GS), technical quality (TQ), interpersonal aspects (IPM), communication (COM), financial aspects (FIN), time spent with doctor (TWD) and accessibility and convenience (AC), with each domain receiving a separate score. The first domain of the tool general satisfaction (GS) consists of two questions, technical

quality (TQ) and time spent with doctor (TWD) each consists of four questions respectively whereas the rest of the five out of the seven domains consist of two questions each. The table shows the frequency and corresponding percentage of each question and domain according to their responses to various patient satisfaction questions asked for the inpatient services they availed under the PMNHP insurance plan.

Hospital preferences were found out where 24.6% (33) respondents preferred to choose a private hospital for treatment, 26.9% (36) choose public hospital and a major chunk of 48.5% (65) respondents said they would choose any doesn't matter.

Next scorings were calculated. Scoring means were also tabulated scores, mean scores higher than 2.5 suggested higher satisfaction scores. With an average score of  $2.96 \approx 3$  SD 0.6293, where the overall patient satisfaction can be translated as higher satisfaction and therefore suggests overall satisfaction as good but scale suggests the overall respondent score was neutral or uncertain. Patients scores were categorized into two types of statements, Higher Satisfaction and Lower Satisfaction for the scores. A positive statements of strongly agree (SA) with correct answer contains 5 marks, with negative statements of correct answer contains -5 marks. Similarly Positive statements of Agree With correct answer contain + 4, while with negative -4 and neutral statements contain 0. The percentage of each variable with frequency is shown in table 5. The maximum possible score was 90. The total number of participants were  $n=134$  while total statements were 18 as shown in the table 5.

Here it is important to define higher satisfaction and lower satisfaction clearly. Higher Satisfaction refers to patients who as a

**Table 1. Hospital Category**

Hospital Category	Frequency	Percent
Private Hospital	113	84.3
Public Hospital	21	15.7
Total	134	100.0

**Table 2. Hospital Preference**

Variables	Categories	Frequency	Percent
Hospital Preference	Private Hospital	33	24.6
	Public Hospital	36	26.9
	Any Doesn't Matter	65	48.5

percentile of the respondents achieved patient satisfaction scores higher than the percentile mean and Lower Satisfaction refers to patients who achieve scores lower than the percentile mean.

Using Inferential statistics ( $p < 0.05$ ) to assess the significance among study variables. Cross tabulations with chi square tests were applied. Statistical significance was assessed using logistic regression to assess crosstab significance first. Where Age and Hospital preference showed p values of 0.020 and 0.049 respectively while Gender, Employment and Hospital category had values 0.274, 0.423, 0.848 respectively which was insignificant for our tests. Although public hospital users were less, respondents of public and private hospitals both exhibit higher satisfaction. p value calculated at 0.202 directs to statistically insignificant results as presented in table 3.

Table 4 shows respondents with highest satisfaction choose to prefer any hospital either public or private. The second choice turned out to be public hospital for higher satisfaction respondents whereas the lower satisfaction respondents choose both preferring any hospital and private hospitals equally and higher than public hospital.

Since the p value calculated came out as 0.049, results were found to be significant and refer

that patient preference of hospital was not affected by higher or lower satisfaction.

Table 5 illustrates employment status with overall patient satisfaction. With the highest percentage of higher satisfaction found among unemployed respondents, and the lowest percentage of lower satisfaction found by public employee with only one response. With a p value of 0.674, association was proven to be statistically insignificant.

Likewise in Table 6 communication cross tabulated with hospital preference show highest response to any hospital among higher satisfaction respondents and private hospital among lower satisfaction. Lowest amongst higher satisfaction and lower satisfaction was private hospital and public hospital respectively. P value at 0.218 showed statistically insignificant results.

Table 7 has cross tabulation between subscale accessibility and convenience, where results were similar and with p value at 0.122 found to be statistically insignificant.

## Discussion

Patient satisfaction as a performance indicator has been proven of most significance especially in order to improve efficiency of health

**Table 3. Hospital Category and Overall Satisfaction**

Hospital Category	Lower Satisfaction (%)	Higher Satisfaction (%)	P-Value
Private Hospital	17 (73.9%)	96 (86.5%)	0.202
Public Hospital	6 (26.1%)	15 (13.5%)	
Total N=134	23	111	

**Table 4. Hospital Preference and Overall Satisfaction**

Hospital Preference	Lower Satisfaction	Higher Satisfaction	P-Value
Private Hospital	9 (39.1%)	24 (21.6%)	0.049
Public Hospital	5 (21.7%)	31 (27.9%)	
Any Doesn't Matter	9 (39.1%)	56 (50.5%)	
Total N=134	23	111	

delivery (Schoenfelder,2012; American Academy of Family Physicians, 2007). The results show that overall patients responded with average satisfaction scores to the services received through the PMNHP, with an overall patient response towards higher satisfaction being reported to the patient satisfaction questionnaire. Only 15.7% of patient availed public hospital services whereas 84.3% availed private hospital services. But patients were found to prefer any hospital, either public or private hospital highest at 48.5%, while 24.6% respondents preferred to choose a private hospital for treatment, 26.9% the lowest preferred public hospital. Lowest scores were found in the Interpersonal Manner, followed by Technical Quality and Time Spent with doctor and highest scores for Financial Aspects.

Private hospital utilization was again found to cover a huge majority of the patients, although it is to be stated that the PMNHP in Islamabad and Rawalpindi has administrative and legal limitations to induct public hospitals and therefore the outflow of patients at private hospitals is automatically more due to less public hospital empanelment. Yet it is evident

to state that private sector covers more of the health care burden as proven even through the lens of a public health program as the PMNHP insurance. Mid age respondents (46-60) were of the highest frequency and were found to show highest higher satisfaction scores which indicates a successful health care delivery targeting the main chunk of patients. Score indicate patients were greatly relieved of the financial implication inflicted by health, patients were satisfied with the care they received but it maybe deduced that the patients felt lack of empathy and bonding with the doctor or health care provider, which gravely affects the whole concept of a healing environment.

In addition lack of effort from the doctors and health care provider cannot be overlooked where communication gaps maybe leading to misconceptions about the doctor's potential and quality of care, being provided. The choice of hospital was clearly not affected by the care received as patients are found to be concerned about receiving treatment as long as it is being provided and is accessible in a public health insurance system. These scores indicate

**Table 5. Employment and Patient Satisfaction**

Employment (%)	Lower Satisfaction	Higher Satisfaction	P-Value
Unemployed	11 (47.8%)	48 (43.2%)	0.674
Public	1 (8.3 %)	11 (9.9%)	
Private	26 (39.1%)	34 (30.6%)	
Own Business	2(8.7%)	18 (16.2%)	
Total	23	111	

**Table 6. Hospital Preference and Communication**

Hospital Preference	Lower Satisfaction(%)	Higher Satisfaction(%)	P-Value
Private Hospital	3 (50%)	30 (23.4%)	0.218
Public Hospital	1 (16.7%)	35 (27.3%)	
Any Doesn't Matte	2 (33.3%)	63 (49.2%)	
Total N=134	6	128	

communication gap from the health care providers, and lack of patient doctor interaction. The ethical and moral fabric of medical professionals may have been subjected to questionable extents. Public hospital utilization for PMNHP was found to be lagging, while patient satisfactions score directly points us to the need for improved hospital facilities and doctor patient interactions.

Patient satisfaction is highly maintained in the health market/private sector as it leads to more patient inflow, more insurance payments, better growth and a more sustainable health system. In this context the concept of P4P (pay for performance), and incentive based performance rewarding systems have been found to be successful to create better health care delivery and more efficiency of hospitals (Golda et al, 2018; Press and Fullam, 2010). As proven by Chan CM, better doctor-patient fit and patient oriented treatment results in higher patient satisfaction (Chan and Azman, 2012). Not only does that increase treatment output but shows as a policy indicator for better health services. Now discussing the factor of competition and incentivization to the insurance utilization could also show better service delivery standards and outcomes. One of the strongest arguments favoring competition is that it can be designed and deployed allowing providers to innovate in the order to compete with others, higher quality delivery by creating incentives based on performance indicators (Porter and Teisberg, 2004).

It is therefore concluded that the study provides great need for further strengthening of health care delivery domains as patients'

satisfactions and implementation from the regulating bodies so as to enforce better mechanisms in place to enable better patient experience. The PMNHP has proven to show great leads towards achieving universal health care. Being a pillar to social health protection in Pakistan, the PMNHP is directing towards achieving SDG goals as the SDG 18 of universal health coverage. The maturity and evolution of the PMNHP will enable a stronger and self-sufficient health system envisioning a health system catering to health for all. This study is first of its kind about generalize inpatient satisfaction in Pakistan and also of the PMNHP. The limitations of this study it is done on a small scale and limited due to resource constrains Time constraint limits the study to only few months, hence the small sample size and also qualitative component of the survey could not be performed because of the time constraints.

### Conclusion

The study addresses that average patient satisfaction is found among PMNHP Insurance users of Islamabad & Rawalpindi and patients would prefer rather any hospital provided that of its availability. In the Islamabad, Rawalpindi region due to administrative complications the PMNHP has not been able to induct more government hospitals and private hospitals are seen being empaneled to compensate for patient distribution.

The need to induct more public sector hospitals needs to be implemented and private sector enplanement regularly scrutinized based on their performance. Thus there is a need to introduce and promote patient-centered practices among the health care providers.

**Table 7. Hospital Preference and Accessibility and Convenience**

Hospital Preference	Lower Satisfaction (%)	Higher Satisfaction (%)	P-Value
Private Hospital	12 (20.3%)	21 (28%)	0.122
Public Hospital	21 (35.6 %)	15 (20%)	
Any Doesn't Matte	26 (44.1%)	39 (52%)	
Total N=134	59	75	

Both the private and public sector can be better regulated through centralized programs like the PMNHP. Continuous professional development programs for all (HRH) health care providers need inculcation. Doctor-patient communication and relation needs redressal at institutional and basic training level. The less-regulated private sector of Pakistan although, does need further regulations and stronger check and balance under the vigilance of the PMNHP insurance program. Patient satisfaction survey/research findings at national and provincial level need to be incorporated into the health system so as to enhance patient satisfaction with health care system in Pakistan. Professional Development of doctors and allied staff need be strengthened so as to improve doctor patient interactions and therefore strengthening the healing experience and creating an efficient public health system.

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