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## Abstract

**Purpose** – The purpose of this paper is to develop and empirically test a model to examine service quality, satisfaction, trust and commitment as loyalty antecedents in a private healthcare service.

**Design/methodology/approach** – The approach was tested using structural equation modelling, involving 175 patients from a private Portuguese healthcare unit, using a revised Service Quality Assessment Scale (SQAS) scale for service quality evaluation.

**Findings** – The scale used to evaluate service quality is valid and meaningful. Service quality proved to be a multidimensional construct and relevant to build satisfaction. The path satisfaction→trust→loyalty was validated, whereas the path satisfaction→commitment→loyalty was not statistically supported.

**Research limitations/implications** – The revised SQAS scale showed good internal consistency in healthcare context. Further trust-commitment antecedents must be examined in a private healthcare landscape to generalise the findings.

**Practical implications** – Healthcare quality managers must explore the service quality dimensions to generate satisfaction among their patients. Developing trust generates positive patient attitudes and loyalty.

**Originality/value** – This study explores using the SQAS scale in a private healthcare context. The authors provide further evidence that service quality is an antecedent and different from satisfaction. All the measures used proved to be valid and reliable. Trust and commitment play different roles in their relationship with loyalty.

**Keywords** Satisfaction, Trust, Commitment, Loyalty, Service quality

**Paper type** Research paper

## Introduction

Health service staff are responsible for diagnosing, treating and preventing illness; as patients have to make decisions about when, how and what services to consume. The Portuguese National Health Service (PNHS) is responsible for supplying fundamental healthcare via a public network comprising health centres and hospitals. However, increasing economic liberalisation meant that Portuguese patients have witnessed a steady rise in private healthcare service providers who both co-operate and compete with the PNHS. At a simplified level, Portugal's healthcare provision is divided into two systems that work alongside and with each other. The public system, the PNHS, includes all institutions and health services controlled by the Health Ministry. The private system includes all private healthcare providers, including liberal professionals. Private system managers have agreements with the PNHS staff for providing healthcare services; i.e., Portugal's system can be referred to as mixed. The PNHS provides universal coverage, but part of the population benefits from health subsystems (for people in certain professions), private insurance or mutual funds.

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Private companies often include health insurance as a fringe benefit. Coexisting public and private health system means that the PNHS does not have to provide all healthcare. The health system is mainly funded through taxes by mandatory employer and employee contributions to the social insurance fund. Additionally, direct payments by patients and private health insurance schemes also represent significant funding. The Portuguese Constitution states that public health services should be provided almost free at the point of use. As such, public health services are financed mainly by taxpayer contributions. Nevertheless, public health services patients have to pay a relatively small fee (flat-rate admission charge) for their consultations/appointments, treatments and surgeries. In special situations, health services are free (e.g. for the retired with disabilities or low income patients). For a thorough PNHS review see Barros *et al.* (2011).

Private healthcare services have expanded markedly in recent years, with technological innovation and a patient centred approach playing an important role. Service quality, satisfaction and loyalty are particularly relevant, as private health services are expensive compared to public health services whose main weakness is the relatively long time taken to provide care, where private healthcare services respond almost immediately. Owing to resource and budgetary limitations, public-private partnerships were introduced to satisfy demand. As such, this liberal approach means that public health services can be provided by private institutions, giving patients the opportunity to experience both provisions. Moreover, many private healthcare institutions have contractual agreements with private businesses to provide employee healthcare (namely occupational healthcare) with an increased service levels. Private individuals are also able to purchase private healthcare insurance. Despite PNHS providing a universal public healthcare service, there is a growing trend for patients to opt for private provision through private healthcare insurance. In this situation, private health services face two challenges. First, they need to ensure they provide the best service quality, with the added challenge of fulfilling patient expectations and fostering their loyalty as customers. Second, patients normally find private healthcare a heavy financial burden; i.e., despite contributing to the mandatory social insurance fund, they have to finance their own private healthcare costs.

As such, patient satisfaction and retention are crucial for private healthcare providers: their survival depends on their service quality. Patient satisfaction is recognised as an organisational performance measure; i.e., a satisfied patient becomes a loyal patient. This focus on patient retention has led many researchers to suggest defensive marketing strategies (Reichheld and Sasser, 1990; Reichheld, 1993, 1996; Zeithaml *et al.*, 1996). Private healthcare business managers follow patient loyalty closely, given the price differential between their and PNHS services. Accordingly, we analyse private healthcare satisfaction and service quality, exploring trust and commitment in a relational context and in promoting patient loyalty. Our main objectives were to:

(1) Identify service quality sub-dimensions valued by patients.

(2) Assess relationships between:

- service quality and patient satisfaction;
- patient satisfaction, trust and commitment;
- patient trust, commitment and loyalty; and
- patient commitment and loyalty.

## Theoretical framework

### *Loyalty*

Loyalty has been widely recognised as important for businesses survival (Zeithaml, 2000). Customer loyalty is crucial for success as attracting new customers is considerably more expensive than retaining existing ones (Reichheld and Schefter, 2000). Reichheld (1996) studied how loyal customers help businesses by buying more; being less price sensitive, attracting new customers through positive word-of-mouth (Ganesh *et al.*, 2000) and by showing a greater resistance to competitor strategies (Akbar and Parvez, 2009). Loyalty has been addressed from a behavioural standpoint, being evaluated as a repeated purchase, by the sequence in which the product was purchased and by the proportion of shopping expenses dedicated to the product (Homburg and Giering, 2001). This one-dimensional view, focused exclusively on behaviour has been criticised for being unable to distinguish the different loyalties (Dick and Basu, 1994). Accordingly, a need has been recognised to add an attitudinal component to the behavioural one (Dick and Basu, 1994; Oliver, 1997; Zeithaml, 2000). Reflecting this, Oliver (1999, p. 34) defines loyalty as:

> A deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, thereby, causing repetitive same-brand or same brand-set purchasing, despite situational influences and marketing efforts having the potential to cause switching behaviour.

This definition emphasises behavioural and attitudinal aspects (Oliver, 1999; Zeithaml, 2000). Behavioural loyalty is the extent to which the patient is repeatedly provided with a health service (Kim and Park, 2000) while attitudinal loyalty is commitment towards a brand and its associated values (Chiou and Droge, 2006). Positive word-of-mouth advertising is a common approach to conceptualise loyalty, as loyal patients are better positioned to evaluate the service than anyone else; i.e., praise/condemn the service as they use it more than occasional patients (Payne, 1993). Variations can be identified that promote positive word-of-mouth (Zeithaml *et al.*, 1996) to recommend the service (Stum and Thiry, 1991) or to encourage others to use the service (Bettencourt and Brown, 1997); i.e., loyal customers are ambassadors. High quality services are expected to satisfy patients and as a result, to promote healthcare providers. Consequently, we used measures such as "willingness to recommend" and "other recommendations" because they are widely used (Anderson, 1998) and serve as a patient loyalty indicator.

### *Commitment*

Morgan and Hunt (1994) defined commitment as one party's belief that the relationship is so important that it is worth making an effort to keep it. For Baker *et al.* (1999), commitment can be analysed from three perspectives: a desire to develop a stable relationship; a willingness to make small sacrifices to maintain the relationship; and the desire to maintain trust in a stable relationship. A commitment normally ends with a preference being shown for a brand, continued patronage for a brand and resistance to competitors (Bettencourt and Brown, 1997; Zeithaml *et al.*, 1996). Accordingly, Pritchard *et al.* (1999) argue that resistance to change is a primary commitment that works as a loyalty process antecedent. Thus, although commitment and loyalty are usually related and sometimes understood as close concepts, they differ. Commitment goes beyond an attitude to a favoured brand; it is more robust and stable than the general attitude towards a brand. In healthcare, patients committed to a relationship with their healthcare provider should therefore continue to use and recommend the service to others:

*H1.* There is a positive relationship between patient commitment and patient loyalty.

*Trust*

Trust can be described as the expectation that both parties will behave predictably (Grönroos, 2000). Moorman *et al.* (1993) defined trust as a willingness to rely on an exchange partner in whom one has confidence. For Rousseau *et al.* (1998, p. 395) trust deals with "the intention to accept a vulnerability based upon positive expectations of the intentions or behaviours of another". Trust emerges from integrity and certainty, in which mutual trust results in positive behavioural intentions towards the other party. Trust encourages both parties to work towards preserving the investment in the relationship. A mutual cooperation is encouraged by increasing the resistance to attractive short-term alternatives; instead, preference is given to long-term benefits in the belief that parties will not act opportunistically (Morgan and Hunt, 1994). Trust and commitment are important to ensuring a long-term perspective to the relationship, reducing the perceived opportunistic-behaviour risk (Erdem *et al.*, 2002). If there is a positive relationship between trust and commitment, then both parties will generate enough value from their interaction and will be prepared to keep their commitment. Over the long term, trust provides rewards, which reduces transaction costs associated with forming relationships. For Morgan and Hunt (1994), a party's capability to generate positive results for the other part determines the commitment. As trust is therefore a major commitment determinant, we propose that:

*H2.* Patient trust positively influences patient commitment.

Trust is essential when risk is an important factor, as in the healthcare industry. The relationship between healthcare providers and patients is based on the trust that patients have built-up with their service providers. Patients must believe that the healthcare provider will care about their wellbeing and employ the best available treatments. Sirdeshmukh *et al.* (2002) directly linked trust to loyalty; hence:

*H3.* Patient trust positively influences patient loyalty.

*Satisfaction*

Customers are either satisfied or disappointed based on a comparison made between their perception and service outcome expectation (Kotler and Keller, 2006). Among the various concepts related to satisfaction, we adopted the approach proposed by Oliver (1980, 1997), adapting it to healthcare service provision: satisfaction reflects a judgment that a healthcare service exceeds patient service expectations (Oliver, 1997). Customer satisfaction is among the most extensively researched constructs owing to its importance to business success. Conceptually, it has been defined as the feeling consumers experience from their purchase (Westbrook and Oliver, 1991). Homburg and Giering (2001) claim that customer satisfaction is a critical issue in the marketing field since satisfied customers turn into loyal customers and ensure profitability, which is crucial for most businesses. Customer satisfaction is considered to be an affective response to products or services (Yuan and Jang, 2008). According to Johnson (2001), customer satisfaction can be conceptualised in two ways: satisfaction following a specific transaction or the consumer's overall satisfaction based on all previous experiences with the firm. Although satisfaction is considered to be closely related to service quality, they are distinct constructs (Lovelock and Wright, 2004). Service quality is an overall service evaluation, while satisfaction corresponds to an emotional reaction to performance. Satisfied customers are more likely to engage and participate in other services offered by the firm (Reichheld and Sasser, 1990). However, believing that satisfied customers are unfailingly loyal can be misleading. Reichheld (1993) found

that 65-85 per cent who switched provider claim they were satisfied with the previous provider. It is then important to find other constructs to help explain how loyalty develops. Satisfaction has been characterised as a prerequisite for relationship quality; higher quality means greater satisfaction, trust and commitment (De Wulf *et al.*, 2001). Several studies advocate that customer satisfaction is important for developing customer trust and commitment (Kantsperger and Kunz, 2010). Thus, we expect satisfied patients to trust their healthcare provider and to be highly committed to the relationship; accordingly, we propose:

*H4.* There is a positive relationship between patient satisfaction and patient trust.

*H5.* There is a positive relationship between patient satisfaction and patient commitment.

*Service quality*

Parasuraman *et al.* (1985, 1988) defined service quality as the difference between perceived service level and customer expectations. This idea is based on the disconfirmation paradigm (Parasuraman *et al.*, 1985), where service quality perception results from comparing what consumers consider the service should be and the service provider's actual performance. While there are several quality healthcare definitions, the most generally accepted definition was presented in the 1990 Iberian programme (Campos *et al.*, 2010, p. 13): "the provision of accessible and equitable care, with outstanding professional level, taking into account available resources in order to achieve patient's satisfaction". The SERVQUAL factors describe service quality determinants – the most popular among existing studies (Parasuraman *et al.*, 1991), namely: reliability, responsiveness, assurance, empathy and tangibility. The Service Quality Assessment Scale (SQAS) was developed by Lam *et al.* (2005) as a SERVQUAL derivative and supports the notion that service quality is a multidimensional construct. The original SQAS was designed to evaluate health-fitness club service quality and used six dimensions: staff, programme, locker room, physical and workout facilities, and child care; nevertheless, they can be grouped into three: personnel, programme and facility. The first service quality scales were generic and adaptable across a broad service-spectrum, but using scales like SERVQUAL requires modification and adaptation to the organisational contexts (Parasuraman *et al.*, 1988). To this end, Murray and Howat (2002) also supported scales with industry-specific service quality dimensions. Health industry services are more closely associated with intangibles (Lam *et al.*, 2005); i.e., some dimensions may be more relevant to patients than others. To satisfy patients, service quality must meet or exceed their expectations (Stum and Thiry, 1991). Service quality has been recognised as a key element that affects customer retention and long-term profitability (Zeithaml *et al.*, 1996) and is often referred to in the literature as a satisfaction antecedent (Brady and Cronin, 2001). According to Rust and Oliver (1994), satisfaction is based on service quality; thus, the greater the service quality felt by patients, the more likely they will feel satisfied:

*H6.* Service quality positively influences patient satisfaction.

## Methodology

*Questionnaire development and pre-testing*

In accordance with the research objectives, we adopted a questionnaire-based quantitative approach, which was developed by extensively reviewing the literature on quality, satisfaction, loyalty, trust and commitment, to identify reliable measures used

in previous studies. Based on the theoretical background, we established a research model and detailed hypothesis (Figure 1).

Service quality was measured using 26 items, taken from the SQAS scale developed by Lam *et al.* (2005) assessing staff (nine-items; e.g., evaluating staff appearance, attitude and courtesy) medical services (six-items; e.g. examining service schedules, availability, variety and appropriateness), waiting rooms (six-items; e.g. examining waiting rooms space and environment) and consulting rooms (five-items; e.g. consulting room and equipment suitability). Satisfaction was measured using five items from Oliver (1980) to capture service expectations. Trust was measured using four items drawn from McKnight *et al.* (2002). Commitment was measured using three items from Meyer and Allen (1997), evaluating affective commitment and a sense of belonging. Loyalty was assessed using three items from Zeithaml *et al.* (1996) aiming to evaluate patient loyalty, particularly their positive word-of-mouth views. All constructs were measured using a Likert type scale with "strongly disagree" and "strongly agree" options as the anchors. The initial questionnaire was based on practical experience gained from the private service provider and examined by academics and healthcare professionals to validate its construction, language clarity and obtain comments and suggestions to improve its readability. The questionnaire was pretested with 20 patients to evaluate its consistency. Three respondents had some doubts regarding the content. As such, the questionnaire was then fine-tuned based on their feedback. The revised questionnaire was retested with ten patients to evaluate its consistency. The Appendix presents the items and their sources.

*Sample and data*

We used a convenience sample comprising individuals attending a private healthcare cardiology unit. The study was carried out during five weeks, two times a week, to fully cover the service. Data were collected using personal interviews with cardiology patients. Service managers had previously authorised questionnaire distribution. After obtaining the patient's consent to participate, they were asked to complete the questionnaire while waiting for their medical appointment. The interviewer played no further part to avoid interviewer bias. The sample generated 175 valid responses. Table I shows their key demographic characteristics.

## Results

Data analysis was carried out using SPSS and AMOS. A confirmatory factor analysis (CFA) was conducted to examine psychometric properties. We used AMOS 20 with maximum likelihood estimation to assess the model. For the purification process, standardised loadings from CFA were evaluated (Hausman and Siekpe, 2009).

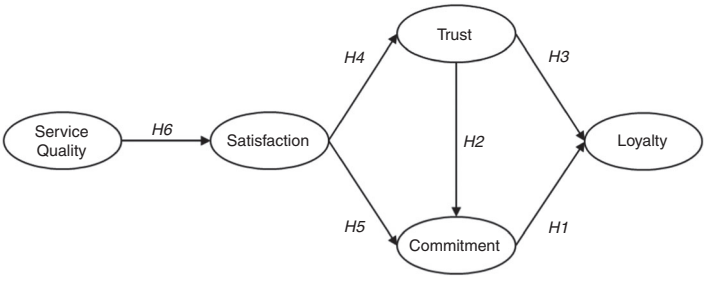


**Figure 1.**
Research model

Accordingly, factor loading scores 0.7 or above confirm convergent validity (Hair *et al.*, 2006). Therefore, some items were removed to improve the model. Table II shows the item and construct properties. The $\chi^2$ statistic ($\chi^2 = 496.344$, $p < 0.001$) shows a good fit, as do the all the following fit indices (judged using the criteria recommended by Bagozzi and Yi, 2012, in brackets) – CMIN/df: 1.667 ($< 2$); NFI: 0.897; TLI: 0.947 ($\geqslant 0.92$); CFI: 0.955 ($\geqslant 0.93$); SRMR: 0.0367 ($\leqslant 0.07$); RMSEA: 0.062 ($\leqslant 0.07$). Results confirmed the solution's dimensionality and suggested convergent and discriminant validity. We further evaluated validity and assessed reliability by examining construct reliability and the average variance extracted (AVE) scores. Construct reliability, AVEs

| Gender | % | Age | % | Antiquity | % | Health plan | % | Education | % |
|---|---|---|---|---|---|---|---|---|---|
| Male | 33.5 | < 25 | 5.3 | One | 16.1 | Private | 10.8 | 9th year | 21.7 |
| Female | 66.5 | 25-35 | 26.7 | Two | 15.6 | Health insurance | 53.1 | 12th year | 31.3 |
| | | 36-45 | 33.1 | Three | 17.4 | Health subsystem | 28.5 | University | 47 |
| | | 46-55 | 15.4 | Four | 27.3 | Company contract | 7.6 | | |
| | | 56-65 | 10.6 | Five | 23.6 | | | | |
| | | > 65 | 8.9 | | | | | | |

**Table I.** Sample demographics

| Variables | Items | Estimate | SE | Standardised estimate | CR* | CR | AVE |
|---|---|---|---|---|---|---|---|
| Staff | ST2[a] | 1.000 | – | 0.803 | – | 0.945 | 0.742 |
| | ST3 | 1.162 | 0.084 | 0.874 | 13.783 | | |
| | ST4 | 1.300 | 0.091 | 0.898 | 14.338 | | |
| | ST5 | 1.258 | 0.088 | 0.898 | 14.346 | | |
| | ST6 | 1.193 | 0.093 | 0.832 | 12.833 | | |
| | ST7 | 1.274 | 0.095 | 0.859 | 13.435 | | |
| Medical services | MS1[a] | 1.000 | – | 0.770 | – | 0.893 | 0.678 |
| | MS3 | 1.203 | 0.113 | 0.770 | 10.658 | | |
| | MS4 | 1.294 | 0.101 | 0.903 | 12.842 | | |
| | MS5 | 1.287 | 0.108 | 0.843 | 11.890 | | |
| Waiting rooms | WR1[a] | 1.000 | – | 0.862 | – | 0.915 | 0.783 |
| | WR2 | 1.006 | 0.059 | 0.933 | 17.157 | | |
| | WR3 | 0.849 | 0.057 | 0.858 | 14.898 | | |
| Consulting rooms | CR3 | 0.828 | 0.085 | 0.660 | 9.788 | 0.839 | 0.637 |
| | CR2 | 0.922 | 0.068 | 0.821 | 13.587 | | |
| | CR1[a] | 1.000 | – | 0.896 | – | | |
| Satisfaction | S3 | 1.069 | 0.081 | 0.794 | 13.180 | 0.877 | 0.704 |
| | S2 | 1.067 | 0.076 | 0.822 | 13.975 | | |
| | S1[a] | 1.000 | – | 0.897 | – | | |
| Commitment | C2 | 1.121 | 0.128 | 0.921 | 8.777 | 0.797 | 0.667 |
| | C1[a] | 1.000 | – | 0.697 | – | | |
| Loyalty | L1[a] | 1.000 | – | 0.939 | – | 0.954 | 0.873 |
| | L2 | 1.036 | 0.044 | 0.932 | 23.751 | | |
| | L3 | 1.062 | 0.045 | 0.932 | 23.671 | | |
| Trust | T1 | 0.932 | 0.042 | 0.907 | 22.226 | 0.946 | 0.854 |
| | T3 | 0.936 | 0.041 | 0.913 | 22.763 | | |
| | T4[a] | 1.000 | – | 0.952 | – | | |

**Notes:** [a]Reference variable. $\chi^2$/df: 496.344(296) p.0.000, NFI: 0.897, TLI: 0.947, CFI: 0.955, SRMR: 0.0367, RMSEA: 0.062. *$p < 0.01$

**Table II.** Dimensionality, reliability and convergent validity statistics

and factor loadings all pass when tested against generally accepted levels (construct reliability > 0.70; AVEs > 0.50 and factor loadings > 0.70) indicating acceptable measurement properties and convergent validity. Correlations between constructs ranged from 0.305 to 0.9 but no pair exceed the Hair *et al.* (2006) recommended 0.9 limit. We examined individual AVEs and compared their square roots with the correlations among constructs. All square root AVEs exceed correlation values among the constructs for their respective columns (Table III), demonstrating discriminant validity. Data analysis started with a CFA to study the dimensions, reliability and validity. To examine each service quality dimension's importance, we conducted a second order factor analysis (Table III).

Specifically, a second order service quality construct includes four first-order factors: staff; medical services; waiting rooms; and consulting rooms. For the second order CFA, the $\chi^2$ is 206.754 (df = 100, $p = 0.000$) and all indices suggest a good fit (NFI = 0.918, TLI = 0.947, CFI = 0.956, SRMR = 0.0437, RMSEA = 0.078). The proposed second-order model is supported; overall, it is equivalent to the first-order model, which means that patients access service quality according to four basic dimensions (staff, medical services, waiting rooms and consulting rooms) supporting the perspective that service quality is accessed with sub dimensions in the patient's mind. Discriminant validity was assessed by comparing the variance extracted from each construct with the square of the correlation estimate between these two constructs. Discriminant validity is achieved when squared root variance estimates are greater than the correlation estimates (Hair *et al.*, 2006, (Table IV). It is clear that squared root AVEs for all variables is higher than the correlations among any variable pair, which supports discriminant validity. Following the measurement purification process, we then used the structural equation modelling (SEM) to test the hypothesis within the research model.

All fit indices in the research model are acceptable ($\chi^2$/df = 554.699/314, $p = 0.000$; NFI = 0.885; TLI = 0.940; CFI = 0.946; SRMR = 0.0563; RMSEA = 0.066). Service quality comprises: staff, medical services, waiting rooms and consulting rooms, with all factors having a similar importance for determining service quality. The second-order model is supported as it is, overall, equivalent to the first-order approach. The SEM results in Table V, for a 1 per cent statistical significance, confirm the following hypotheses: the service quality impact on patient satisfaction (*H6* = 0.694, $p < 0.001$), patient satisfaction's positive effect on patient trust (*H4* = 0.792, $p < 0.001$), patient trust's impact on patient commitment (*H2* = 0.558, $p < 0.001$) and patient trust's positive impact on loyalty (*H3* = 0.133, $p < 0.001$). Both, *H5* ($p = 0.073$), relating patient satisfaction and patient commitment and *H1* ($p = 0.052$), patient commitment and loyalty, must be rejected.

**Table III.**
Second order factor analysis

| First-order | Path | Second-order | Estimate | Standardised estimate | SE | CR* |
|---|---|---|---|---|---|---|
| Professionals[a] | ← | Service quality | 1.000 | 0.831 | – | – |
| Medical services | ← | Service quality | 0.869 | 0.839 | 0.105 | 8.304 |
| Waiting rooms | ← | Service quality | 1.266 | 0.871 | 0.136 | 9.280 |
| Consulting rooms | ← | Service quality | 1.178 | 0.894 | 0.121 | 9.705 |

**Notes:** [a]Reference variable. $\chi^2$/df: 206.754(100) p.0.000, NFI: 0.918, TLI: 0.947, CFI: 0.956, SRMR: 0.0437, RMSEA: 0.078. *$p < 0.01$

| Constructs | Mean | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|---|---|---|
| 1. Staff | 5.491 | 0.862 | *0.861* | | | | | | | |
| 2. Medical services | 5.547 | 0.765 | 0.721 | *0.823* | | | | | | |
| 3. Waiting rooms | 5.867 | 0.841 | 0.731 | 0.703 | *0.885* | | | | | |
| 4. Consulting rooms | 5.622 | 0.772 | 0.714 | 0.760 | 0.794 | *0.798* | | | | |
| 5. Satisfaction | 5.958 | 0.802 | 0.562 | 0.584 | 0.508 | 0.625 | *0.839* | | | |
| 6. Commitment | 5.612 | 1.050 | 0.419 | 0.438 | 0.305 | 0.431 | 0.632 | *0.817* | | |
| 7. Loyalty | 5.884 | 0.908 | 0.515 | 0.522 | 0.470 | 0.531 | 0.828 | 0.713 | *0.934* | |
| 8. Trust | 5.878 | 0.823 | 0.550 | 0.624 | 0.510 | 0.572 | 0.746 | 0.722 | 0.900 | *0.924* |

**Notes:** The italicised scores are the square root AVE; the off-diagonal scores are the correlations among constructs

**Table IV.**
Discriminant validity: squared root AVEs versus construct correlations

## Interpretation and implications

We considered service quality to be a multidimensional construct. The SQAS was altered to ensure its adaptation to a Portuguese private healthcare context. Only four dimensions were used from the original six proposed by Lam *et al.* (2005). Our results provide evidence that adapted SQAS constructs are both valid and meaningful in accessing service quality in healthcare. Patients evaluate their service quality based on staff, medical service, consulting rooms and waiting rooms. The SEM confirms that service quality is an immediate patient satisfaction antecedent, validating *H6*. Clearly, a pleasant environment, incorporating a warm pre-service atmosphere, a professional patient-oriented service and an appropriate medical service is important for improving patient satisfaction. The patient's perceptions plays a crucial role in establishing patient satisfaction. Service quality improvements enhance patient satisfaction, so health quality managers must be aware that all four service quality variables are equally important. Waiting rooms, consulting rooms and medical services are shown to be as important as how professionals provide the service. Also, by confirming *H4*, we support previous studies and emphasise an important strategic conclusion in private healthcare services: greater patient satisfaction means greater patient trust. This is particularly important in healthcare, as it is not only the patient's health that is in question – private need to outperform public health services as well. Studying h*H2* and *H3* (relationship between patient trust and commitment and patient trust and loyalty) confirms that service providers are knowledgeable, proficient and capable. In Portuguese private healthcare services, where many patients show behavioural loyalty by entering into contractual agreements (e.g. with insurance companies providing health care), trusting the service provider leads to an increased willingness to show loyalty. By developing trustful relations with their patients, private providers can attract new patients and/or establish new contracts through a positive word-of-mouth.

Surprisingly, we did not find a statistically significant effect between patient satisfaction and commitment nor between patient commitment and loyalty, which indicates that despite being satisfied, private healthcare patients might be willing to stop using private services as they do not feel attached or committed to them. There may be several reasons: first, many patients may resort to public health services, which also provide competing services but with a poorer response time, indicating that the satisfaction/trust relationship might be transaction specific. Second, most transactions between patients and private healthcare providers start with a contractual obligation and are based on service packages – understood as a contractual relationship rather than an affective relationship. In any event, patients can always go back to the PNHS, meaning weak affective relationships may lead private

**Table V.** Hypothesis test results

| | Independent variable | Path | Dependent variable | Standardised estimate | SE | *p*-value | Result |
|---|---|---|---|---|---|---|---|
| *H1* | Commitment | → | Loyalty | 0.133 | 0.067 | 0.052 | Rejected |
| *H2* | Trust | → | Commitment | 0.558 | 0.135 | 0.000 | Supported |
| *H3* | Trust | → | Loyalty | 0.813 | 0.072 | 0.000 | Supported |
| *H4* | Satisfaction | → | Trust | 0.792 | 0.078 | 0.000 | Supported |
| *H5* | Satisfaction | → | Commitment | 0.218 | 0.152 | 0.073 | Rejected |
| *H6* | Service quality | → | Satisfaction | 0.694 | 0.108 | 0.000 | Supported |

healthcare patients to never feel sufficiently attached to their private service provider, despite trustful, good quality and satisfactory healthcare services.

## Conclusions and future direction

Our purpose was to study the main patient loyalty antecedents in a private healthcare services and examine the relevant relationships between healthcare service quality, satisfaction, trust, commitment and loyalty. We show that service quality plays a key role if private healthcare service providers aim to satisfy their patients. Although service quality has an inherently intangible construct, some components – such as consulting rooms and waiting rooms – are as relevant as staff and medical service, clearly indicating that they are important differentiation factors in medical service provision *vis-à-vis* public services. We demonstrate that service quality is an important satisfaction antecedent, which antecedes trust. Regarding the role played by trust and commitment in their relationship with loyalty, the SEM authenticated the path satisfaction →trust→loyalty, but did not validate the path satisfaction→commitment→loyalty. To make sure that private patients become loyal and promote their provider, we propose that private providers gain patient trust, which will reinforce the satisfaction-trust-loyalty relationship. Nevertheless, in the private healthcare landscape, even when patients trust their service providers, they might not feel committed or engaged. Consequently, the low switching costs to public health services can always make the relationship between the patient and the private service provider contractual rather than affective. If private healthcare managers want their patients to become truly loyal then they must strive to provide top quality services to satisfy them and to create an affective relationship. It is crucial for private healthcare providers to generate trust among their patients so that they truly believe that private is superior to public healthcare provision.

Our research has several shortcomings that should be considered in future research. First, sample size and variety was limited to one speciality in a single major private health service provider. Accordingly, it would be interesting to replicate our study across the country and include a comparable analysis with other, public health services – especially to examine the relationship between satisfaction, commitment and loyalty. Second, this study was based on a static perspective. It would be interesting to follow-up the study longitudinally. Third, it could be worth analysing how different medical specialities are understood by patients. Finally, analysing how trust and commitment develop among patients who have renewed/stayed with their service provider or switched to another provider would help us understand the difference between trust and commitment.

## References

Akbar, M.M. and Parvez, N. (2009), "Impact of service quality, trust and customer satisfaction on customer loyalty", *ABAC Journal*, Vol. 29, pp. 24-38.

Anderson, E. (1998), "Customer satisfaction and word of mouth", *Journal of Service Research*, Vol. 1 No. 1, pp. 5-17.

Bagozzi, R.P. and Yi, Y. (2012), "Specification, evaluation, and interpretation of structural equation models", *Journal of the Academy of Marketing Science*, Vol. 40, pp. 8-34.

Baker, T., Simpson, P. and Sugwan, J. (1999), "The impact of suppliers' perception of reseller market orientation on key relationships constructs", *Journal of Academic of Marketing Science*, Vol. 27 No. 1, pp. 50-57.

Barros, P., Machado, S. and Simões, J. (2011), "Portugal: health system review", *Health Systems in Transition*, Vol. 13 No. 4, pp. 1-156.

Bettencourt, L.A. and Brown, S.W. (1997), "Contact employees: relationships among workplace fairness, job satisfaction and prosocial service behaviors", *Journal of Retailing*, Vol. 73 No. 1, pp. 39-61.

Brady, M.K. and Cronin, J.J. (2001), "Some new thoughts on conceptualizing perceived service quality: a hierarchical approach", *Journal of Marketing*, Vol. 65 No. 3, pp. 34-49.

Campos, L. Saturno, P. and Carneiro, A.V. (2010), *Plano Nacional de Saúde 2011-2016*, CEMBE, Lisbon.

Chiou, J. and Droge, C. (2006), "Service quality, trust, specific asset investment, and expertise: direct and indirect effects in a satisfaction-loyalty framework", *Journal of Academy of Marketing Science*, Vol. 34 No. 4, pp. 613-627.

De Wulf, K., Oderkerken-Schröder, G. and Iacobucci, D. (2001), "Investment in consumer relationships: a cross-country and cross-industry exploration", *Journal of Marketing*, Vol. 65, pp. 33-50.

Dick, A. and Basu, K. (1994), "Customer loyalty: toward an integrated conceptual framework", *Journal of the Academy of Marketing Science*, Vol. 22 No. 2, pp. 99-113.

Erdem, T., Louviere, J. and Swait, J. (2002), "The impact of brand credibility on consumer price sensitivity", *International Journal of Research in Marketing*, Vol. 19, pp. 1-19.

Ganesh, J., Arnold, M.J. and Reynolds, K.E. (2000), "Understanding the customer base of service providers: an examination of the differences between switchers and stayers", *Journal of Marketing*, Vol. 64, pp. 65-87.

Grönroos, C. (2000), *Service Management and Marketing: A Customer Relationship Management Approach*, John Wiley and Sons, New York, NY.

Hair, J. Jr, Black, W., Babin, B., Anderson, R. and Tatham, R. (2006), *Multivariate Data Analysis*, Pearson Prentice Hall, Upper Saddle River, NJ.

Hausman, A.V. and Siekpe, J.S. (2009), "The effect of web interface features on consumer online purchase intentions", *Journal of Business Research*, Vol. 62, pp. 5-13.

Homburg, C. and Giering, A. (2001), "Personal characteristics as moderators of the relationship between customer satisfaction and loyalty – an empirical analysis", *Psychology & Marketing*, Vol. 18 No. 1, pp. 43-66.

Johnson, M.D. (2001), "Customer satisfaction", in Smelser, N.J. and Baltes, P.B. (Eds), *International Encyclopedia of the Social and Behavioral Sciences*, *Elsevier*, Amsterdam, pp. 3198-3202.

Kantsperger, R. and Kunz, W.H. (2010), "Consumer trust in service companies: a multiple mediating analysis", *Managing Service Quality*, Vol. 20 No. 1, pp. 4-25.

Kim, Y.M. and Park, S.H. (2000), "Conceptualizing and measuring the attitudinal loyalty construct in recreational sport contexts", *Journal of Sport Management*, Vol. 14 No. 3, pp. 197-207.

Kotler, P. and Keller, K.L. (2006), *Administração de Marketing*, Pearson Prentice Hall, São Paulo.

Lam, E., Zhang, J. and Jensen, B. (2005), "Service quality assessment scale (SQAS): an instrument for evaluating service quality of health-fitness clubs", *Measurement in Physical Education and Exercise Science*, Vol. 9 No. 2, pp. 79-111.

Lovelock, C. and Wright, L. (2004), *Serviços: Marketing e Gestão*, Saraiva, São Paulo.

McKnight, D.H., Choudhury, V.C. and Kacmar, C. (2002), "Developing and validating trust measures for e-commerce: an integrative typology", *Information Systems Research*, Vol. 13 No. 3, pp. 334-359.

Meyer, J.P. and Allen, N.J. (1997), *Commitment in the Workplace: Theory, Research and Application*, Sage, Thousand Oaks, CA.

Moorman, C., Deshpande, R. and Zaltman, G. (1993), "Factors affecting trust in market research relationships", *Journal of Marketing*, Vol. 57, pp. 81-101.

Morgan, R.M. and Hunt, S.D. (1994), "The commitment-trust theory of relationship marketing", *Journal of Marketing*, Vol. 58 No. 3, pp. 20-38.

Murray, D. and Howat, G. (2002), "The relationships among service quality, value, satisfaction, and future intentions of customers at an Australian sports and leisure centre", *Sport Management Review*, Vol. 5, pp. 25-43.

Oliver, R.L. (1980), "A cognitive model of the antecedents and consequences of satisfaction decisions", *Journal of Marketing Research*, Vol. 17 No. 4, pp. 460-469.

Oliver, R.L. (1997), *Satisfaction – A Behavioral Perspective on the Consumer*, Irwin/McGraw-Hill, Boston, MA.

Oliver, R.L. (1999), "Whence consumer loyalty?", *Journal of Marketing*, Vol. 53 No. 4, pp. 33-44.

Parasuraman, A., Berry, L.L. and Zeithaml, V.A. (1991), "Refinement and reassessment of the SERVQUAL scale; multiple-item scale for measuring service quality", *Journal of Retailing*, Vol. 67 No. 4, pp. 420-50.

Parasuraman, A., Zeithaml, E.V. and Berry, L.L. (1985), "A conceptual model of service quality and its implication for future researches", *Journal of Marketing*, Vol. 49 No. 4, pp. 41-50.

Parasuraman, A., Zeithaml, E.V. and Berry, L.L. (1988), "SERVQUAL: a multiple items scale for measuring customers perception of service quality", *Journal of Retailing*, Vol. 64, pp. 12-23.

Payne, A. (1993), *The Essence of Services Marketing*, Prentice-Hall, Hemel Hempstead.

Pritchard, M.P., Havitz, M.E. and Howard, D.R. (1999), "Analyzing the commitment-loyalty link in service contexts", *Journal of the Academy of Marketing Science*, Vol. 27 No. 3, pp. 333-348.

Reichheld, F.F. (1993), "Loyalty-based management", *Harvard Business Review*, Vol. 71, March-April, pp. 64-73.

Reichheld, F.F. (1996), "Learning from customer defections", *Harvard Business Review*, Vol. 74, March-April, pp. 56-69.

Reichheld, F.F. and Sasser, W.E. Jr (1990), "Zero defections: quality comes to services", *Harvard Business Review*, Vol. 68 No. 5, pp. 105-111.

Reichheld, F.F. and Schefter, P. (2000), "E-loyalty: your secret weapon on the web", *Harvard Business Review*, Vol. 78 No. 4, pp. 105-113.

Rousseau, D.M., Sitkin, S.B., Burt, R.S. and Camerer, C. (1998), "Not so different after all: a cross discipline view of trust", *Academy of Management Review*, Vol. 23 No. 3, pp. 393-404.

Rust, R.T. and Oliver, R.L. (1994), "Service quality: insights and managerial implications from the frontier", in Rust, R.T. and Oliver, R.L. (Eds), *Service Quality: New Directions in Theory and Practice*, Sage Publications, London, pp. 1-19.

Sirdeshmukh, D., Singh, J. and Sabol, B. (2002), "Consumer trust, value, and loyalty in relational exchanges", *Journal of Marketing*, Vol. 66, pp. 15-37.

Stum, D.L. and Thiry, A. (1991), "Building customer loyalty", *Training and Development Journal*, Vol. 45, pp. 34-36.

Westbrook, R.A. and Oliver, R.L. (1991), "The dimensionality of consumption emotion patterns and consumer satisfaction", *Journal of Consumer Research*, Vol. 18, pp. 84-91.

Yuan, J. and Jang, S. (2008), "The effect of quality and satisfaction awareness and behavioral intentions: exploring the role of a wine festival", *Journal of Travel Research*, Vol. 46 No. 3, pp. 279-288.

Zeithaml, V.A. (2000), "Service quality, profitability, and the economic worth of customers: what we know and what we don't know", *Journal of the Academy of Marketing Science*, Vol. 28, pp. 67-85.

Zeithaml, V.A., Berry, L.L. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60, pp. 31-46.

## Appendix

**Table A1.**
Measurement items

| Scale | Items |
|---|---|
| Staff (ST) | ST1. Know-how and required skills |
| (Lam *et al.*, 2005) | ST2. Suitable appearance/uniforms |
| | ST3. Will to help |
| | ST4. Patience |
| | ST5. Communication with the customers |
| | ST6. Responsiveness and care with the complaints |
| | ST7. Courtesy and respect |
| | ST8. Individualised care and attention to each customer |
| | ST9. Consistent service providence |
| Medical services (MS) | MS1. Variety of medical specialities and exams |
| (Lam *et al.*, 2005) | MS2. Availability of medical specialities and exams |
| | MS3. Convenience of schedules according with customer needs |
| | MS4. Content and quality of medical procedures |
| | MS5. Appropriateness of the medical procedures duration |
| | MS6. Adequacy and space of the consulting rooms |
| Waiting rooms (WR) | WR1. Seats availability |
| (Lam *et al.*, 2005) | WR2. General maintenance/materials state |
| | WR3. Overall cleaning (waiting rooms and bathrooms) |
| | WR4. Accessibility |
| | WR5. Background music |
| | WR6. Safety |
| Consulting rooms (CR) | CR1. Pleasant environment |
| (Lam *et al.*, 2005) | CR2. Modern equipment |
| | CR3. Adequate consulting room access plate/signs/indications |
| | CR4. Equipment variety |
| | CR5. Consulting room overall appearance |
| Satisfaction (S) | S1. The choice to use this service supplier services was wise |
| Oliver (1980) | S2. If I had to choose again, I would make the same choice for this healthcare service provider |
| | S3. I regret my decision to use this healthcare service provider |
| | S4. I am unhappy to have used this healthcare service provider |
| | S5. I am sure I made the right choice in using this healthcare service provider |
| Trust (T) | T1. This service supplier plays a good role as a private healthcare service provider |
| (McKnight *et al.*, 2002) | T2. This service supplier is competent in the service provided |
| | T3. Overall, this service supplier is an overall capable and proficient service provider |
| | T4. Overall, this service supplier is very knowledgeable at the service provided |
| Commitment (C) | C1. Even if I could, I would not stop using this healthcare service provider because I like the |
| (Meyer and Allen, 1997) | relationship I have with this clinic/hospital |
| | C2. I want to remain as a part of the group of customers who resorts to this healthcare service provider due to my rewarding relationship with this clinic/hospital |
| | C3. My emotional/affective connection with this healthcare service provider is the main reason why I keep using its services |
| Loyalty (L) | L1. I will tell good things regarding this healthcare service provider |
| (Zeithaml *et al.*, 1996) | L2. I will recommend this healthcare service provider to someone that asks for my advice |
| | L3. I will encourage my family and friends to make use of this healthcare service provider |

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