

**Research Article****Measuring Patients Satisfaction through SERVPERF-Model in Public Sector Hospitals****<sup>1</sup>Fawad Khan | <sup>\*2</sup>Qamar Afaq Qureshi**

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**ABSTRACT:**

**Background:** quality has two components one is technical quality and second is functional or interaction quality. In this study functional or interaction quality is focused.

**Aim:** Purpose of this existing study is to investigate the quality services through patient satisfaction using SERVPERF-model in public sector hospitals in DIKhan district, KPK Pakistan.

**Material and Methods:** For this purpose survey approach was used. Cross-sectional primary data was collected form 100 patients of two public sector hospitals. Data was analyzed in SPSS. Mean, standard deviation, correlation and regression were used.

**Findings/Results:** It was found that there is positive and significant relationship found between predictors and criterion variables. Moreover only reliability factor has significant impact on patient satisfaction.

**KEYWORDS**

Patient Satisfaction, Quality Services, SERVPERF-Model, Hospitals, Patients.

## 1 | INTRODUCTION

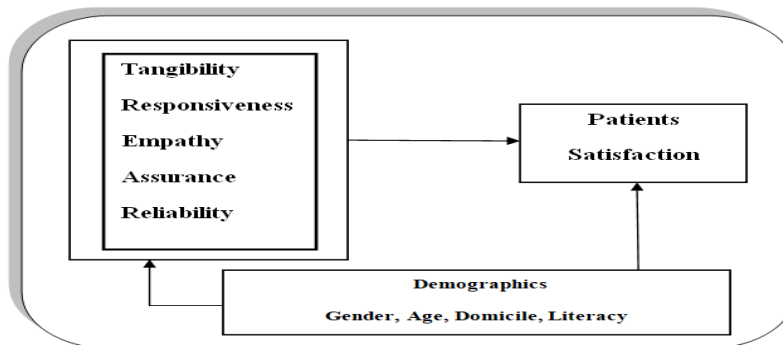
Quality of health services can be measured through the level of satisfaction of its patients. Evaluating healthcare services' quality is a difficult task.<sup>1</sup> there are two components of quality i.e. technical and interaction quality. Technical quality means when standard quality approaches have been ignored while interaction quality refers to quality among patients and services providers i.e. physicians, services providers during treatment process<sup>1</sup>. Previously interaction quality was referred to as functional quality, in the hospitals functional quality was assessed to evaluate the patients' satisfaction.<sup>2, 3</sup> There are 5 approaches in healthcare quality these are government, patients, insurance company, professionals and medical/health care organizations.<sup>4</sup> Now a day's assessing quality through patients is considered one of the most appropriate methods of measuring quality in the hospitals. In this regard SERVPERF model is extensively used to measure quality.<sup>5</sup>To the best of researchers' knowledge healthcare professionals (HCP) used to evaluate health services quality using technical aspect to improve diagnosis and treatment that's why patients' perceptions were overlooked and ignored. Interaction or functional aspect was overlooked by HCP.<sup>6</sup>Moreover, absence of recommended model to evaluate quality makes this process more difficult in the hospitals. Previously service quality model was used to investigate the quality services in health care organizations (HCOs) but huge criticisms were raised in reliability and validity of this model that is why Cronin and Taylor<sup>7</sup> introduced SERVPERF model for quality services.<sup>7</sup> The current study offered novel contribution by filling the gap in the literature of functional quality aspect and patient satisfaction in hospitals of Pakistan. The model used in the existing study was modified SERVPERF model having five attributes and their influence on patients' satisfaction.

### 1.1 | Objective of the Study

- To investigate the impact of SERVPERF model on patient satisfaction.

### 1.2 | Problem Statement

In Pakistan there has been significant increased on the concern about quality of health services in the hospitals. In Pakistan hospitals are already crowded and there is shortage of health work force in the Pakistani hospitals.<sup>8</sup>Where there are fewer rescuers than victims it raised a question on the quality of the services rendered. Health workers worked in stressful environment. When limited human and non-human resources are available it would lead to wrong diagnosis and wrong treatment.<sup>9</sup> It is imperative for the management of the hospitals to measure patient satisfaction in a proper way so that findings might help the policy makers to formulate such policy to bring significant changes and improvements in the health system of Pakistan. This could only be possible by applying SERVPERF model. It is one of the wieldiest recommended tools to measure service quality of health sector.



**FIGURE 1:** Theoretical Framework

## 2 | MATERIAL AND METHODS

### 2.1 | Study Design

As this study is quantitative in nature therefore, survey approach using structured questionnaire was used. Primary data was collected. Data was cross-sectional in nature. Surveys help the researcher to save cost, time and easy to collect the data from large population.<sup>9</sup> Survey also helps the researchers to measure attitudes, behaviors of the respondents.

### 2.2 | Population & Sampling

The populations of this study are patients admitted in district headquarters hospital (DHQ) and Mufti Mahmood Hospital in Dera Ismail Khan. The patients admitted in January and February of 2019 was selected as respondents of the study. Non-probability convenience sampling technique used to select 150 patients form two public sector hospitals.

### 2.3 | Measures

There were total twenty seven items for SERVPER model and Patient satisfaction. In which four items for each construct of SERVPERF model and seven items for patient satisfaction. While items related with demographic information were also included in the section of the scale.

### 2.4 | Data Analysis Techniques

First permission was taken from hospital administration and after permission consent was taken from all respondents i.e. patients. Patients were made assured that data would be kept confidential and would only be used for academic purpose. After collecting the data it was analyzed in SPSS. Frequency, percentage, mean exploratory factor analysis and Cronbach alpha were used in descriptive statistics to check the reliability and validity. In order to test hypotheses correlation and regression were used.

## 3 | RESULTS

Scales reliability and validity criteria was given by Field<sup>10</sup> for Cronbach alpha must be >0.70 and for KMO must be >0.05 and BTS must be significant. Form the table 1 it is revealed that all alpha values, KMO and BTS values met the threshold criteria thus scales used in this study are found reliable and valid.

TABLE 1 Reliability and Validity Analyses

Variables	No of Items	$\alpha$	KMO and BTS
Overall Scale	27	0.870	
Tangibility	4	0.729	KMO=0.725; BTS=150.644, p<0.01
Responsiveness	4	0.756	KMO=0.732; BTS=130.649, p<0.01
Empathy	4	0.823	KMO=0.599; BTS=246.002, p<0.01
Assurance	4	0.701	KMO=0.691; BTS=108.835, p<0.01
Reliability	4	0.799	KMO=0.516; BTS=33.593, p<0.01
Patient Satisfaction	7	0.801	KMO=0.592; BTS=107.956, p<0.01

Socio-economic and demographic information was also gathered from the study participants. It was found that 53 respondents were literate while 47 were not, moreover majority of the participants were having age more than 36 years followed by those age group participants who were having age between 26-35 years i.e. 28 and only 26 participants were having age of 18-25 years.

TABLE 2 Demographic Information

Variables	Characteristics	n	%
Literacy Based	Literate	53	53.0
	Illiterate	47	47.0
Age	18-25	26	26.0
	26-35	28	28.0
	36+	46	46.0

Further analysis of results revealed that highest mean score for reliability  $M=3.59$ ,  $S.D=0.721$ , followed by tangibility  $M=3.51$ ,  $S.D=0.547$ , lowest score is recorded for responsiveness  $M=3.17$ ,  $S.D=0.451$  respectively. Relationship between tangibility and patient satisfaction ( $0.47^{**}$ ,  $p<0.01$ ); reliability and patient satisfaction ( $0.58^{**}$ ,  $p<0.01$ ); responsiveness and patient satisfaction ( $0.31$ ,  $p<0.01$ ); assurance and patient satisfaction ( $0.48^{**}$ ,  $p<0.01$ ); empathy and patient satisfaction ( $0.46^{**}$ ,  $p<0.01$ ). Thus H1 is accepted.

TABLE 3 Mean Standard Deviation and Intercorrelations

Variables	Mean	S.D	1	2	3	4	5
Tangibility	3.51	0.547	1				
Reliability	3.59	0.721	0.67 <sup>**</sup>	1			
Responsiveness	3.17	0.451	0.37 <sup>**</sup>	0.48 <sup>**</sup>	1		
Assurance	3.48	0.640	0.53 <sup>**</sup>	0.77 <sup>**</sup>	0.35 <sup>**</sup>	1	
Empathy	3.35	0.708	0.60 <sup>**</sup>	0.64 <sup>**</sup>	0.44 <sup>**</sup>	0.60 <sup>**</sup>	1
Patients Satisfaction	3.49	.519	0.47 <sup>**</sup>	0.58 <sup>**</sup>	0.31 <sup>**</sup>	0.48 <sup>**</sup>	0.46 <sup>**</sup>

Findings of regression analysis revealed that all predictors shows variance upon patient satisfaction  $R^2= 0.363$ , i.e. 36.3% while goodness of fit  $F=10.715$ ,  $p<0.01$ , only beta value of reliability  $\beta=0.38$ ,  $p<0.05$  is found significant while remaining all insignificant. This means one unit change in reliability could bring 38% change in patient satisfaction.

TABLE 4 Direct Effects

Criterion	Predictor	R	R <sup>2</sup>	F	$\beta$	t	p	Support
PS	Constant	.603 <sup>a</sup>	.363	10.715			0.000	
	Tangibility				.115	.983	.328	No
	Reliability				.380	2.438	.017	Yes
	Responsiveness				.022	.233	.816	No
	Assurance				.063	.471	.639	No
	Empathy				.103	.870	.386	No

## 4 | DISCUSSION

Provision of quality service is one of the most significant factors in healthcare organizations.<sup>10</sup> If patients are satisfied from the quality of services they received they can influence other patients over word of mouth.<sup>11</sup> SERVPERF model is used and applied in this study to measure the quality of service sin two hospitals in DIK city of KPK Pakistan. It was found that all predictors and criterion are significantly and positively related with patient satisfaction, highest means core is recorded for reliability of the services. In regression analysis only reliability was found significant. There is need to pay attention to other factors such as tangibility, responsiveness, assurance and empathy.<sup>12,13</sup> SERVPERF model is accurate to measure the services quality as performance minus expectation gives an accurate result for measuring quality of services.<sup>14,15</sup> This study has filled the gap in the literature and offered novel contribution in SERVPERF model.<sup>16-17</sup>

## **5 | CONCLUSION**

It is concluded whether literate or illiterate patients for both patient satisfaction is crucial and patient satisfaction is achieved only if quality services are rendered and hospitals have to main standard quality in all unit of the hospitals.<sup>18-21</sup> Moreover, it is also concluded that hospital administration at regular intervals must conduct a survey using SERVPERF model to accurately measure the services provided to patients.

## **6 | MANAGERIAL IMPLICATIONS**

Hospital administration while performing performance appraisal must conduct survey about quality services provided to patients by physicians. The SERVPERF model would be beneficial for HCOs in measuring patient satisfaction.

## **7 | LIMITATIONS AND FUTURE DIRECTIONS**

It is essential to address limitations. Very first limitation is small sample size. It is recommended that future studies must use big sample size. The 2<sup>nd</sup> limitation is single data. This may cause common method biasness. It is therefore recommended to use qualitative data as supplement. 3<sup>rd</sup> this study only used public hospitals data one must be careful while generalizing the findings to private hospitals.

**Conflict of Interest:** There is no competing interest

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