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The relationships between service quality, customer satisfaction and buying intentions in the private hospital industry

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The objective of this study was to investigate whether superior service quality and superior transaction-specific customer satisfaction will enhance loyalty (as measured by purchasing intentions) among patients in the private health care industry. The research design allowed an assessment of the relative impact of individual dimensions of service quality and transaction-specific customer satisfaction on two dependent variables, namely loyalty (as measured by intentions to repurchase) and customer satisfaction, the latter measured as 'overall' or cumulative satisfaction.

The results reveal that the service quality dimensions *Empathy of nursing staff* and *Assurance* impact positively on both Loyalty and Cumulative satisfaction.

The customer satisfaction dimensions *Satisfaction with meals*, *Satisfaction with the nursing staff* and *Satisfaction with fees* all impact positively on both Loyalty and Cumulative satisfaction

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Introduction

Every marketing textbook exhorts marketers to differentiate themselves from competitors and competing brands (Lamb, Hair, McDaniel, Boshoff & Terblanche, 2004). The suggested differentiating variables range from branding to convenience to price differentiation. However, many if not most firms operate in markets where competing firms have very similar cost structures which make price competition difficult.

As most of the differentiating variables suggested in the literature are easily copied by competitors, many firms are focusing their efforts on quality of customer service as a means of differentiation. Providing quality that meets or exceeds customer expectations has become a major source of competitive advantage for many firms as it reduces price elasticities and builds loyalty and customer retention (Anderson & Fornell, 1994:242). Service quality has also been shown to be an important driver of customer satisfaction both from a theoretical viewpoint (Heskett, Sasser & Schlesinger, 1997) and empirically substantiated in a variety of industries (Anderson & Sullivan, 1993; Churchill & Suprenant, 1982) including service industries such as tourism (Green & Boshoff, 2003) and health care (Woodside, Frey & Daly, 1989).

The empirical findings of studies investigating the relationships between service quality, customer satisfaction and their outcomes have found broad support (Loveman,

1998: 18-31; Anderson & Mittal, 2000) for the relationships described in the Service-Profit Chain suggested by Heskett, Sasser and Schlesinger (1997). These relationships have, however, not been considered in the South African private hospital industry. This study thus attempts to assess what dimensions of both customer satisfaction and service quality drive 'overall satisfaction' and loyalty in the South African private hospital industry.

Service quality

The first attempt to describe and define service quality was the paradigm suggested by Grönroos (1983) who distinguished between technical quality (what is done) and functional quality (how it is done). The early work of Grönroos (1983) was later extended by Parasuraman, Zeithaml and Berry (1985:42). They argued that to fully understand service quality, the *intangible*, *heterogeneous* and *inseparable* nature of services must be acknowledged and that service quality can be defined as the consumer's overall impression of the relative inferiority/superiority of the organisation and its services (Bitner & Hubbert, 1994) or as the customer's assessment of the overall excellence or superiority of the service (Zeithaml, 1988). In these terms service quality means conforming to customer expectations (Lewis & Booms, 1983) and implies, from a consumer perspective, the comparison of customer expectations with customer perceptions of actual service performance (Parasuraman *et al.*, 1985).

The concept of customer satisfaction

In the service environment, one customer satisfaction-related debate is of particular importance, namely whether customer satisfaction is an outcome or a process (Yi, 1991:69). To date there seems to be two schools of thought. Churchill and Suprenant (1982) and Oliver (1989), on the one hand, view customer satisfaction as an outcome resulting from the consumption experience. To Hunt (1977:455), on the other hand, satisfaction is not the pleasure of the experience, it is the evaluation rendered that the experience was at least as good as it was supposed to be. The 'satisfaction as a process' school stresses that satisfaction or dissatisfaction is not inherent in the product but, instead, is the individual's perceptions of that product's attributes as they relate to that individual. Thus, satisfaction is idiosyncratic and, as a construct, is formed by the interaction of perceptual interpretations of the service and consumer expectations of that service. As a consequence, different consumers will have varying levels of satisfaction for an experience which is essentially the same.

Although both schools of thought (satisfaction as an outcome and as a process) have been widely recognised, the process-oriented approach seems more appropriate in the service environment given that consumption is an experience and consists of collective perceptual, evaluative and psychological processes that combine to generate consumer satisfaction. In addition, the nature of services (eg, intangibility) and the peculiarities of marketing services (eg, inseparability) necessitate a distinction between 'overall' or cumulative satisfaction and satisfaction with a specific service encounter (transaction-specific satisfaction), an important distinction which is often ignored (Bitner & Hubbert, 1994; Voss & Parasuraman, 1995).

From an encounter-specific perspective, satisfaction is viewed as a post-choice evaluative judgement of a specific purchase occasion. Most behavioural research can be interpreted as focusing on this conceptualisation. This perspective is insufficient to explain customer satisfaction for, as Bitner and Hubbert (1994) point out, the evaluation of each encounter will not necessarily correlate with the customer's overall satisfaction with the firm or perceptions of the firm's quality. Over time, however, it is likely that multiple service encounters will lead to an overall level of satisfaction.

More recently, research has focused on satisfaction at a more general or organisational level. From this brand-specific perspective, satisfaction is an overall evaluation based on many transient experiences with a good or service over time and, as such, satisfaction can also be thought of as an ongoing evaluation of a firm's ability to deliver the benefits a customer is seeking. Bitner and Hubbert (1994) point out that overall satisfaction is likely to be multidimensional and based on all encounters and experiences with that particular service firm. These multiple encounters may include several interactions with one person as well as experiences with multiple contact persons in the same firm (Oliva, Oliver & MacMillan, 1992). Thus, transactional satisfaction can be considered a contributor and subsequent modifier to a less dynamic attitude of

satisfaction at an organisational level, while overall satisfaction can be considered as the customer's global evaluation of the product/service offering.

No matter how we perceive customer satisfaction, however, there can be no doubt that it is the key to profitability (maybe not the only one, admittedly) over the long term (Oliver, 1997: 10) also in a hospital environment (Raju & Lonial, 2001:140-154).

Loyalty

Some commentators, somewhat cynically, suggest that there are just two types of consumers, namely those who are intrinsically loyal to a brand or store and those potential switchers who, on every purchase occasion again choose between competing offerings (Colombo & Morrison, 1989). Keeping customers loyal is not easy, but its importance can hardly be overstated. In fact, consumer loyalty has been described as *the* marketplace currency for the twenty-first century (Singh & Sirdeshmukh, 2000).

Customer loyalty has been defined in various ways, from a probability of repurchase to proportion of purchase (Sivadas & Baker-Prewitt, 2000). At a general level, customer loyalty is a positive propensity toward a store or brand (East, Hammond, Harris & Lomax, 2000). A critical review of the many definitions of loyalty suggests that loyalty is both a cognitive construct (attitude) and a shopping behaviour (Dick & Basu, 1994; Mellens, Dekimpe & Steenkamp, 1996).

Whilst loyalty in a health care and particularly a hospital environment differs from brand or store loyalty (it is often the physician who makes the choice or strongly influences the choice of a hospital) there can be no doubt that the same benefits of loyalty accrue to a hospital as would to a retailer or bank, for instance.

No matter what the industry under discussion, loyal customers are a competitive asset to any business organisation (Dekimpe, Steenkamp, Mellens & Vanden Abeele, 1997) as customer loyalty serves as a barrier to competitive entry (Aaker, 1991) and thus, by implication, is also a key determinant in predicting market share (Baldinger & Rubinson, 1997; Jacoby & Chestnut, 1978) and profitability (Reichheld, 1996).

The antecedents of loyalty

A review of the literature reveals numerous studies that have reported a positive relationship between satisfaction and measures of repurchase intentions (Bloemer & De Ruyter, 1998; Loveman, 1998; Jones, Mothersbaugh, & Beatty, 2000) and between positive service quality perceptions and loyalty.

The South African health care sector

A fairly 'pure' service sector such as the health care sector can be quite varied, especially with the inclusion of the many ancillary services. Traditionally, the South African health care sector has consisted of two industries, namely,

private hospitals and public hospitals. Recently, a major development in the hospital environment has been the emergence of public/private partnership hospitals (Wilson, 2002:90). Public hospitals are by far the larger industry. In contrast, private hospitals, the majority of which are Hospital Association of South Africa (HASA) members, make up approximately one third of South Africa's hospitals.

The private hospital industry

There are about 178 private hospitals in South Africa. Three groups, namely Netcare, Afrox Health care Limited and Medi-Clinic currently dominate South Africa's private hospital industry. The independents and smaller groups comprise Clinix, Community Health, Curamed, Joint Medical Holdings, Melomed and the Protector Group. The three major players collectively own 80% of hospital beds in the private health care industry (Bhoola, 2002:55).

The South African private health care market is an increasingly competitive environment. Private hospitals in particular compete aggressively to attract patients. As in any other competitive environment competing hospitals have to differentiate themselves in the minds of consumers and ensure

that their patients leave satisfied so as to ensure that they return again and in this way ensure the hospital's long-term survival.

Objectives

The objective of the study was to investigate whether, if a private hospital can differentiate itself by means of superior service quality and superior transaction-specific customer satisfaction, it will be able to enhance loyalty (as measured by purchasing intentions) among its patients. More specifically, an attempt was made to assess which dimensions of service quality and transaction-specific customer satisfaction exert the strongest influence on two dependent variables, namely loyalty (as measured by intentions to repurchase) and customer satisfaction, the latter measured as 'overall' or cumulative satisfaction (Johnson, Anderson & Fornell, 1995).

Figure 1 suggests that meeting consumer needs at the attribute level will enhance cumulative customer satisfaction which will in turn enhance loyalty/buying intentions and by implication profitability as predicted by the Satisfaction-Profit chain (Anderson & Mittal 2000:107-120).

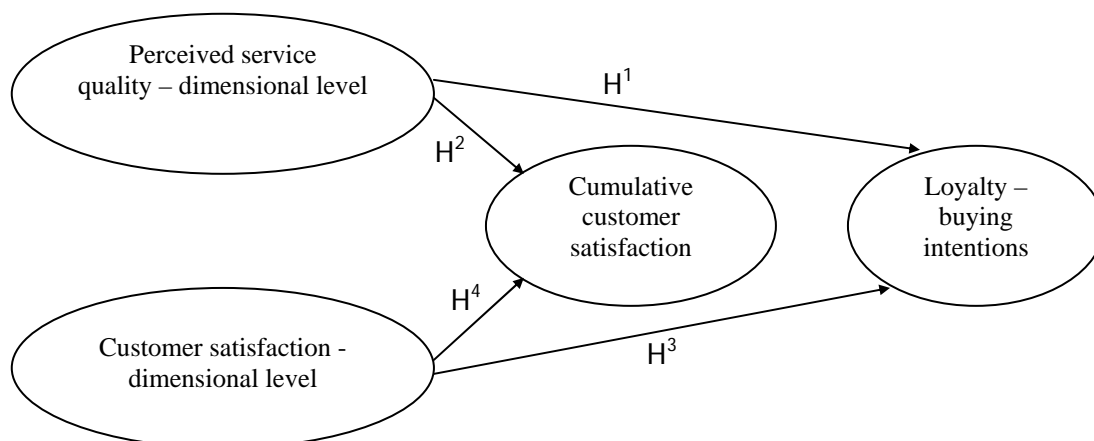


Figure 1: The hypothesised relationships

Hypotheses

To assess the theoretical model depicted in Figure 1 the following hypotheses were considered:

- H¹ There is a positive relationship between perceived service quality at the dimensional level and loyalty as measured by buying intentions
- H² There is a positive relationship between perceived service quality at the dimensional level and cumulative customer satisfaction
- H³ There is a positive relationship between customer satisfaction at the dimensional level and loyalty as measured by buying intentions
- H⁴ There is a positive relationship between customer satisfaction at the dimensional level and cumulative customer satisfaction

The research design

The measures

The best-known method of operationalising service quality is the Gaps Model/SERVQUAL approach suggested by Parasuraman, Zeithaml and Berry (1988). It is based on the 'expectancy disconfirmation' paradigm and measures service quality perceptions (as opposed to so-called 'objective' quality) by comparing customer expectations with the service performance.

During the initial operationalisation, model development and scale development processes Parasuraman, Zeithaml and Berry (1985) suggested that service quality consists of 10 dimensions, namely tangibles, reliability, responsiveness, competence, courtesy, credibility, security, access, communication and understanding the customer. This was

later reduced to just five dimensions, namely reliability, assurance, responsiveness, empathy and tangibles.

To overcome at least some of the problems associated with the use of SERVQUAL (Cronin & Taylor, 1992) service quality was measured along the original 10 dimensions as service quality is a stronger predictor of customer satisfaction (Green & Boshoff, 2003) than the later 5-factor configuration.

The SERVQUAL instrument has been subjected to a fair amount of criticism for its poor validity. Such criticisms include paradigmatic problems, questions about its dimensionality and particularly its poor predictive validity (Buttle, 1995). The problem is that at this moment there is no credible alternative to SERVQUAL to measure service quality. The original version of SERVQUAL, which measures ten instead of five dimensions, was utilised in this study (Zeithaml, Parasuraman & Berry, 1990:21-22) to measure service quality.

Customer satisfaction with the actual hospital experience (at the dimensional level) was measured with 53 statements based on a thorough literature review (Woodside *et al.*, 1989; Jun, Peterson & Zsidisin, 1998; Reidenbach & Sandifer-Smallwood, 1990), as well as on the exploratory study that preceded the empirical survey. Cumulative (or overall) satisfaction, a global assessment as opposed to a dimensional assessment, was used as dependent variable as it has been shown to be a better predictor of loyalty (Olsen & Johnson, 2003:194). Cumulative satisfaction was measured with the following three semantic differentially-scaled items:

- Overall, how satisfied were you with your stay at? (satisfied ↔ dissatisfied)
- How would you rate the overall standard of service at ...? (excellent ↔ poor)
- Did you comment on any aspect of your hospital stay to any hospital staff member (praised ↔ complained)

Because one cannot refer to loyalty in the private hospital industry in the same manner as say, in a retail context (due to the way the buying decision is made), buying intentions were used as a surrogate measure of loyalty. Buying intentions have successfully been used as a surrogate for loyalty in a service environment before (Shaw-Ching, Furrer & Sudharshan, 2001). The dependent variable in this study was thus measured using the following five items:

- I would not mind returning to again in the future
- I would recommend this hospital to family and friends
- In an emergency this is the hospital I would like to be admitted to ...
- I regard myself as a 'loyal' customer of ...
- I would definitely return to this hospital in the future if necessary

All items were linked to a 7-point Likert scale ranging from Strongly Agree (7) to Strongly Disagree (1).

The sample

The sampling procedure can be described as a combination of convenience and random sampling. The hospitals that participated in this study were selected on a convenience basis. Questionnaires were distributed on a random basis to patients who booked into four hospitals belonging to one private hospital group. One hospital in Cape Town, Port Elizabeth, Durban and two in Johannesburg participated in the study. To qualify to participate in the study respondents had to be over the age of 20 years; had to be there to undergo an operation (anaesthetic included); and had to have at least one overnight stay in a hospital ward.

In total 3 800 questionnaires were distributed of which 425 were returned and 323 (or 11,2%) could be statistically analysed.

The questionnaire was a self-administered questionnaire. It was accompanied by a covering letter and information on an incentive to complete the questionnaire, as well as a reply-paid envelope. The questionnaires could be handed in before patients left the hospital or else mailed back once they had returned home.

Data analyses

The data were analysed in three phases. During the first phase the discriminant validity of the instruments used to measure cumulative customer satisfaction and loyalty/willingness to re-purchase was subjected to an exploratory factor analysis. Once a clear factor structure emerged, the internal reliability of each factor was assessed using Cronbach's Alpha. The factors that emerged after the exploratory factor analysis phase were then used as independent variables in four subsequent multiple regression analyses to assess the relationships predicted by the four hypotheses and graphically depicted in Figure 1.

The empirical results

Discriminant validity

To assess the discriminant validity of the instruments used to measure both service quality and customer satisfaction, the remaining items were subjected to an exploratory factor analysis using the computer programme BMDP4M (Frane, Jennrich & Sampson, 1990) by specifying a Maximum Likelihood and a Direct Quartimin oblique rotation (Jennrich & Sampson, 1966) of the original factor matrix.

A variety of different exploratory factor analysis solutions were considered. The results revealed, however, that neither the ten dimensions nor the five dimensions of service quality proposed by Parasuraman *et al.*, (1988), could be replicated. The most interpretable factor structure was the one shown in Table 1. A number of items did not demonstrate sufficient discriminant validity by either cross-loading or not loading to a significant extent and were then deleted. Table 1 shows that the service quality items used from the initial SERVQUAL loaded on seven distinct factors, namely *Communication* (measured by three items), *Credibility* (measured by four items), *Tangibles* (measured by five

items), *Understanding* (measured by six items), *Responsiveness* (measured by four items), *Security* (measured by two items) and *Doctor's responsiveness* (measured by two items).

These dimensions were operationalised as follows:

Communication	the patient receiving information about his condition, treatment, procedures to be conducted and post-discharge treatment/care
Tangibles	perceptions of the cleanliness of the hospital in general and the wards in particular, the neatness of the buildings, the décor in the wards and the appearance of the nursing staff
Empathy of nursing staff	the responsiveness of the nursing staff, their understanding, the adequacy and individualisation of attention, efficiency and a warm/caring attitude
Assurance	hospital caring about its patients, the hospital's reputation, patients' confidence in the hospital and feeling safe there
Responsiveness of administrative staff	speedy admission, efficient in dealing with problems, sincerity in solving problems, responsive to requests
Security	both inside and outside the hospital
Physician responsiveness	physicians attending to the needs of patients and being punctual in doing ward rounds

The items used to measure customer satisfaction were also subjected to an exploratory factor analysis. The most interpretable factor structure is the one reported in Table 2. It shows customer satisfaction in a hospital consists of 7 dimensions, namely *Satisfaction with meals* (measured by six items), *Satisfaction with fees* (measured by four items), *Satisfaction with the nursing staff* (measured by four items), *Satisfaction with the admission process* (measured by three items), *Satisfaction with the theatre experience* (measured by four items), *Satisfaction with the TV service* in the wards (measured by two items) and *Satisfaction with the ward arrival* (measured by two items).

The underlying dimensions of customer satisfaction were operationalised as:

Meals	being tasty, nutritious, attractively presented and at correct temperatures and adequate variety
Fees	that are reasonable, worth the money, value for money and not expensive
Nursing staff	that are cheerful, responsive, kind/caring and adequately skilled
Admission	courteous/helpful, prepared to listen, prompt admission
Theatre experience	receiving pre-med in time, proper preparation for operation, easing of fears, explanation by anaesthetist
TV service in ward	access to a TV that is functioning properly
Ward arrival	being told what to do and where ward facilities are

Internal reliability

The next phase of the data analysis was to assess the internal reliability of the instrument used to test the variables in the theoretical model depicted in Figure 1. This was done by calculating Cronbach Alpha coefficients using the computer programme SAS (SAS Institute, 1990).

Tables 1 and 2 show that all of the instruments used returned initial Cronbach Alpha coefficients above the 0.7 threshold recommended by Nunnally (1978) and Peterson (1994).

Tables 1 and 2 thus confirm the reliability, the discriminant and the construct validity of the instruments used to measure the independent variables used in the subsequent multiple regression analyses.

The regression analyses results

Table 3 shows that the service quality dimensions Empathy of nursing staff ($p < 0,001$), *Assurance* ($p < 0,001$) and *Tangibles* ($p < 0,01$) impact positively on Loyalty as hypothesised. The impact of *Security* ($p < 0,05$) on Loyalty is, however, negative. Hypothesis 1 is thus accepted in terms of these four dimensions but rejected in respect of *Communication*, *Responsiveness* and *Physician responsiveness*.

Table 1: Exploratory factor analysis results for service quality items

Service Quality Dimensions	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
	Comm- nication	Tangibles	Empathy of nursing staff	Assurance	Respons- iveness	Security	Physician responsive- ness
Patients assured of receiving adequate information about their condition	0,945						
Patients assured of receiving adequate information about their treatment	0,890						
Procedures thoroughly explained to patients	0,745						
Discharge care thoroughly explained	0,546						
Spotlessly clean wards at ____		0,866					
____ is a clean hospital		0,801					
____ maintains a neat appearance of buildings		0,602					
Tastefully decorated wards		0,552					
Nursing staff look professional and neat in their uniforms		0,522					
Service at ____ is excellent overall		0,444					
Nurses never too busy to respond to patients' needs			0,699				
Nurses show understanding toward patients' feelings of discomfort			0,644				
Patients do not feel neglected by nursing staff			0,610				
Patients are given plenty of individual attention			0,607				
Nursing staff efficient at dealing with patients' problems			0,421				
Nurses show understanding when patients feel low			0,490				
Nurses treat patients with a warm and caring attitude			0,493				
____ cares about its patients				0,815			
Patients feel safe at ____ hospital				0,796			
____ has an excellent reputation				0,701			
Patients can feel confident in treatment to be received				0,630			
Administrative staff efficient at dealing with patients' queries/problems					0,827		
Admission handled quickly and efficiently by administrative staff					0,696		
Administrative staff sincerely interested in solving patients' problems					0,637		
Administrative staff never too busy to respond to patients' requests					0,630		
Adequate security provided inside hospital						0,788	
Adequate security provided outside hospital						0,754	
Doctors are punctual when conducting ward rounds							0,723
Doctors can be counted on to attend to their patients' needs							0,540
Eigen values:	15,45	1,74	1,47	1,33	1,07	0,90	0,89
Cronbach's alpha:	0,92	0,88	0,95	0,95	0,87	0,82	0,77

Table 2: Factor matrix for customer satisfaction items

Customer Satisfaction Dimensions	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6	Factor 7
	Meals	Fees	Nursing Staff	Admission	Theatre	TV's in Wards	Ward Arrival
Meals were tasty	0,987						
Meals were nutritious	0,903						
Meals were attractively presented	0,899						
Overall, patient enjoyed the food while at ____	0,876						
Meals always served at correct temperature	0,715						
Meals were served in a variety of ways	0,640						
Fees at ____ are reasonable		0,880					
Considering fees charged, stay worth the money		0,779					
A stay at ____ is good value for money		0,773					
____'s fees are not expensive		0,618					
Nursing staff were always cheerful			0,888				
Nursing staff responded promptly to patient's needs			0,839				
Nursing staff kind and caring throughout patient's stay			0,706				
Nursing staff were skilled in administering procedures			0,583				
Administrative staff courteous and helpful at admissions counter				0,825			
Administrative staff willing to listen to patient's concerns				0,675			
Patient's admittance procedure carried out promptly				0,634			
Pre-med (for surgery) was administered at correct time					0,824		
Preparation for surgery carried out efficiently					0,569		
Nursing staff eased patient's fears about the surgery					0,517		
Anaesthetist came to explain his role during surgery					0,403		
Television sets functioned properly						0,993	
Television set in the ward						0,671	
Upon arrival in ward, nursing staff told patient what to do next							0,561
After arrival in ward, patient shown ablution/ward facilities							0,471
Eigen values:	9,76	2,91	1,69	1,44	1,28	1,20	0,84
Cronbach's alpha:	0,94	0,89	0,91	0,79	0,77	0,80	0,77

Table 3 thus shows that the more patients perceive the nursing staff as empathetic, feel assured and safe in the hospital, and evaluate the physical environment (Tangibles) positively, the more likely they are to remain loyal to the hospital. In the case of *Security*, however, the relationship is negative. In other words, too much security will reduce Loyalty.

Table 3 reveals that the modelled independent variables (service quality dimensions) explain 58,5% of the variation in the dependent variable (Loyalty).

According to Table 4 only two service quality dimensions namely *Empathy of nursing staff* ($p < 0,001$) and *Assurance* ($p < 0,001$), impact positively on Cumulative satisfaction as suggested by hypothesis 2. Hypothesis 2 is thus accepted in terms of *Empathy of nursing staff* and *Assurance* but rejected in respect of *Communication*, *Tangibles*, *Responsiveness*, *Security* and *Physician responsiveness*.

Table 4 reveals that the modelled independent variables (service quality dimensions) explain 60,3% of the variation in the dependent variable (Loyalty).

When individual dimensions of customer satisfaction are regressed on Loyalty, Table 5 shows that *Satisfaction with meals* ($p < 0,001$), *Satisfaction with the nursing staff* ($p < 0,001$), *Satisfaction with fees* ($p < 0,01$) and *Satisfaction with the television service* ($p < 0,01$) all impact positively on Loyalty. Hypothesis H3 is thus accepted in terms of these four dimensions but rejected in terms of *Satisfaction with admission*, *Satisfaction with ward arrival* and *Satisfaction with the Theatre experience* ($p > 0,05$).

Table 5 also shows that the strongest predictor of Cumulative satisfaction is *Satisfaction with the nursing staff* (estimate 0,386) and that the six dimensions of Cumulative satisfaction included in the regression model explain 68,3% of the variation in the dependent variable (Loyalty).

To assess the last hypothesis the impact of the individual customer satisfaction dimensions on Cumulative satisfaction (an "overall" assessment) was assessed. Table 6 shows that *Satisfaction with nursing staff* ($p < 0,001$), *Satisfaction with fees* ($p < 0,001$) and *Satisfaction with meals* ($p < 0,01$), all exert a positive influence on Cumulative satisfaction as suggested by H1 which is thus accepted. However, the hypothesis is rejected in respect of *Satisfaction with administration*, *Satisfaction with Arrival*, *Satisfaction with the theatre experience* and *Satisfaction with the TV service*. Table 6 also shows that *Satisfaction with the nursing staff* is the strongest predictor of Cumulative satisfaction and that 66,0% of the variation in the dependent variable (Loyalty) is explained by the seven independent variables (satisfaction dimensions).

Managerial implications

If a private hospital sets itself the goal of enhancing loyalty of its patients, it is clear from Table 3 that service quality efforts will have to be focused on the Empathetic behaviour

of its nursing staff and conveying a sense of Assurance. Nursing training will thus have to move beyond normal nursing skills, competencies and efficiency to also emphasise 'softer' skills such the responsiveness of the nursing staff, their understanding of patients' concerns and fears, providing individualised attention and developing the ability to demonstrate a warm/caring attitude towards patients. To convey a sense of Assurance, on the other hand, the hospital will have to cultivate a perception that will be based on more than just interaction with the nursing staff. During the whole hospitalisation experience and at each 'contact point' all employees should demonstrate that they care about its patients, are careful in protecting and enhancing the hospital's reputation, do everything to gain the patients' confidence in the hospital and ensure that patients feel safe during their hospitalisation. Table 4 shows that careful management of the Empathy of the nursing staff and of feelings of Assurance will not only enhance patient Loyalty but will also enhance patients' ratings of their overall or cumulative satisfaction.

Another dimension that impacts on patient Loyalty (which can be described as a 'hard issue') is Tangibles. Tangibles are a service quality dimension that has proved relatively unimportant in many service quality studies (Zeithaml *et al.*, 1990:29). It is obviously different in the hospital environment. Perceptions of the cleanliness of the hospital in general and the wards in particular, the neatness of the buildings, the décor in the wards and the appearance of the nursing staff will all influence whether a patient will return to a hospital or not. Tangibles are typically the easiest service quality dimension to manage and manipulate as they do not involve people.

The fourth service quality dimension to impact on Loyalty is Security (see Table 4). In other words, it appears as if a too strong security presence (too many and/or heavily armed security guards, inappropriate security fencing etc) can actually raise concerns and scare-off patients, and will reduce their intentions to again patronise the hospital. Security arrangements must thus be implemented very discreetly and care taken not to overdo the installation of visible security measures.

Perceptions of loyalty can also be enhanced by ensuring satisfaction with transaction-specific dimensions of the service rendered. Table 5 shows that customer satisfaction with the meals provided, satisfaction with the nursing staff, satisfaction with the fees paid and satisfaction with the TV service in the wards will encourage patients to return to the hospital in the future. In other words, tasty, attractive, nutritious meals combined with variety will make patients want to come back. Table 5 underlines the critically important role that the nursing staff play in all facets of patients' evaluation. If patients experience the nursing staff as cheerful, kind, caring, courteous as well as highly skilled and prompt, they are significantly more likely to return to the same hospital should the need arise.

Table 3: Multiple regression results: Impact of service quality dimensions on loyalty

Dependent Variable: LOYALTY (Buying intentions or willingness to re-purchase)

Source	DF	Sum of Squares	Mean Square	F value	Pr > F
Model	7	2013,39	287,63	63,56	0,0001
Error	315	1425,56	4,53		
Corrected Total	322	3438,95			
R²	C.V.	Root MSE	Loyalty Mean		
58,5%	11,92	2,13	17,84		

Parameter	Estimate	T-value	Exceedance probability	Std Error of estimate
INTERCEPT	2,024	2,04	0,0418	0,990
COMMUNICATION	0,048	1,16	0,2478	0,041
EMPATHY: NURSING STAFF	0,160	5,81	0,0001***	0,028
TANGIBLES	0,126	2,97	0,0032**	0,043
ASSURANCE	0,227	4,01	0,0001***	0,057
RESPONSIVENESS: ADMIN	0,026	0,61	0,5440	0,043
SECURITY	-0,147	-2,15	0,0323*	0,068
RESPONSIVENESS: PHYSICIAN	-0,003	-0,04	0,9669	0,076

 *** = p < ,001
 ** = p < 0,01
 * = p < 0,05

Table 4: Multiple regression results: Impact of service quality dimensions on cumulative satisfaction

Dependent Variable: CUMULATIVE SATISFACTION

Source	DF	Sum of Squares	Mean Square	F value	Pr > F
Model	7	6797,42	971,06	68,46	0,0001
Error	315	4467,76	4,18		
Corrected Total	322	11265,18			
R²	C.V.	Root MSE	CUM SAT Mean		
60,3%	12,37	3,77	30,43		

Parameter	Estimate	T-value	Exceedance probability	Std Error of estimate
INTERCEPT	1,512	0,86	0,3890	1,753
COMMUNICATION	-0,082	-1,12	0,2651	0,073
EMPATHY: NURSING STAFF	0,274	5,64	0,0001***	0,049
TANGIBLES	0,096	1,28	0,2028	0,075
ASSURANCE	0,653	6,51	0,0001***	0,100
RESPONSIVENESS: ADMIN	0,050	0,66	0,5110	0,076
SECURITY	-0,050	-0,41	0,6806	0,121
RESPONSIVENESS: PHYSICIAN	0,028	0,21	0,8323	0,134

 *** = p < ,001
 ** = p < 0,01
 * = p < 0,05

Table 5: Multiple regression results: Impact of satisfaction dimensions on loyalty

Dependent Variable: LOYALTY (Willingness to re-purchase)					
Source	DF	Sum of Squares	Mean Square	F value	Pr > F
Model	7	2348,97	335,57	96,98	0,0001
Error	315	1089,98	3,460		
Corrected Total	322	3438,95			
R²	C.V.	Root MSE	LOYALTY Mean		
68.3%	10,43	1,86	17,84		
Parameter		Estimate	T-value	Exceedance probability	Std Error of estimate
INTERCEPT		2,0622	2,46	0,0143	0,837
MEALS		0,066	4,50	0,0001***	0,015
NURSING STAFF		0,386	11,99	0,0001***	0,032
FEES		0,080	2,77	0,0060**	0,029
ADMISSION		0,025	0,55	0,5852	0,046
WARD ARRIVAL		0,028	1,02	0,3067	0,027
THEATRE		0,020	0,63	0,5260	0,032
TV		0,129	2,67	0,0079**	0,048

*** = p < ,001					
** = p < 0,01					
* = p < 0,05					

Table 6: Multiple regression results: Impact of satisfaction dimensions on cumulative satisfaction

Dependent Variable: CUMULATIVE SATISFACTION					
Source	DF	Sum of Squares	Mean Square	F value	Pr > F
Model	7	7439,27	1062,75	87,50	0,0001
Error	315	3825,92	12,15		
Corrected Total	322	11265,18			
R²	C.V.	Root MSE	CUM SAT Mean		
66.0%	11,45	3,485	30,430341		
Parameter		Estimate	T-value	Exceedance probability	Std Error of estimate
INTERCEPT		2,763	1,76	0,0790	1,568
MEALS		0,083	3,03	0,0026**	0,027
NURSING STAFF		0,664	11,00	0,0001***	0,060
FEES		0,309	5,71	0,0001***	0,054
ADMISSION		-0,021	-0,24	0,8111	0,086
WARD ARRIVAL		0,0909	1,81	0,0715	0,050
THEATRE		0,0504	0,85	0,3936	0,059
TV		0,0714	0,79	0,4286	0,090

*** = p < .001					
** = p < 0.01					
* = p < 0.05					

According to Table 5 patients are also more likely to return to a hospital (loyalty) if they perceive the fees that they are charged as fair, reasonable and good value for the money paid (fees), and if, when they have access to a TV service in the wards, this service functions effectively. Hospital managers must thus ensure that patients are not overcharged, that they receive an itemised account and even, when necessary, provide a justification or an explanation for exceptional charges. Furthermore, it appears as if patients regard a functional TV service as 'a given' and care must be taken to ensure that the service is always functional and that a back-up TV or repair staff are available to ensure an uninterrupted service.

Table 6 confirms that the same transaction-specific dimensions also impact on Cumulative satisfaction, except for the TV service. In other words, patients who report high levels of satisfaction with the meals provided, satisfaction with the nursing staff and satisfaction with the fees paid, will besides remaining Loyal to the hospital, also report high levels of satisfaction with the service encountered.

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