

Service Interaction Quality in High Contact Service: Scale Development and Validation

Neetu Kumari^{1*} and Sandeep Patyal²

¹Lecturer, Udhampur Campus, University of Jammu, J&K, India.

Email: neetu.patyal@rediffmail.com

²Project Fellow, University of Jammu, J&K, India. Email: patyal.sandeep@yahoo.co.in

*Corresponding Author

Abstract: The healthcare units are moving towards managing healthcare services by focusing on key stakeholder patients to retain them and sustain competitive advantage. The Service Interaction Quality is an aid to Service Quality. Interaction Quality is the employee - customer interaction that takes place during service delivery. The study purposes three-dimensional model to achieve service interaction quality. The study investigates the effect of Attitude & Behavior, Expertise and Service Delivery Process on Service Interaction Quality. The data for study was collected from 400 indoor patients associated with Government District hospital (Udhampur, North India). The study reveals the higher impact is of expertise followed by Attitude & Behavior and Service Delivery Process. The paper concludes with managerial, research implication and direction for future research.

Keywords: Attitude and behaviour, Expertise, Service delivery process, Service interaction quality.

work actively with the provider to co-produce the service. Service cannot be created apart from the customers purchase and active participation. Marriage counseling and some health related services fall into this high contact services category. Service interaction is where employee serves customers face to face. The service interaction quality depends on customers' perception of the firm how they view these individuals. Those responsible for delivering the core service are also aid to deliver variety of supplementary services such as listening to customer, handling queries, sympathetic, caring attitude and solving grievances. Service interaction includes a series of contact with the chosen service provider. During service interaction many customer start evaluating the quality of service they are receiving and decide whether it meets their expectation. These interactions supply a grater array of clues to service quality (Crosby, Evans and Cowles, 1990). Service Interaction Quality is an aid to achieve service quality by interactive interaction with customers.

I. INTRODUCTION

The size of service sector is increasing around the world, in both developed and emerging countries. Service sector contributed around 66.1 percent of its gross value added growth in 2015-2016 in India. The various services under this sector are construction, hospitality, trade, transport, food and beverages services, communication, social and personal services, insurance, financing other business services (Lovelock, Witz and Chatterjee, 2010). With the growth of the service economy, emphasis on providing quality services to add value in service is also challenge for service firms. Services are intangible and inseparable. Thus service organization, especially those in the public sector, having high contact services, need to build confidence by actions or interaction that create lasting trust. A closer relationship often exists in situations when there is high contact or face to face interaction between customers and representatives of the service provider. Although the service itself remains important, value is added by people and processes (Lovelock, Witz and Chatterjee, 2010). Interaction may include negotiations and sharing of insights in both directions. The interactions are more in high contact services, where customers

II. SERVICE INTERACTION QUALITY

Many services will always require direct interaction between customer and contact personnel despite technology advancement. These interactions with service provider strongly influence how customer perceives service quality. Service is often difficult to visualize and understand. The conceptualization and measurement of Service Interaction Quality perception have been the most debated topic in the service marketing literature to date. Numerous studies are carried out to conceptualize service interaction. In the early, SERVQUAL was developed by Parasuraman, Zeithaml & Berry in 1985. It includes tangibility, reliability, responsiveness, communication, credibility, security, competence, courtesy, understanding, and access. The authors redefined and converted these ten dimensions into five useful dimensions which include tangibles, reliability, responsiveness, assurance and empathy in 1988. In SERVQUAL model, service quality is assessed by calculating the difference between what customer's expectations are and what they really perceive. Further another important tool SERVPERF was developed by Cronin & Taylor (1992). The main feature of this model focuses on measuring customer perceptions about service performance.

Another model was proposed by Rust and Oliver in 1994 which is known as three - component model comprising service product (i.e. technical quality), service delivery (i.e. functional quality), and service environment. Later, Dabholkar, Thorpe & Rentz (1996) identified and tested that customers tend to break service quality dimensions into various sub dimensions and as such proposed Multilevel model based on three levels First level relates to customers overall perceptions of service quality; second level focuses on five primary dimensions (physical aspects, reliability, personal interaction, policy and problem solve) and third level consists of seven sub - dimensions (appearance, convenience, promises, doing it right, inspiring confidence, courteous and helpful). Further the relationship between interaction between service provider and its impact on customer's perception are accepted by number of researchers (Choi and Kim, 2013; Ekinci and Dawes, 2009; Lin, Chiu and Hsiesh, 2001; Crosby, Evans and Cowles, 1990).

Despite development across Service Interaction measurement, little effort has been made to identify and standardize attributes that define the various sub dimensions. To bridge up this research void, another model on service quality was developed by Brady & Cronin in 2001 based on hierarchical approach. They defined

service quality in terms of three primary dimensions namely interaction quality, physical environment quality and outcome quality each having nine secondary sub dimensions viz; attitude, behavior, expertise, ambient condition, design, social factors, waiting time, tangibles and valence and three tertiary sub - dimensions under each secondary dimension namely reliability, responsiveness and empathy. More recently Sardana (2003) proposed service quality model for health care units having three important dimensions viz; performance (medical discipline, paramedical discipline, nursing and allied services, resource management and management practices), quality (functional quality, technical quality and process quality) and recipient satisfaction (promoter satisfaction, customer satisfaction, employee satisfaction and societal satisfaction). Although it is apparent that perception of Service Interaction Quality is based on multiple dimensions but there is no general agreement on content and nature of dimensions. As such there is need to establish comprehensive and holistically model for Service Interaction Quality measurement. The study analyses Service Interaction Quality on the basis of three dimensions Attitude and Behaviour, Expertise, and Service Delivery Process.

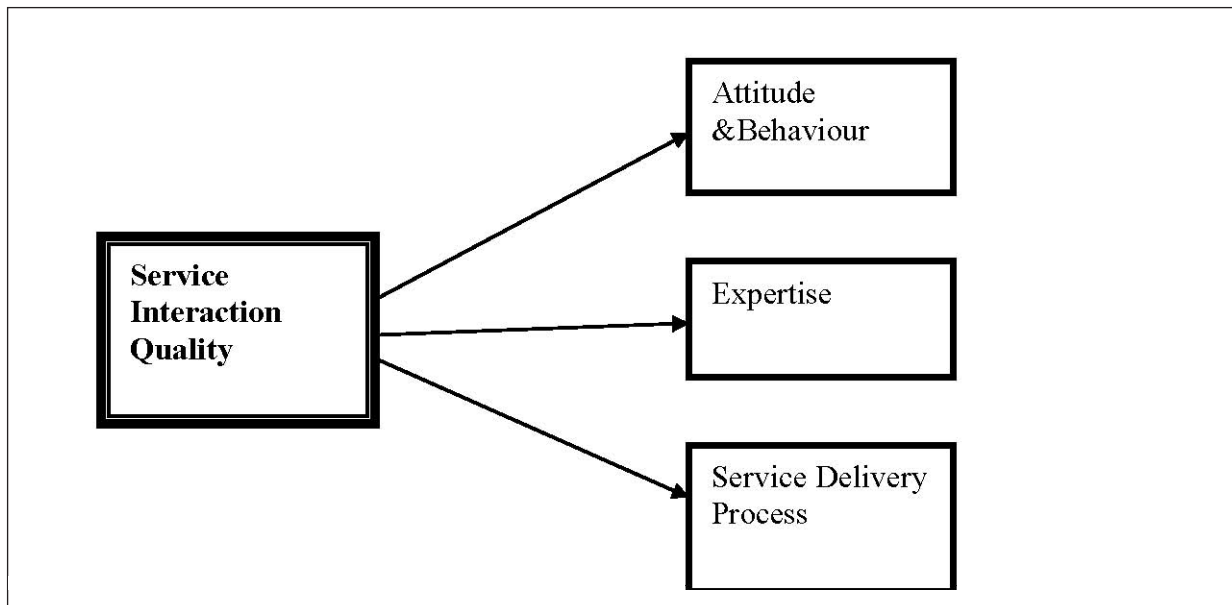


Fig. 1: Service Interaction Quality Model

III. RESEARCH PROPOSITION

In a high contact service entails interactions throughout service delivery between customer and organization. The customer's exposure to the service provider because services are intangible and characterized by inseparability features (Lovelock, 1981). The employee - customer interaction that takes place during service delivery is Service Interaction Quality. The interaction that takes place during service delivery has greatest effect on service quality perceptions of the consumers (Brady & Cronin, 2001; Crosby, Evan and Cowles, 1990). The first

important dimension of Service Interaction Quality is Attitude & Behaviour. The Attitude is predisposition or tendency to respond positively towards a certain idea, object, person or situation. Attitude influences an individual choice of action and response of service personal. Behaviour is the service personal behavior during service interaction. Number of literature studies authenticated attitude & behavior to be one of the important dimensions of interaction quality (Brady & Cronin, 2001). Bitner (1992) empirically demonstrated that attitude is a super ordinate concept of satisfaction. Further, Sardana (2003) stated that patients judge the performance neither through the clinical

cure nor through the technology employed but reach conclusions on the basis of behavioral attitudes and communication skills of the doctors and attending staff. The attitude & behaviour of staff (doctors, nurses, supporting staff) can be accessed through dimensions such as friendliness, helpfulness, ability to clear patient queries, honesty, support, care which also directly affect interaction quality. The second important dimension of Service Interaction Quality is expertise of the staff. Expertise basically relates to correct diagnosis and adequate knowledge about the respective fields. Expertise is whether service personnel really know their job. This dimension is most important in healthcare service because expertise of doctors, nurses and paramedical staff directly influence life of the patients. The third important factor which affects Service Interaction Quality is Service Delivery Process. Service delivery is concerned with where, when and how the service product is delivered to the customer. It is a component of service that defines the interaction between providers and user of service. Good service delivery provides clients with an increase in value. Service delivery process in health care sector is responsibility of various stakeholders. A hospital is a complex system which incorporates personnel, drawn from various disciplines such as medical, paramedical and administration that are all required to work as a team. It has diverse support service infrastructure in areas of dietary service, sanitation, supplies, laundry and housekeeping. In addition management of values such as customer focus, convenient procedure and performance orientation also contribute in building process quality (Sardana, 2003). The patient's perceptions about these dimensions are subsequently combined to evaluate the overall interaction quality and finally outcome quality. On the basis of this set of hypothesis and objective are constructed.

IV. OBJECTIVE

To examine the relative impact of employees Attitude and behaviour, Expertise and Service Delivery Process on Service Interaction Quality.

Hypothesis - Attitude & Behaviour of staff, Expertise skills and Service Delivery Process directly positively influence the quality of Service Interaction Quality.

V. RESEARCH METHODOLOGY

A. Sample

The study on Service Interaction Quality (SIQ) is based on data collected from indoor patients of Public hospital. The pretesting (35 respondents) was conducted to check face and content validity of items for the three dimensions. The proportionate stratified random was used for final data collection. The total sample of 400 indoor patients is taken from public referred Hospital Udhampur, North India staying in the hospital for more than three days.

B. Measures

All measures of Attitude & Behaviour (AB), Expertise (E) and Service Delivery Process (SDP) used in the study are extracted from the studies of (Ekinici and Dowes, 2009; Sardana, 2003; Brady & Cronin, 2001; Lin, Chiu and Hsiesh, 2001; Newman and Pyne, 1996; Bitner, 1992). The layout of scale was adopted to suit the public healthcare sector. Construct used a five point likert type scale of strongly agree (5) and strongly disagree (1). SIQ was measured through 35 statements related to Attitude & Behaviour, Expertise and Service Delivery Process. The Attitude & Behaviour relates outcome of attitude of employees contains 18 items. Expertise dimension relates to correct diagnosis and adequate knowledge about the respective fields contains 8 items. Service Delivery Process the Process quality aspects comprise of 9 items.

C. Data Purification

Exploratory Factor Analysis (EFA) is conducted for data reduction and summarization. Before EFA response score for negative items were changed and all items were checked for normal distribution. The study used principal component analysis with varimax rotation for factor analysis. The eigen value equal to or more than one criterion is used to determine number of factors to be extracted and Kaiser - Meyer - Olkin (KMO) value greater than or equal to 0.50 is used to find out relevancy of data reduction and grouping for factor analysis. Further Bartlett test of Sphericity (BTS) is used to identify the significance of correlation coefficients among the variables and degree of correlation coefficient greater than or equal to 0.30 is used as criterion for selection of items (Hair *et al.* 1995).

D. Demographic Profile

The Sample of 400 indoor patients from public hospital (North India) consisted of 266 females and 134 males. Majority of respondents fall under category of 20 year to 40 years (269). Patients avail services of Government hospital fall under group between 5000 - 10000 (267 respondents). Results also highlight that most of the respondents are of below hr secondary (308). Further Income wise majority are of respondents are dependent (260) followed by serviceman (92), Businessman (38) and Professional (10).

VI. RELIABILITY AND VALIDITY

Reliability of scale is assessed by overall cronbach alpha value of 0.922. The internal consistency using split half method is used to assess the reliability of the scale which came out to be 0.928 for final half and 0.916 for another half (Table I).

Further review of literature and deliberation subject expert and doctors helped in assessing construct validity. Later the items of the schedule are modified to make questionnaire conceivable to

patients to check face validity. Construct validity are achieved by adequate value of KMO, BTS, variance explained. The degree of correlation coefficient value among selected statements for the three components i.e. AB (0.85), E (0.83) and PQ (0.85) indicate high degree of convergent validity (Table II).

TABLE I: RELIABILITY OF SERVICE INTERACTION QUALITY SCALE

Overall (400)	Sub Sample I	Sub Sample II
0.922	0.928	0.916

TABLE II: DIMENSION - WISE CONVERGENT VALIDITY

Dimension	Correlation	Significance
Service Interaction Quality		0.000
Attitude & Behaviour	0.851	
Expertise	0.832	
Service Delivery Process	0.854	

VII. DATA ANALYSIS

The reliability and validity results show that Service Interaction Quality measure meets the psychometric property requirement. Exploratory factor analysis was conducted for the attitude & behavior, expertise and service delivery process to identify the respective significant items on basis of Kaiser - Meyer - Olkin (KMO), Bartlett's Test of Sphericity (BTS) and determinants, using varimax rotation. The detailed analyses are discussed as under:

A. Attitude and Behavior

Attitude & Behavior comprises of 16 statements related to doctors, nurses, technical and supportive staff attitude and their behavior with patients and their associates. The KMO value is found to be 0.874 and BTS as 3927.339 (dof = 120 and Sig = 0.000) (Table III), which supported the relevancy of factor analysis. The application of varimax rotation method at 3 iterations helped in identifying two factors (Table IV). The factors are discussed as below.

Nurses (Factor 1) - The first factor comprised seven statements out of sixteen statements relating to nurses. These statements includes 'behavior with your friends and relatives' (F.L. = 0.79), 'explain about technical treatment' (F.L. = 0.73), 'attitude & behavior' (F.L. = 0.84), 'helpful & supportive' (F.L. = 0.57) 'caring' (F.L. = 0.78), 'answer queries' (Chahal & Sharma 2004), (F.L. = 0.83) and 'listening ability' (F.L. = 0.83). The results indicated that there exists dissatisfaction among respondents towards attitude & behavior of nurses in the hospital. The factor explained 27.78 percent of variance out of 73.19. The value of communalities for the items which reflected the relative importance of the statements came out to be the highest for 'behavior with your friends and relative' (0.80), followed by 'listening ability' (0.78), 'attitude & behavior of

nurses' (0.76), 'answer queries' (0.75), 'explain about technical treatment' (0.70), 'helpful and supportive' (0.68) and 'caring' (0.67).

Doctors Attitude (Factor 2) - The second factor contained four statements related to doctor. Those statements included 'communication with staff' (F.L. = 0.76), 'helpful & supportive' (F.L. = 0.83), 'attitude' (F.L. = 0.75) and 'patient involvement' (F.L. = 0.72). The results revealed that there exists average level of satisfaction among respondents towards doctor attitude. The factor explained 20.78% of variance. The value of communalities came out to be highest for 'helpful and supportive' (0.77) followed by 'attitude of doctors' (0.71), 'communication with staff' (0.68), 'patient involvement' (0.55).

Technical & Supportive Staff (Factor 3) - The statements namely 'availability' (F. L. = 0.78), 'attitude & behaviour' (F.L. = 0.84), 'friendly & helpful' (F.L. = 0.76) were found to be important under factor 3. The results indicated that patients are averagely satisfied with attitude & behavior of technical & supportive staff (Sardana 2003). The factor explained 14.17 percent of variance. The value of communalities for the items are higher in 'attitude & behavior' (0.83), followed by 'friendly & helpful' (0.75) and 'availability' (0.69).

Doctors Behaviour (Factor 4) - The statements namely 'professional values' (F.L. = 0.64) and 'answer queries satisfactory' (F.L. = 0.71) were found to be important under factor 4. The results revealed that the patients have average satisfaction towards doctor's behavior. The factor explained 10.45 percent of variance. The values of communalities for the items are higher in 'answer queries satisfactory' (0.79) followed by 'professional values' (0.74).

B. Expertise

Expertise comprised eight statements namely overall competent staff, physicians explain logically (Chahal & Sharma 2004), physician have sufficient knowledge, physician diagnosis the diseases correctly, technical supporting staff are expertise and overall doctor, nurses, technical staff have required expertise. The detailed analysis is explained as under.

The KMO value is found to be 0.886 and BTS as 1473.116 (dof = 28, and Sig = 0.000) (Table III), which supported the relevancy of factor analysis. The application of varimax rotation method at 3 iterations helped in identifying two factors. The factors are discussed as below.

Individual Expertise (Factor 1) - The first factor comprised eight statements. The factor loading of statements are 0.81 for 'physician expertise', 'operational competence' (0.69), 'technical staff are expertise' (0.71), 'diagnosis diseases correctly' (0.79), 'nursing expertise' (0.82), 'technical knowledge' (0.71) and 'explain logically' (0.64). The overall mean score of factor arrived at 3.65 revealed that respondents are averagely satisfied with respect to expertise of nurses, doctors and technical staff. The factor explained 48.96 percent of variance out of 66.26.

The value of communalities for the item which reflect the relative importance of the statements came out to be highest for 'nursing expertise' (0.71), followed by 'diagnosis diseases correctly' (0.67), 'physician expertise' (0.67), 'technical staff are expertise' (0.64), 'technical knowledge' (0.64), 'operational competence' (0.59) and 'explain logically' (0.41).

Overall Expertise (Factor 2) - The second factor included only one statement namely 'overall competent' (F.L. = 0.95). The overall mean score of factor is 3.39 revealed that respondents are averagely satisfied with respect to overall expertise of staff. The factor explained 17.30 percent of variance and the value of communalities arrived at 0.94.

C. Service Delivery Process

Service Delivery Process comprised nine statements namely working timing of hospital suit you, feel satisfied administrative function, laboratory services, blood bank services, conductive interaction with frontline staff, housekeeping services, supportive staff, grievances handling system, overall process quality is good.

The KMO measure of sampling adequacy value was found to be 0.642 and BTS as 562.526 (dof = 21 and Sig = 0.000) (Table III), which supported the relevancy of factor analysis. The application of varimax rotation method at 3 iterations helped

in identifying two factors (Table IV). The factors are discussed as below.

Supportive Staff (Factor 1) - The first factor comprised four statements. These statements with factor loading include 'good housekeeping services' (0.81), 'listening ability of supportive staff' (0.77), 'interaction with frontline staff' (0.70) and 'grievances handling system' (0.82) explained 31.89 percent of variance out of 56.49. The overall mean scores of factor came out to be 3.24 revealed that respondents are averagely satisfied with respect to process quality of supportive staff. The value of communalities for the item which reflect the relative importance of the statements came out to be the highest for 'good housekeeping staff' (0.67) followed by 'listening ability of supportive staff' (0.62), 'interaction with frontline staff' (0.50), 'grievances handling system' (0.41).

Supportive Facilities (Factor 2) - The second factor included three statements namely 'administrative function' (F.L. = 0.71), 'laboratory services' (F.L. = 0.65) (Sharma & Chahal 2003) and 'blood bank services' (F.L. = 0.84) explained 24.59 percent of variance. The overall mean scores of factors came out to be 2.49 revealed dissatisfaction among respondents towards service delivery process quality of hospital. The value of communalities for the item which reflect the relative importance of statements came out to be highest for 'blood bank services' (0.71) followed by 'administrative function' (0.55), 'laboratory services' (0.46).

TABLE III: KAISER - MEYER - OLKIN MEASURE OF ADEQUACY, CUMULATIVE VARIANCE AND MEAN SCORE VALUES FOR COMPONENTS OF PHYSICAL ENVIRONMENT QUALITY

	Attitude & Behavior	Expertise	Service Delivery Process
Kaiser – Meyer – Olkin Measure of Adequacy	0.874	0.886	0.642
Bartlett's Test of Sphericity	3927.339	1473.116	562.526
Degree Of Freedom	120	28	21
Significance	.000	.000	.000
Cumulative Variance	73.19	55.353	56.492
Mean	3.26	3.63	2.92

TABLE IV: FACTOR WISE MEAN, FACTOR LOADING, KMO, VARIANCE EXPLAINED, COMMUNALITIES AND EIGEN VALUE

Factors	Mean	Factor Loading	KMO	% of V	Communalities	Eigen Value
Attitude & Behaviour	3.33		0.874			
F1 – Nurses	2.93			27.78		4.44
Behavior with your friends and relative	3.16	0.79	0.900		0.80	
Explain about technical treatment	3.02	0.73	0.938		0.70	
Attitude and behavior	2.96	0.84	0.881		0.76	
Helpful and supportive	2.96	0.57	0.937		0.68	
Caring	2.91	0.78	0.898		0.67	
Answer queries	2.80	0.83	0.920		0.75	
Listening ability	2.76	0.83	0.912		0.78	
F2 – Doctors Attitude	3.56			20.78		3.32
Communication with staff	3.71	0.76	0.911		0.68	

Helpful and supportive	3.61	0.83	0.864		0.77	
Attitude	3.51	0.75	0.858		0.71	
Patient involvement	3.44	0.72	0.917		0.55	
F3– Technical & Supportive Staff	3.57			14.17		2.26
Availability	3.68	0.78	0.832		0.69	
Attitude & behavior	3.57	0.84	0.774		0.83	
Friendly & helpful	3.47	0.76	0.775		0.75	
F4 – Doctors Behaviour	3.26			10.45		1.67
Professional values	3.32	0.64	0.832		0.74	
Answer queries satisfactory	3.21	0.71	0.804		0.79	
Cumulative Variance Explained				73.19		
Expertise	3.52		0.888			
F1–Individual Expertise	3.65			48.96		3.91
Physician expertise	3.87	0.81	0.887		0.67	
Operation competence	3.85	0.69	0.863		0.59	
Technical staff are expertise	3.77	0.71	0.878		0.64	
Diagnosis diseases correctly	3.70	0.79	0.859		0.67	
Nursing expertise	3.65	0.82	0.897		0.71	
Technical knowledge	3.65	0.71	0.926		0.64	
Explain logically	3.12	0.64	0.926		0.41	
F2 – Overall Expertise	3.39			17.30		1.38
Overall competent	3.39	0.95	0.880		0.94	
Cumulative Variance Explained				66.26		
Process Quality	2.86		0.642			
F1 – Supportive Staff	3.24			31.89		2.23
Good housekeeping services	3.44	0.81	0.682		0.67	
Listening ability of Supportive staff	3.34	0.77	0.676		0.62	
Interaction with frontline staff	3.28	0.70	0.701		0.50	
Grievances handling system	2.92	0.62	0.747		0.41	
F2 – Supportive Facilities	2.49			24.59		1.72
Administrative function	2.65	0.71	0.564		0.55	
Laboratory services	2.48	0.65	0.593		0.46	
Blood bank services	2.36	0.84	0.532		0.71	
Cumulative Variance Explained				56.49		

D. Relationship Among Service Interaction Quality Dimensions: Attitude & Behaviour, Expertise and Service Delivery Process

The direct effect of independent factors attitude & behaviour (Chahal and Sharma, 2004), expertise and service delivery process on dependent variable service interaction quality is predicted with the help of regression analysis (Brady & Cronin, 2001). The results revealed the model explains about 27 percent variance ($R^2 = 0.27$) (Table V). The beta coefficient values and

t value with regard to three components namely expertise ($\beta = 0.44$, $t = 8.37$) and service delivery process ($\beta = 0.28$, $t = 5.06$) at significance level 0.000 and 0.000 respectively revealed that expertise and process quality have significant and positive impact on interaction quality. On the other hand, the attitude & behaviour depicts negative impact on service interaction quality as beta coefficient value was found to be - 0.19 at significance level of 0.001. Thus the results refute that attitude & behaviour have always positive affect on service interaction quality. Among the three factors higher effect is of expertise followed by service delivery process and attitude & behaviour.

TABLE V: MEAN, BETA COEFFICIENT, T, P, R² AND DURBIN WATSON VALUES OF SERVICE INTERACTION QUALITY DIMENSION ATTITUDE AND BEHAVIOUR, EXPERTISE AND SERVICE INTERACTION QUALITY

	Mean	Beta Value	t Value	P Value	R ²	Durbin Watson
Overall Mean	3.09	-	-	-	.278	1.612
AB	3.26	-.199	-3.380	.001		
E	3.63	.443	8.374	.000		
PQ	2.92	.288	5.064	.000		

E. Discussion

Overall we find support for hypothesized relationship. The finding of study indicate affect of attitude & behavior, expertise and service delivery process on service interaction quality as per service research perception (Brady & Cronin 2001). The result indicated that expertise of service provider is more significant in degree of service interaction quality followed by service delivery process and attitude & behavior of staff.

F. Attitude and Behaviour

The mean score of Attitude & Behaviour showed average level of satisfaction with respect to doctors' attitude (3.56), doctors' behavior (3.26), technical & supportive staff (3.57). Respondents are dissatisfied with respect to nurses (2.93) specifically towards help & support of nurses, mean score of 2.96 reveals below average satisfaction with respect to behaviour and nature of nurses. The mean score for 'nurses are always ready to listen what you have to say' came out to be below average i.e. 2.76. The respondents remarked that nurses rarely listen to their problems. They also remarked that nurses do not reply there queries properly (2.80) and are not caring (2.91).

G. Expertise

The staff expertise is found to be function of items namely physician expertise (3.87), operation competence (3.85), operation competence (3.85), technical staff expertise (3.77), diagnostic expertise (3.70), Nursing expertise to treatment process (3.65), technical knowledge (3.65) and explain logically (3.12) scored average mean score. Depicting average level of satisfaction of patients towards expertise of staff (3.52).

H. Service Delivery Process

Service delivery comprised of items related to process quality showed average level of satisfaction towards housekeeping service (3.44), service delivery of supportive staff (3.34), interaction with frontline staff (3.28). Respondents are specifically dissatisfied with administrative function of health care unit came out to be below average i.e. 2.65. The mean score for well equipped laboratory services of hospital came

out to be 2.48. Respondent also showed below average (2.36) dissatisfaction for blood bank services. Score of 2.92 reveals that patient is dissatisfied from hospital grievances handling system.

I. Implications

The study results suggest several managerial implication which help in providing satisfaction to service user by operationalize service interaction quality. Service Interaction Quality is basically related to attitude & behavior, expertise and service delivery quality of service provider. In high contact service like healthcare attitude and behavior of service provider and frontline staff is most important. The study results reveal that patients are not satisfied with hospital staff (2.56) in general and with respect to nurses in particular. They stated that nurses are not helpful and supportive (2.96), inconsiderate to their problem (2.76), as well as their queries (2.80) and unavailability at the time of need (2.91). These are considered to be the major dimensions responsible for lower level of satisfaction of respondents. In order to avoid these nurses should be polite, friendly, sympathetic and courteous to the patients under all circumstances (Sharma & Chahal, 2003). The nurses should be given spiritual training along with their technical training to deal nicely with patients. Further, the staff nurses should perform general duties & responsibility in an effective and competent manner like assisting the patients and their relatives. In addition nursing staff should also enhance technical nursing care quality. The love and affection of nurses can help the patients in recovering from their diseases quickly (Chahal & Sharma, 2003). In general, overall the staff should be caring, sympathetic and courteous to patients. To make this happen, the staff should be given formal training and half yearly or quarterly seminars should be arranged. The staff member whose response found to be satisfactory should be given appreciations awards to empower them with necessary updated skills & capabilities in the form of best doctor, nurses and supportive staff such awards should be created to set up example for the other staff. The respondents are also dissatisfied from service delivery process of health care unit. The public hospitals are managed by superintendent with the help of senior doctors. For efficient and effective health system and sound management it is essential to have specialized management departments like personnel, material, finance, sanitary inspection, etc. Further specialists should be recruited in each department for efficient

and proper administration of hospital. Further, the respondents complained about laboratory services. In order to avoid this, the management should provide proper life saving facilities, like X - rays, oxygen, glucose, ECG, etc. The patients should not be sent to private clinic for medical test and all tests should be made available in the hospital. The management must aware the masses about their social responsibility and benefits of blood donation. Patient also complaint about availability of blood in blood bank. The management must aware the masses about their social responsibility and benefit of blood donation through various advertising media such as respective TV, website, plays, pastors, etc. Further, blood donation camp can be organized monthly to root out blood shortage problems. In addition regular donor should get life time membership with blood bank and some public responsibility reward should be given to such donors. Grievances handling redressal cell should be established so that the patients can get quick relief in case of any grievances. Above all the problems of patients and their relatives should be taken into consideration and implemented if suitable to create healthy participative environment.

J. Limitation and Future Research

The study brings in certain interesting findings; through it will not be out of place to mention here some of its major limitation study is limited to Service Interaction Quality. The future research on Physical Environment Quality with interaction quality can come out with new results. The model suggested SIQ comprise of Attitude and Behaviour, Expertise and Service Delivery Process further the impact of social factor, tangibility, zone of tolerance, customers' mood, can also be included to gain more knowledge about quality of service. The study focus on a single healthcare unit may also limit the extent to which the findings can be generalized. As Interaction Quality vary between low contact, medium contact and high contact services. Study recognizes the need for future replication of our model in alternative service industries like higher education, airlines, retailer to validate the results. An understanding of Attitude and Behaviour, Expertise and Service delivery Process is a first step toward effective service delivery and achieving positive customer perception, as applicability of Service interaction quality not required more financial expenditure the concentration and dedication of higher authority towards service interaction quality can implement these strategies in short run to achieve higher profitability in long run.

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