

Service Encounter Related Process Quality, Patient Satisfaction, and Behavioral Intention

NANDAKUMAR MEKOTH

Goa University, India

GEORGE P. BABU

The University of Southern Mississippi, USA

VIDYA DALVI

Government College, Quepem, Goa, India

NIRMALA RAJANALA

Goa University, India

KHUSEYN NIZOMADINOV

City Healthcare, Tajikistan

This study identifies some of the critical service encounters that the outpatients undergo in a health care facility and investigates whether the service encounter related process quality as perceived by the patients leads to patient satisfaction, repeat visit, and recommendation intentions. Personal visits, observations, and enquiries at the outpatient center have been conducted to identify the various service encounters that outpatients undergo in the hospital. Exit interviews of the outpatients have been conducted to identify service encounter related process quality variables which determine patient satisfaction and behavioral intentions. A preliminary scale to measure service encounter related process quality was developed and its factor structure and internal consistency reliability were established. The study reveals that both the physician quality and laboratory quality have been found to be significantly related to patient satisfaction. However, quite interestingly, courtesy shown by the registration or outpatient staff, perceived length of waiting time, or even the salient aspects of the servicescape, did not influence patient satisfaction.

Key words: service encounter, process quality, patient satisfaction, behavioral intentions, India

Introduction

Service quality is an important element in services marketing. The service quality framework varies from service to service, as services are heterogeneous. Researchers argue that the distinctive nature of services requires a distinctive approach in defining and measuring

service quality. The service marketers are considering various constructs like service quality, consumer satisfaction and behavioral intentions while planning and developing the marketing strategies. Extensive Research has been done to conceptualize service quality (Parasuraman et al. 1985; Zeithaml, Berry, and Parasuraman 1988). Researchers suggest that customers do not perceive quality in a uni-dimensional way (Zeithaml et al. 2008), but they perceive it as multidimensional and at multi-levels (Liu Chu-Mei 2005). Process quality is one of the important dimensions of service quality (Brady and Cronin 2001; Marley, Collier and Goldstein 2004; Lehtinen and Lehtinen 1991).

Health care is one of the people processing services which involve high-contact encounters. The level of involvement of the patient as well as the doctor in the health care process is high. The process quality is equally important to evaluate the service delivery process. In the case of health care services, quality judgments may be attributed to the either the clinical outcome quality or the process quality of the service delivery. While the outcome quality in certain cases can be judged by the patient in the form of symptomatic relief, the judgment is difficult in many cases, it being rife with credence qualities. However, it is easier to judge the process quality if the patients are in a reasonably fit condition, which most of the outpatients generally are.

Most of the studies have included some blend of the clinical and process quality criteria but have not separated their effects. (Marley, Collier, and Goldstein 2004). The theoretical and empirical findings across the different health care settings emphasize the relative importance of process quality in determining patient satisfaction and future intentions (Lehtinen and Lehtinen 1991; Boshoff and Gray 2004; Shemwell and Yavas 1999; McAlexander, Kaldenberg and Koenig 1994; Lytle and Mokwa 1992).

Since quality and satisfaction are experienced by the patient, it is appropriate to judge them from the point of view of the patient. Hence, the present study is based on the perceptions of the patients. The present study uses subjective judgments of process quality by the outpatients. It aims to identify the major service encounters that the outpatients undergo in a hospital and then goes on to investigate whether higher perceived service encounter related process quality leads to higher patient satisfaction, and the formation of repeat visit and recommendation intentions. It also investigates the moderating role of patients' income to predict their satisfaction. This study is undertaken with the additional objective of understanding how

the non-Western context provided by a country like India might differently impact patient expectations, satisfaction, and loyalty. Given the background of the investigators, we have attempted to root this study within the cultural framework of how Indians understand their healthcare system while at the same time holding firm the objective values of scientific investigation.

SERVICE QUALITY

Service quality is viewed as a unique construct (Taylor and Baker 1994). Service quality should be conceptualized and measured as an attitude (Cronin and Taylor 1992). Extensive Research has been done to conceptualize service quality as perceived by the service provider and the customer (Zeithaml, Berry, and Parasuraman 1988; Brady and Cronin 2001; Marley, Collier, and Goldstein 2004). Service quality is perceived as a customer's subjective interpretation of his or her experience.

Lehtinen and Lehtinen (1991) have applied the two-dimensional approach, i. e. process quality (production process) and output quality (result of production process) in dance restaurants. Marley, Collier, and Goldstein (2004), have divided the service quality framework into clinical quality (medical outcome and 'what' is delivered) and process quality ('how' the service is created and delivered) in hospitals. Lehtinen and Lehtinen (1991) have also applied the three dimensional approach, i. e. physical quality, interactive quality, and corporate quality in dance restaurants. The SERVQUAL model developed by Zeithaml, Berry, and Parasuraman (1988) has five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. They have also developed a ten dimensional model, i. e.: credibility, security, access, communication, understanding the customer, tangibles, reliability, responsiveness, competence, and courtesy, and a perceived service quality model based on 4 gaps, i. e. knowledge gap, standard gap, delivery gap and communication gap (Zeithaml, Berry, and Parasuraman 1988). Based on theoretical and empirical evidences, researchers still claim that the service quality construct is complex.

Health care is one of the people processing services which involve high- contact encounters. The level of involvement of the patient as well as the doctor in the health care process is high. The health care service delivery process includes both the medical treatment as well as other related factors, like physical structure, encounter and interaction with service personnel, service culture, etc. Considering all these aspects in toto, a patient as well as his/her family mem-

bers may evaluate the level of the service quality. 'A problem arises when patients are asked to evaluate the quality of those services that are high in credence characteristics, such as complex medical treatment, which they find difficult to evaluate even after the treatment is completed. A natural tendency in such situations is for patients to use process factors and tangible cues as proxies to evaluate quality' (Lovelock, Writz, and Chatterjee 2006, 390). In the competitive service industries, if core service outcome is the same, the customer may evaluate the service performance in terms of process quality. In the health care settings, the medical treatment and medical outcome may be the same but the process quality framework may vary between the hospitals.

Researchers have tried to integrate the effects of clinical quality and process quality on customer satisfaction and behavioral intentions. The majority of the patients with no or less medical knowledge may not evaluate the clinical quality but may evaluate the process quality. There is limited empirical research which has investigated the relationship between process quality, patient satisfaction and behavioral intentions in the health care sector; however, certain sub-dimensions of process quality have been tested in different service industries.

In the present study, two dimensional service quality constructs i.e. clinical quality and process quality, as conceptualized by Marley, Collier, and Goldstein (2004) have been considered. According to Marley, Collier, and Goldstein, process quality is a result of the service (non-technical) delivery process engaged in during and outside of the medical procedure. Process quality includes making the patient's experience in the hospital proceed efficiently and effectively. Examples of process quality include the level of personalization and patient – service provider interaction, delivery of medication and food to the patient, the efficiency of admission and checkout, and the timeliness and accuracy of hospital bills (Marley, Collier, and Goldstein 2004).

In the proposed study, service encounter related process quality is operationalized as having five dimensions, i.e. servicescape (four items), physician quality (five items), laboratory staff quality (three items), registration staff quality (one item), and waiting time (three items).

We have found very limited research on the relative contribution of these dimensions of process quality to evaluating the customer satisfaction and in the formation of behavioral intentions as perceived by the customers. The present study aims to examine the im-

pact of these dimensions upon patient satisfaction and behavioral intentions. Since it is set in the context of Outpatient departments (OPD) in the government hospitals in India, it also helps us to unravel some of the unique nuances associated with perceived service quality in a developing country context.

PATIENT SATISFACTION AND LOYALTY

The fundamental aim of today's total quality movements has become total customer satisfaction (Kotler, Bowen, and Makens 2004). Consumer satisfaction is the core concept in service marketing literature. Most studies on customer satisfaction are based on the confirmation/disconfirmation of customer's expectations. Satisfaction is seen as a function of confirmation or disconfirmation of expectation and is best conceptualized as an attitude toward service performance (Taylor and Cronin 1994). Satisfaction can be defined as an attitude, like judgment following a purchase act or a series of consumer product interaction (Lovelock, Writz, and Chatterjee 2006). In a health care setting, the customer is a patient. Patient satisfaction is the dominating area in health care research, management and marketing.

In some studies the expectations are defined. Various healthcare attributes are considered to measure patient satisfaction, like value of care (Kim et al. 2008), service value (Cronin et al. 2000). Income and sociodemographic factors (Mummalaneni and Gopalakrishna 1995), waiting time (Mowen, Licata, and McPhail 1993), complaint mechanism (Dolinsky 1995), patient confidence (Reidenbach and Smallwood 1990), admission process, nursing care, pleasantness of surrounding, discharge process (Otani and Kurz 2004), employee behavior (Kattara, Weheba, and El Said 2008), health outcomes and health care process variables (Lytle and Mokwa 1992), staff behavior (Akter, Upal, and Hani 2008), physician care, staff care and access (Otani, Kurz, and Harris 2005). There is a consensus regarding the close relationship between service quality and consumer satisfaction (Mummalaneni and Gopalakrishna 1995).

Increased demand and competition has posed a challenge to service marketers. It will be a wise move on the part of the medical practitioner to analyze patient satisfaction as well as dissatisfaction in order to maximize patient satisfaction (Singh 1990). Patient's satisfaction and dissatisfaction may have an impact on the financial performance of the healthcare provider. Success in retaining or attracting patients may result from patient satisfaction with the medical care they receive. Patient willingness to remain within any delivery system, or with any individual physician, may be due directly to sat-

isfaction or dissatisfaction (Ross et al. 1987). A satisfied customer may or may not become a loyal customer. A loyal customer is more important than a satisfied customer.

Studies demonstrate that service quality has both a direct and indirect effect on attitudinal loyalty and purchase intentions (Carrillat, Jaramillo, and Mulki 2009). The empathy of nursing staff and their assurance enhance the loyalty of patients in the case of private hospitals (Boshoff and Gray 2004). Patients are more likely to return to a hospital if they perceive the fees that they are charged as fair, reasonable and good value for the money paid (Boshoff and Gray 2004). The research findings based on developed countries may or may not be applicable to developing and underdeveloped economies.

The casual relationship between clinical quality, patient satisfaction and behavioral intentions may be proved correct if related to the clinical outcome, i. e. cure, which may be tangible, but, it is difficult to generalize the relationship between process quality, patient satisfaction and behavioral intentions with heterogeneous sociodemographic groups and cross-country hospital settings, as the process quality outcome is more emotional, i. e. care. The patients and the family members do expect a cure as well as the care of a hospital setting. The service encounter related process quality influences the future decision making.

The behavioral intention dimensions, which are more relevant to the service encounter related process quality considered in the present study, are repeat visits and recommendations.

HYPOTHESES

A patient enters a health care facility with the prime motive of medical consultation, treatment and medical outcome. Even in a Government hospital, cure and care are expected. Therefore, we hypothesize that:

H1 *The higher the perceived physician related quality of medical service, the higher the (1) patient satisfaction, (2) repeat visit intention of the patient, and (3) recommendation intention of the patient.*

In a health care setting, a patient undergoes various service encounters. Certain symptoms demand laboratory tests for proper diagnosis of ailment or disease. A patient in a debilitated position or emotionally disturbed situation may expect courtesy, accuracy and co-operation from laboratory staff. It is hypothesized that:

H2 *The higher the perceived laboratory related quality of medical*

service, the higher the (1) patient satisfaction, (2) repeat visit intention of the patient and, (3) recommendation intention of the patient.

The front line staff at the registration counters and OPD staff (other than the physician) can create the first and the lasting impression to remain with the same health care facility. Proposing the same, we hypothesize that:

H3 *The higher the perceived courtesy of the hospital staff, the higher the (1) patient satisfaction, (2) repeat visit intention of the patient, and (3) recommendation intention of the patient.*

Patients are conscious about the alternative service providers. They are well informed about about the competitive strengths and weaknesses of the service providers. Research has proved that the length of waiting time influences patient satisfaction. Researchers have also studied the moderating effect of income and the zone of tolerance with waiting time. It is hypothesized that:

H4 *The higher the perceived length of waiting time, the lower the (1) patient satisfaction, (2) repeat visit intention of the patient, and (3) recommendation intention of the patient.*

Process quality is concerned with 'how' the service is delivered. The service encounter related physician quality and other employee behaviors are the determinants of patient satisfaction and formation of future intentions. Therefore, it is hypothesized that:

H5 *The higher the perceived quality of the observable process dimensions of the medical service, the higher the (1) patient satisfaction, (2) repeat visit intention of the patient, and (3) recommendation intention of the patient.*

Some researchers have examined the mediating and moderating effects of various constructs, like service value, culture, satisfaction, on the relationship between service quality and behavioral intentions. To check the mediated role of patient satisfaction, we propose the following:

H6 *The relationship between the perceived quality of observable process dimensions of the medical service and (1) repeat visit intention of the patient, and (2) recommendation intention of the patient will be mediated by the patient satisfaction.*

Income appears to have a moderating impact on satisfaction. People with higher income appear to be more concerned with the personal dimensions of health care delivery, while lower income groups

appear to be more concerned with value. Customers with higher income are generally found to have a higher opportunity cost for time. Hence patients with higher income are likely to have lower tolerance for delays. Hence it is hypothesized that:

- H7 *The higher the income level of the patient the stronger the relationship between (1) perceived physician related quality of the medical service, (2) perceived laboratory related quality of medical service, (3) perceived courtesy of hospital staff, and (4) perceived length of waiting time, and patient satisfaction.*

The Study

DESIGN

This study was conducted in the Goa Medical College and Hospital, Goa, India, a major healthcare facility owned by the government providing free medical service. Hospitals established by the government are generally less subject to market forces for they have a captive population to serve. Profit-oriented organizations operate in the market environment and have to survive in the face of competition. To generate profit, the performance has to be equal (if not better) compared to competitors, and prices have to be sufficiently higher than their costs (Srinivasan 2004). In the given market there are two types of healthcare service providers, some being in the private sector which charge for the services they provide, and the others in the public sector providing free service except for the cost of medicines. The private medical facilities are normally visited by higher income patients who can afford the services, while the free medical facility is frequented by lower income patients. However, a free medical facility being a major one with expert physicians and costly facilities is sometimes preferred even by high income groups, particularly in the case of critical and complicated cases.

The exit interview questionnaire was administered to outpatients at the OPD section of the said hospital. A total of 209 patients were interviewed. We got a fairly balanced age distribution for the respondents (ages: 18–34 = 31; ages: 35–54 = 89; ages: 55–74 = 82; ages: 75–89 = 7). However, out of the respondents, 155 (74.2%) were males. Most of the respondents had completed at least high school level education. However, 22 respondents whom we interviewed were illiterate. In the case of these respondents, we read to them a form of the questionnaire translated into the local tongue (Konkini) and took their responses. Regarding marital status, 175 respondents were in an active marital relationship. The employment distribution was as follows:

Private employees: 64 (30.6%); Government employees: 49 (23.4%); Housewives: 34 (16.3%); Own business: 28 (13.4%); Retired: 23 (11%); Students: 5 (2.4%); and Others: 6 (2.9%). Location-wise, 40.6% were urban residents while the remaining 59.4 were from rural areas. A total of 110 respondents met a specialist doctor, whereas 99 met only a general physician. Around 50% of the respondents reported that their monthly income was less than 5000 Indian rupees (close to \$110, according to the current exchange rate).

ANALYSIS

Dimensions of Service Process Quality

The quality of service in the context of measurement of patient satisfaction was found to comprise medical outcome, access to health care, personal characteristics and disease characteristics (Turner and Pol 1995). Medical outcome and disease characteristics have been excluded from this study, since the focus is on encounter related process dimensions. In order to identify the determinants, the typical process an outpatient undergoes has been first mapped. In a typical service encounter a patient passes through a number of service points at the hospital. These are the registration counter, the outpatient department where the physician is located, and the laboratories (in case of any tests to be carried out).

Outpatients are generally in a condition in which they are able to judge process quality, which is not the case for many inpatients due to their debilitated condition. Unstructured open-ended interviews have been conducted in order to identify variables which determine patient satisfaction. The exit interviews asked outpatients about the factors with which they were particularly happy, as well as factors about which they were particularly unhappy. The researchers were able to identify sixteen variables through this process. The interviews revealed that the patients were generally happy about the physicians. Patients expressed satisfaction about explanations given by the physicians. Many of the patients were happy about the Knowledge, Concern, Confidence, and Courtesy of the physicians. Patients have expressed concern about the courtesy, efficiency and friendliness of laboratory staff, while the feelings about these were mixed in nature. There was considerable unhappiness among patients about waiting time at the registration counter and outpatient departments, which was unavoidable. The experience of waiting at the outpatient departments was considered uncomfortable by many patients. The unhappiness about waiting at laboratories was relatively less. Some

of the patients expressed that they had an option to give the samples for testing and could return to collect the results later.

An instrument comprising the sixteen variables which determine service quality was developed to facilitate further data collection. The questionnaire also included items measuring satisfaction, behavioral intentions such as intention to revisit and recommendation.

Scale Validity and Reliability

In order to determine the dimensionality of the scale, an exploratory factor analysis with varimax rotation was performed. The sixteen items were loaded onto four dimensions explaining 66.011 per cent of the total variance. An examination of the variables belonging to the four factors revealed that the dimensions corresponded to physician quality, laboratory quality, courtesy and waiting time in that order. Scale reliability was assessed by computing Cronbach's Alpha for each of the dimensions separately and for the entire scale. In order to determine how each item contributes to the dimensions as well as to the scale, the coefficient alpha was calculated by deleting each of the items. This process resulted in the deletion of one item each from physician quality, courtesy and waiting time. Finally the scale with thirteen items which had the maximum reliability score was accepted. The final scale with constituent dimensions and significant factor loadings is given in table 1. The scale had an acceptable reliability level. The constituent dimensions also had acceptable reliability, except for the waiting time dimension which is also very close to acceptability.

Items constituting the process quality dimensions were expected to be related to the following:

1. Physician quality: explanation; knowledge; confidence; concern; and, courtesy.
2. Laboratory staff quality: efficiency; friendliness; and, courtesy.
3. Front office staff quality: courtesy.
4. Waiting time: at registration; at the OPD; and, at the laboratory.

We had anticipated that servicescape quality would emerge as a separate factor (items such as the location of the outpatient department (OPD); registration counter; registration procedure; layout; and comfort). However, this did not happen. While servicescape is an essential element of any service production-consumption system, the nature of customers making use of government hospitals in a country like India (as a patient put it in her own words: 'we don't expect our government to give us anything other than the treatment; a smile

TABLE 1 The scale dimensions and factor loadings

Item	Component			
	1	2	3	4
<i>Physician Quality</i>				
Explanation by Doctor	0.875			
Doctor's Knowledge	0.832			
Doctor's Confidence	0.740			
Doctor's Concern	0.719			
Courtesy of Doctor	0.579			
Comfort at OPD	0.461			
<i>Laboratory Staff Quality</i>				
Efficiency of lab staff		0.811		
Friendliness of lab staff		0.795		
Courtesy of lab staff		0.745		
Waiting time lab		0.685		
<i>Front Office Staff Quality</i>				
Courtesy OPD Staff			0.806	
Courtesy Regist. Staff			0.714	
Location of OPD			0.606	
<i>Waiting Time</i>				
Waiting at Registration				0.841
Waiting time OPD				0.720
Registration system				0.619
Variance Explained	20.810	18.322	14.840	12.039

NOTES Extraction method: Principal Component Analysis; Rotation method: Varimax with Kaiser Normalization, a rotation converged in 6 iterations.

from a government doctor itself is a luxury') would make us think this is not an unusual result.

Testing of Hypotheses

The first four hypotheses are related to the relationship between perceived encounter service quality and three outcome variables, namely patient satisfaction, repeat visit intention and recommendation intention. These hypotheses have been tested by estimating the following regression equations:

$$Y_1 = a_1 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e_1$$

$$Y_2 = a_2 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e_2$$

$$Y_3 = a_3 + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + e_3$$

where y_1 denotes patient satisfaction, y_2 denotes repeat visit inten-

TABLE 2 Standardized coefficients of the predictors in regression equations for independent effects on Satisfaction, Repeat Visit Intention and Recommendation Intention

Determinant	Satisfaction	Repeat Visit Intention	Recommendation Intention
Physician	0.396***	0.067	0.039
Laboratory	0.288***	0.302***	0.336***
Courtesy	0.049	-0.010	-0.065
Waiting time	-0.050	-0.114	-0.078
R ²	0.356	0.086	0.089

NOTES ***Significant at $p < 0.05$.

TABLE 3 Standardized coefficients for testing mediation effect of Satisfaction

Determinant	Satisfaction	Repeat Visit Intention	Recommendation Intention
Quality Only	0.504***	0.202**	0.195**
<i>Simultaneous Testing</i>			
Quality		0.074	0.037
Satisfaction		0.249**	0.312***

NOTES *** Significant at 1% level, ** significant at 5% level.

tion, y_3 denotes recommendation intention and X_1 through X_4 (SPSS factor scores) denote (1) physician related, (2) laboratory related, (3) courtesy related, and (4) waiting time related service encounter quality. The results of this regression analysis in terms of significance and magnitude of beta coefficients of the equations and the variance explained in terms of the R^2 are indicated in table 2.

The fifth hypothesis (H5) has been tested by regressing patient satisfaction, repeat visit intention and recommendation intention on perceived encounter service quality. The composite score of perceived service quality has been calculated by summing the individual dimensions of the perceived encounter quality. The results of the regression analysis are indicated in the first row of coefficients in table 2. The mediating role of patient satisfaction in the relation between perceived service quality and repeat visit intention and recommendation intention is tested using the procedure specified by Baron and Kenny (1986). The result of this analysis is provided in the last two rows of table 3.

The moderating role of income in the prediction of satisfaction by the dimensions of perceived encounter service quality as specified by the seventh hypothesis has been tested first by estimating the F ratio as per the procedure advocated by Chow (1960). The Chow test

TABLE 4 Standardized coefficients for testing Moderation Effect of Income on Prediction of Satisfaction

Determinant	Regression with Average Scores		Regression with Factor Scores	
	Low Income	High Income	Low Income	High Income
Physician	0.438***	0.352***	0.501***	0.450***
Laboratory	0.353***	0.207	0.433***	0.180
Courtesy	-0.046	0.133	0.100	0.220
Waiting time	0.054	-0.128	0.192*	0.083
R ²	0.458	0.275	0.469	0.249

NOTES *** Significant at 1% level, * significant at 10% level.

resulted in an F ratio of 1.72508 for 5 degrees of freedom in the numerator and 113 degrees of freedom in the denominator. However, subsequently the observations were divided into low income and high income groups by splitting the file at the median income, and separate regression equations were estimated to predict satisfaction with the four dimensions of perceived encounter service quality. The procedure was repeated using the factor scores of the dimensions of perceived encounter service quality as predictor variables. The results of these analyses are given in table 4.

Both the physician quality and laboratory quality have been found to be significantly related to patient satisfaction. However, courtesy and waiting time have been found to be unrelated to patient satisfaction. This indicates that the physician is a key variable in the healthcare service. Patients do expect a proper explanation from the physician about their condition of health, possible reasons, need and importance of treatment, possible outcomes of treatment, instructions to be followed during treatment regime and time required for recovery. Apart from the explanation given, the knowledge and confidence shown by the physician is also important in predicting the patient satisfaction. Patient judgment of knowledge and confidence corresponds to the assurance dimension of the service quality and it plays a very important role in instilling confidence in the patients. It is important to note that the concern and courtesy shown by the physician are important in the determination of patient satisfaction, while those by registration and OPD staff are not. However physician quality was not found to predict repeat visit intention and recommendation intention.

Conclusion

This study examined the role of service related processes in generated outcomes such as patient satisfaction and loyalty. While the

present study affirms that both the physician quality and laboratory quality are significantly related to patient satisfaction, quite interestingly, courtesy shown by the registration and OPD staff, perceived length of waiting time, or even the quality of the servicescape, did not influence patient satisfaction. As we highlighted in the review of the literature, in most studies conducted in the West, every dimension of process quality emerged as a significant determinant of patient satisfaction and loyalty. The different socio-cultural-economic settings in India could possibly explain the disparity of the results of this study with those of other studies.

Given that most patients who visit government run-hospitals come from the relatively poor strata of the society, their focus will be more towards the core product than the augmentations to it. However, as Kumar, Kim, and Pelton (2009) observe, the Indian consumer psyche is undergoing a great transition now and it may be just a few years until they become more demanding when it comes to the augmented products related to healthcare. The thriving business of medical tourism in India has caused many private hospitals to upgrade every aspect of service quality to a level comparable with that of the West (George and Henthorne 2009). Along with this, an increasing number of people belonging to the middle class in India now go to Western Europe and North America for medical treatments. In addition to this, the recent past has witnessed a massive repatriation of Indian nationals back to home, mainly from North America. These trends might lead to heightening the expectations of service quality among Indian patients.

Nilchaikovit, Hill, and Holland (1993) observe that many Western studies on Asian healthcare systems do not take into account the patients' self-concepts and patterns of self-other relationships, which are largely culturally determined, and are essential for an objective understanding of the patients' experience of illness, expectations, and perceptions of available healthcare services. Self concepts can profoundly affect the quality of the physician-patient relationship and medical care, too. Research by Donthu and Yoo (1998) shows that consumers from cultures high on power distance and high on collectivism exhibit lower levels of service quality expectations. These researchers also point out that individuals from long term oriented cultures do not demand high service quality in comparison with their counterparts from short term oriented cultures. Indian culture scores high on all three of these dimensions (Hofstede 1984). Since providing service quality involves cost, differentiating based on cultural differences does make sense.

An alternative explanation, one that is less culture-centric, is that perceived courtesy of hospital staff and perceived length of waiting time could be hygiene factors which may cause dissatisfaction if staff are discourteous or if the waiting time is too long. Hence, they may not have a positive relation with satisfaction but may have a relation with dissatisfaction. This conjecture emerges from an adaption of Herzberg's two factor theory of motivation (Herzberg, Mausner, and Snyderman 1959): satisfaction and dissatisfaction as two different constructs rather than a continuum and they are influenced by different factors. Herzberg reasoned that because the factors causing satisfaction are different from those causing dissatisfaction, the two feelings cannot simply be treated as opposites of one another. The opposite of satisfaction is not dissatisfaction, but rather, no satisfaction. Similarly, the opposite of dissatisfaction is no dissatisfaction. Swan and Combs (1976) also refer to a similar logic: instrumental performance dimensions of the service process (the core acts that constitute the service) yield satisfaction whereas expressive performance dimensions of service performance (the peripheral acts that add value to the core acts) yield dissatisfaction. However, to validate this conjecture further research is required.

As part of the present study, we also developed a scale to measure the quality of service process in an outpatient clinical setting. While this was not one of the objectives of the study, a scale like this may be useful for future researchers who want to investigate other issues related to process quality. None of the existing scales did a good job when it came to measuring outpatient service process quality. Wisniewski and Wisniewski (2005) have developed a scale somewhat similar to the present one, but it was specifically meant to be used in a colposcopy setting. At the other extreme, we have found some scales such as Babakus and Mangold (1992) which attempt to measure overall service quality with hospitals. We admit that this is a preliminary instrument and thus can be adapted to other studies only after verifying its convergent, discriminant, and nomological validity. It is very important to have a valid and reliable scale to measure service process quality in the clinical outpatient setting, and the one that we developed for the present study may become a good starting point for that.

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