A paradigm shift for medical health care to focus on a service-value approach to achieve greater patient satisfaction.

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A Paradigm Shift For Medical Health Care To Focus On A Service-Value Approach To Achieve Greater Patient Satisfaction

Abstract

This study takes a divergent approach to exploring which construct is more predictive of patient satisfaction in a service dominant economy within the context of a healthcare setting. Applying a critical analysis of literature, a service value model for customer satisfaction is proposed which is validated and confirmed with survey data from outpatients at Moorfields Eye Hospital; a world class specialist hospital based in the UK.
Quality of service had the strongest impact on service value but service value had the strongest impact and mediation effect on patient satisfaction. The study concludes that since service value rather than quality of service is more predictive of patient satisfaction, health service providers should focus more on service value in addition to quality of service, if they are to meet the dynamic expectations of their patients.
This poses a strong argument in favour of a paradigm shift in focus from quality of service-based model to service value-based model for greater patient satisfaction.

Keywords: customer orientation, quality of service, service value, patient satisfaction, healthcare services, performance.

1.0 Introduction

In the face of UK's financial austerity, there is growing pressure by the Government on NHS hospitals to deliver high quality services to patients (Gill, 2018), while at the same time implementing cost saving measures (NHS, 2019; Robertson et al., 2017). Customer-oriented services have become important and are known to give hospitals their core competitive advantage for sustainable service delivery through customer loyalty (Mohiuddin, 2018; Rajkumari and Nula, 2017; Pevec and Pisnik, 2018). Factors that affect patient satisfaction with medical services, include service quality, patient orientation and more importantly service value. Whilst there is considerable literature on patient satisfaction (e.g. Hush et al., 2011; Lee et al., 2010; Lyu et al., 2013), quality of healthcare services (Ajam et al., 2014; Donabedian, 1996; Ghaffari et al., 2013), service value (Mills et al., 2010; Petrick, 2002) and patient orientation (Ndubisi, 2012; Lee et al., 2013), little is known about the extent to which service value mediates the relationship between customer orientation, quality of service and patient satisfaction in the UK healthcare services sector, particularly in a specialist international hospital.

Patient satisfaction is undoubtedly dependent on the quality of healthcare services received by customers (Johnston, 2013; Jackson et al., 2001; Kupfer and Bond, 2012; Gadalean et al., 2011). Similarly, customer orientation and service value are found to be equally important, but seldomly included in quality assessments (Chahal and Kumari, 2011; Izogo and Ogba, 2015; Lee at al., 2012). The increasing interest in the concept of value to practitioners, and academics has been highlighted in scholarship (e.g., Ennew and Binks, 1996; Payne and Holt, 2001; Currie et al., 2007; O'Cass and Ngo, 2011; Osborne, et al., 2015; Desyllas et al., 2018; Eriksson and Hellström, 2020). However, there is little focus on service value as a mediator to customer satisfaction. For example, O'Cass and Ngo (2011) only focused on value offering; and Desyllas et al. (2018) on value capture in service innovation. Although, Osborne, et al., (2015) and Eriksson and Hellström (2020) proposed a service approach to

managing public services, they did not explicitly explore the relationship between customer orientation, service quality and service value in achieving customer satisfaction.

This research sets out to explore the determinants of patient satisfaction and examine the mediating role of service value using the Moorfields Eye Hospital in London, UK as the case organisation. This hospital was selected due to its long-standing international reputation as a world class hospital, centre of excellence (Moorfields, 2022a) and uniqueness as a speciality hospital. It stands as a strong representative case of a current NHS Foundation Trust having to implement financial austerity (NHS, 2019), and yet at the same time meeting patient demands for a high-quality service experience while continuing to transform and maintain a global standard.

Moorfields Eye Hospital (MEH) NHS Foundation Trust is the leading provider of eye health services in the UK and remains a world-class Centre of Excellence for ophthalmic research and education (Moorfields, 2022a; CQC, 2019). MEH serves a vast population of ophthalmic referrals in London, across the UK and the international market. The trust has 2,349 (full-time and part-time) staff who are committed to sustaining and building on our pioneering history, and ensuring we remain at the cutting edge of developments in ophthalmology (Moorfields, 2022b). Moorfields' NHS patient activity and the total volume of Moorfields' NHS activity in 2021/22 (excluding the Bedford site) was a grand total of 663,174 patients and an outpatient total attendance of 567,596. With such vast patient numbers there is pressure to streamline services whilst ensuring patient-centered care of the highest quality and safety. Income for the year 2021/2022 was £283.8 million (2020/21: £244.0 million), an increase of £39.8m on the prior year, as patient activity recovered from the unprecedented decrease in 2020/21 (Moorfields, 2022b) due to the COVID-19 pandemic.

Moorfields Eye Hospital also has a vast and impressive track record in publishing research. The NIHR is the National Institute for Health and Care Research which supports world-leading health and social care research that improves people's health and wellbeing and promotes economic growth. It is funded by the Department of Health and Social Care and is the largest funder of health and care research in the UK. The NIHR Moorfields Biomedical Research Centre (BRC) is a collaboration between the two organisations of Moorfields Eye Hospital NHS Foundation Trust and UCL Institute of Ophthalmology. In the last reporting year FY2021/22, following internal bibliometric analysis, the BRC reported to the NIHR that the combined activity from the BRC partnership led to 437 publications and 150 research projects. Furthermore, according to the 2017 Centre for World University Rankings (CWUR) rankings by subject, UCL Institute of Ophthalmology is the best place in the world to study Ophthalmology (University College London, 2017).

MEH was given an overall rating of 'Good' with the Care Quality Commission (CQC) from the last inspection in 2019 (CQC 2019). However, externally commissioned Moorfields Patient surveys highlighted that aspects of Moorfields Service Quality and Patient Satisfaction such as patient journey and waiting times at the hospital are insufficient. This was identified as a concern to the patients and therefore the clinical teams and Trust Executive of MEH. This study was aimed at gaining a greater understanding of the relationship between the constructs and providing a contribution to management and policy making and further enhancing and refining the service to patients of MEH. Whilst Moorfields Eye Hospital has 23 sub-specialist outpatient clinic types within the Trust (Moorfields 2022b), the study was conducted taking samples of patients predominantly attending the Medical Retina outpatient-services.

Though this study would meet the real need of the selected case organisation, it would also highlight the importance of service value within NHS hospitals in the UK and give a further understanding of patients' satisfaction and service quality. Furthermore, the concept of service value in health service has not yet been defined in existing literature.

1.1 Theory

This study is underpinned by the European Union (2019) value-based healthcare framework (VBHC) with a focus on the personal value component (Fig. 1). The European Union (2019) defined the VBHC as "a comprehensive concept built on four value-pillars: appropriate care to achieve patients' personal goals (personal value), achievement of best possible outcomes with available resources (technical value), equitable resource distribution across all patient groups (allocative value) and contribution of healthcare to social participation and connectedness (societal value)".

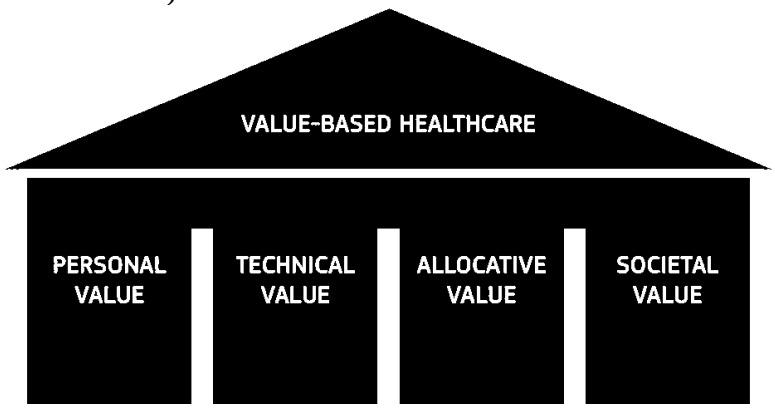

Figure 1: Value-Based Healthcare Framework (European Union, 2019)

Whilst not explicitly defined, the VBHC suggest the need for a paradigm shift from quality-based service metrics for healthcare to a value-based approach where the technical and allocated values can be mobilised effectively to deliver personal value to the patient and to the larger society. The study, however, focused on the personal-value component, with patient satisfaction as the ultimate. In other words, personal value is perceived as the key determinant of patient satisfaction rather than quality of service. For the purpose of this study, personal value is conceived as service value, or the value expectations that a patient has from before and during the healthcare service experience.

The choice of the VBHC as the main theoretical framework over other value models such as the value-based model (Stevanovic et al., 2015), value-based payment model (American Academy of Family Physicians, 2020) is its comprehensiveness. The VBHC framework is grounded in the principle of universal healthcare, and financial sustainability but not necessarily cost driven (Porter, 2010). In addition, the VBHC is rooted in the principle of "health is wealth", it is patient-focused and has high credibility of being implemented by European Union member countries of which UK was a part of in 2019.

This study seeks to understand the extent of relationships between some determinants of patient satisfaction whilst examining the mediating role of service value. This is help provide a service value-based framework for understanding customer satisfaction of healthcare services. The main research question is "to what extent does service value mediate the relationship between patient orientation, quality of service and patient satisfaction?"

It is expected that this study would help gain a greater understanding of the antecedents of customer satisfaction in a service dominant economy. The rest of the paper covers literature review on customer (patient) orientation, patient satisfaction, service value and quality of service leading to a proposed conceptual framework. The methods adopted for the study are then discussed, followed by the results and discussion of the findings. The paper concludes with theoretical and practical contributions, and also discusses the implications and limitations of the study.

2.0 Literature Review and Conceptual Framework

Several factors that affect patient satisfaction in hospitals include quality of service, and those other systems, processes and outcomes on the healthcare service journey (Donabedian, 1996). Systems, such as the physical facilities, quality of doctors and nurses, quality of equipment and medications inform patients satisfaction ratings. Key outcomes of medical services delivery such as recovery time, perceived value, level of aftercare support among others also influences patient satisfaction.

Literature on patient satisfaction suggests that the level of patient satisfaction is determined by processes before, during and after care. However, for the purpose of this study, we focused on customer orientation, quality of service, service value and patient satisfaction. This is because, apart from Lee et al. (2010), there is limited research in which these four factors have been considered concurrently. Unfortunately, even in the study by Lee et al. (2010), the quality of service construct is conceived wrongly as medical information services. Also, service value was not primarily considered as a mediating factor in patient satisfaction. Furthermore, the studies by Cronin and Brady (2001) and Cronin et al. (2000) considered behavioural outcome and intentions rather than satisfaction as the main dependent variable. Currently, no study has yet advocated for a paradigm shift from a quality-of-service based model of customer satisfaction to the service-value based model being proposed. This study is, therefore, the only true attempt to assess the relationship between customer orientation, quality of service and patient satisfaction with service value as a mediator.

2.1 Towards a Service Value Model for Customer (Patient) Satisfaction

Currently, the service literature is dominated by studies on the three variables of service quality, service value and satisfaction (Table i). The thrust of the discussions have been functional as well as conceptual with particular consideration being given to identifying the relationships between these constructs. These only give better discrimination between the constructs leading to a consensus on nature of the inter-relationships (Zeithaml et al., 1996; Ryu et al., 2012; Hargreaves, 2015). Consequently, there has been a convergence of opinion amongst researchers that, favourable service quality perceptions lead to improved satisfaction and value attributions (Barrutia and Gilsanz, 2013). The resultant improvement in value has a direct influence on satisfaction. In a service context, the more cognitively-oriented service quality and value appraisals precede satisfaction (e.g., Cronin and Taylor, 1992).

Insert Table 1 here

The relationships between service quality, value, satisfaction as well as their consequences such as customer loyalty (e.g., Paparoidamis et al., 2015) and positive feedback from ‘word of mouth’ (Cronin et al., 2000) have been documented. However, a more discerning evaluation shows little congruity of which of the three variables (or combinations) directly influence the consequence measure. Critical evaluation of the extant literature shows that,

thus far, there is only one study (Lee et al., 2010) which assessed these three variables with a fourth added construct of 'customer orientation' (Table i and Fig. 2).

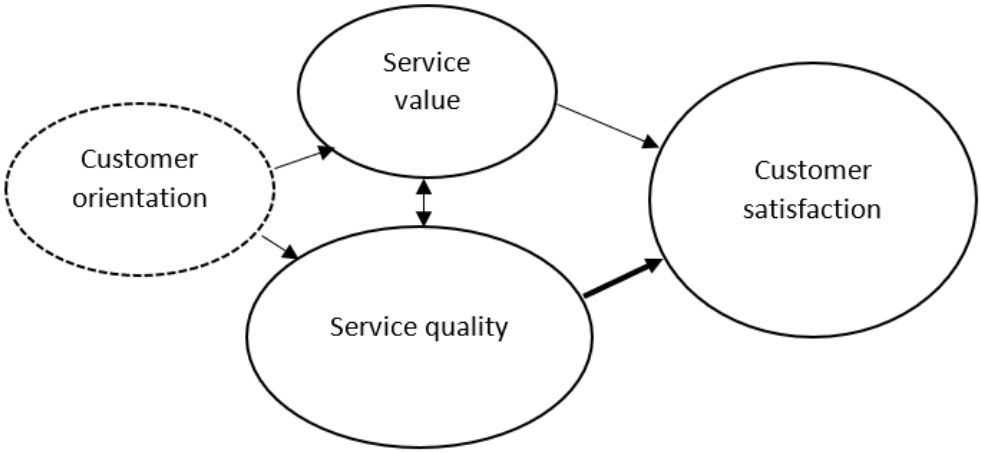

Figure 2: CurrentView of the Relationship Between the Four Constructs

This study takes a divergent approach towards customer satisfaction by assessing the extent of the relationship between the four constructs of customer orientation, quality of service, service value and customer satisfaction with service value as a mediator. Almost all previous studies focused on fewer than four of these constructs concurrently. In addition, similar to the expectation-perception method of SERVEQUAL (Parasuraman et al., 1985), and based on service value as a consumer's evaluation of a product's use (Zeithaml, 1988), it is postulated that service value is generated when customers are able to benchmark their service experience against those customer orientations promised by the service provider. Similarly, quality of service is best understood when organisations benchmark their service delivery against their systems (i.e., tools, procedures and set quality standards).

Although, Cronin and Taylor (1992) avers that service quality and value appraisals precede satisfaction, they were not explicit as to which of these two constructs is more predictive or mediate customer satisfaction. We take this further by proposing that service value strongly mediates the relationship between quality service and customer satisfaction.

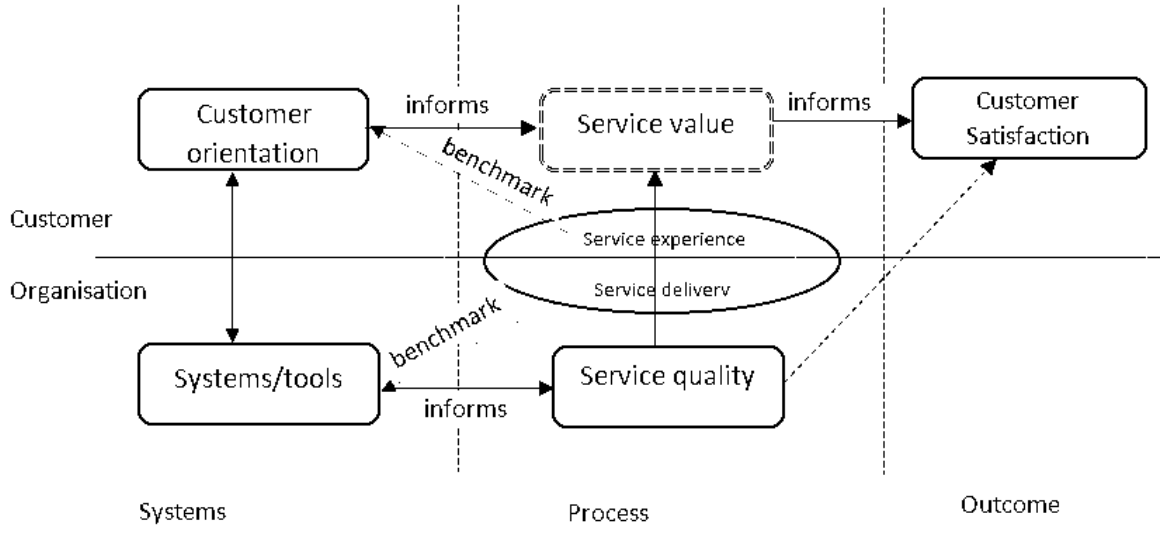

Figure 3 : Proposed Service-Value-Based Model for Customer Satisfaction

The proposed service value model for customer satisfaction (Fig. 3) extends Donabedian (1996) 'Structure, Process and Outcome' model by applying it to service delivery and experience of organisations and customers respectively. We posit that service quality is both a structure and a process, and that organisations usually have set quality standards to inform service deliver to customers. Organisations then benchmark their service delivery against their quality standards, in order to determine the level of quality of their service delivery. Customers also benchmark their service experience with those pre-defined expectations which have been provoked by the customer orientation campaigns of the organisations (Lyons and Brennan, 2019). We therefore conclude that it is only when there are benchmarks (such as customer orientation and service standards/structures) are organisation better able to assess the quality of their services and customers able to truly assess the value and satisfaction with the services they receive. Thus, customer value rather is more predictive of customer satisfaction than service quality. Thus, posit that service value mediates the relationship between quality of service and customer satisfaction.

The next section reviews literature specifically on these four constructs. As at the time of this study, there was only one such paper by Lee et al. (2010). Yet, in the study by Lee et al. (2010) the construct "quality of service" was erroneously conceived as "medical service information" and there was no emphasis on service value as a mediator of patient satisfaction. Also, their study looked at the relationship between the four constructs in the context of a medical centre in Asia specifically South Taiwan which has a different culture from that of the UK. Therefore, there does not appear to be, to the best of our knowledge, any published study assessing these four constructs in the context of a hospital elsewhere in the world.

2.2 Patient Satisfaction

Studies on satisfaction are universally applicable to all industries. Satisfaction has been defined as a way of assessing one's emotions (Hunt, 1977) or the positive feelings (Rust and Oliver, 1994) experienced by customers. Within the domain of business, customer satisfaction is key for gaining competitive advantage and revenue increase (Anderson et al., 1997; Krajnáková et al., 2014; Rich and Orr, 2011). The satisfaction concept has been applied to the medical service industry; thereby creating the term 'patient satisfaction'. Patient satisfaction has become an essential performance measurable indicator of the quality of patient care. It is a tool for hospitals to evaluate medical service quality (Donabedian, 1996). For patients it can assist in the choice of a medical service provider (Hansagi et al., 1992).

Patient satisfaction measures help hospitals to adapt and change the medical process in order to satisfy more patients (Lee et al., 2010). Thus, patient expectation, perception and medical care experience are important factors which influence patient satisfaction. Consequently, medical service providers need to understand patient expectation and its feasibility in order to achieve them. Many scholars repeatedly state that medical service quality can be held as a true indicator of patient satisfaction (Mahon, 1996; Lyu et al., 2013). However, there is lack of literature on the extent to which customer orientation impacts patient satisfaction within specialist hospitals.

2.3 Customer Orientation and Patient Satisfaction

Customer orientation was first defined by Saxe and Weitz (1982) as satisfying customer needs when interacting with employees. This definition has remained largely unchanged with Frank and Park (2006) defining it as behaviours indicative of prioritising customer needs to

achieve long term customer satisfaction. Kotler (1980) proposed that customer orientation is the marketing concept between front line sales staff and customers, and this has been validated by Martin and Bush (2006).

Saxe and Weitz (1982), emphasises the purpose of all company activity being to satisfy customers, establish and provide a long-term relationship between customers and business enterprises. They originally applied the concept to the interaction between customers and salespeople and developed the selling-orientation-customer-orientation or 'SOCO' scale to measure customer orientation. The SOCO scale has since been used in several studies such as Dunlap et al. (1988), Williams and Weiner (1990), Thomas et al. (2001), Flaherty (2015) and Huang (2015). Some studies have looked at sales-person customer orientation from a buyer's perspective (Michaels and Day, 1985; Feinberg and Kennedy, 2011) and the relationship between customer orientation and satisfaction (Brady and Cronin, 2001; Stock and Hoyer, 2005; Kim 2011). Depite the popularity of the SOCO scale, it is also regarded as cumbersome and is found to induce fatigue from the participant. Thomas et al. (2001) consequently developed a shorter, reliable and valid version of the SOCO scale.

The literature on customer orientation shows that customer-oriented companies can increased customer satisfaction and value by creating customer demand and providing a higher quality of service (Jaworski and Kohli, 1993; Slater and Narver, 1995; Lee et al., 2013). Evidence suggests that oorganisations are more successful when they embrace customer orientation (Han et al., 1998; Day, 1999; Narver et al., 2000; Slater and Narver, 2000; Blocker et al., 2011; Raab et al., 2012). The customer orientation concept was applied to the medical service industry in this research. The questions are based on details of the items used for measuring the customer orientation constructs of interest in this study. Customer orientation was measured using the scale originally constructed and validated by Narver and Slater (1990) and modified by Kumar et al., (1998) for application within the health care industry. The following hypothesis is proposed towards testing its reliability and validity within the context of specialist hospital whilst determining the extent to which CO impact patient satisfaction.
H1: There will be a positive relationship between customer orientation (CO) and patient satisfaction (SAT).

2.4 Quality of Service and Patient Satisfaction

The concept of medical service quality has widened over time, from a previous focus on physicians' expertise to a more patient centric approach (Bath, 2008). Patients' views have subsequently become a major concern and priority to hospitals, and are considered key indicators of service quality. The overall efficiency and patient satisfaction of administrative services are also acknowledged and recognised as important guides. A popular and robust measurement of service quality is the 'SERVQUAL' by Parasuraman et al. (1985). Despite some criticism about its methodology (Babakus and Boller, 1992), variance restriction (Brown et al., 1991; Brown et al., 1993) and applicability (Carman, 1990), it has been used in multitude of service environments and remain the dominant instrument in service quality research (Bolton and Drew, 1991). The healthcare services industry is no exception with a vast number of studies applying this scale (Hu, 2010; Altuntas et al., 2012; Aikins et al., 2014; Duan et al., 2014; Talib et al., 2015).

A robust model for assessing service quality is Donabedian's (1996) 'Structure, Process and Outcome' model. This method has been widely used to assess service quality in varying industries. Several studies (e.g., Hermann et al., 2000; Naranjo and Viswanatha, 2011; Akter et al., 2013; Gardner et al., 2014; Seibert et al., 2015) have applied Donabedian's method

towards assessing the healthcare industry due to a lack of currently accepted standardised method to assess quality of medical services. This study therefore, uses the commonly applied Donabedian approach to assess service quality. The following hypotheses are put forward:
H2: There will be a positive relationship between quality of service (QS) and patient satisfaction (SAT).

H2a: Quality of service will mediate the effect of customer orientation on patient satisfaction.

2.5 Service Value and Patient Satisfaction

The term 'value' in the field of marketing was first proposed by Levitt (1960). He regarded it as a product's ability to please customers to justify its existence. Zeithaml's (1988) defined service value as a consumer's evaluation of a product's use when considering what is received against what is given; a view held by several scholars (Ostrom and Iacobucci, 1995; Sirdeshmukh et al., 2002). However, no common consensus has been reached on the definition, conceptualisation and measurement of service value (Mills et al., 2010; Khalifa, 2004; Sanchez-Fernandez and Iniesta-Bonillo, 2007; Grönroos and Voima, 2013). This study adopts a service value definition based on the value a patient places on the hospital facilities, ambience, attractiveness and overall costs to patients with respect to travel, medication etc (Petrick, 2002). The attributes of 'value' which are considered as most important have shifted from the value of tangible commodity to that of service.

Petrick (2002) developed a Multi-Dimensional Scale named 'SERV-PERVAL' by adapting the PZB model which was a base for the development of the original SERQUAL scale. Lee et al (2010) applied this multi-Dimensional scale model to assess service value and the basic value; a perspective set out by Hirschman (1982) and Zeithaml (1988). Lee et al. (2010) developed the evaluation of customer value model based on past rational and experimental perspective, perceived benefit and costs theories (e.g., Zeithaml, 1988; Woodruff and Gardial, 1996; Petrick, 2002). Service value in this study was validated by applying the same methodology. It is therefore hypothesised that:
H3: There will be a positive relationship between service value (SV) and patient satisfaction (SAT).

2.6 Conceptual Framework and Hypotheses

The preceding literature synthesis provides the basis for the conceptual framework in Fig. 4, and the stated hypotheses.

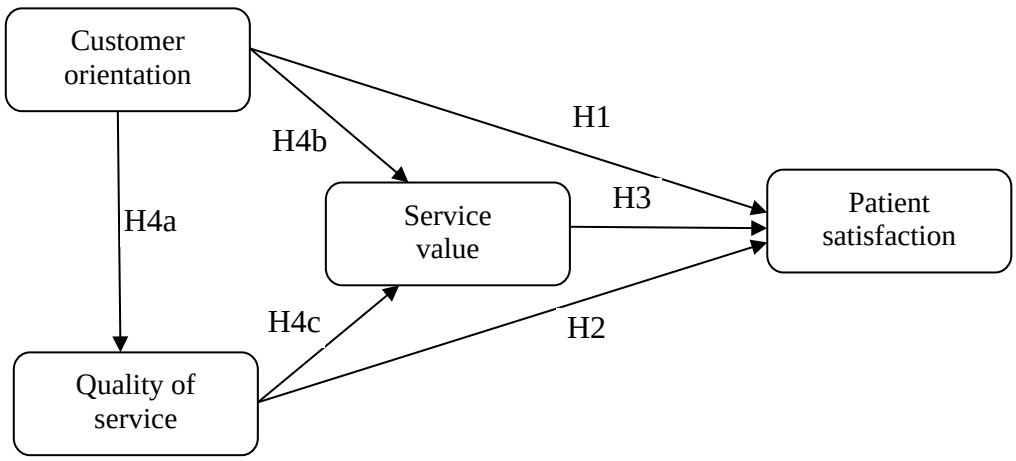

Figure 4: Conceptual Framework and Hypotheses

This study assessed the extent to which customer orientation (CO), service quality (SQ), impacts on customer satisfaction (SAT) and the mediating role of service value (SV) within the context of a UK based medical centre. The following hypotheses are proposed:
H3a: Service value will mediate the relationship between customer orientation and patient satisfaction
H3b: Service value will mediate the relationship between quality of service and patient satisfaction
H3c: Quality of service will mediate the effect of customer orientation on service value
Prior to this study, there has been little or no study of the inter-relationships between customer orientation, service value, and quality of service in the context of a UK based specialist hospital. On the basis of that, we hypothesised that:
$H4_a$: There would be a positive relationship between CO and QS
$H4_b$: There would be a positive relationship between CO and SV
$H4_c$: There would be a positive relationship between QS and SV

3. METHOD

3.1 Research Approach and Scale Development

This study used quantitative methods to test a model by validating it with a set of hypotheses. This study therefore followed the survey research approach to collect data on the four key constructs in a UK hospital using a questionnaire (Appendix A). The questions were adopted from standardised items and adapted to a hospital for this study (Table ii).

Insert Table (ii) here

For the purpose of this study, modified versions of the instruments listed in Table (ii) were used to measure the items on a 5-point Likert-type scale where 1 = highly dissatisfied and 5 = highly satisfied, or 1 - strongly disagreed to 5 – strongly agree. The respondents were required to indicate the extent to which they were currently satisfied with Moorfields Eye Hospital on each of the patient satisfaction items and the extent to which they disagreed or agreed with the items for the CO, SV and QS constructs.

Several considerations were made before selecting and adapting these scales. For example, the ‘SERV-PERVAL’ Scale for service value was chosen ahead of the ‘SERV-QUAL’ scale (Parasuraman et al., 1985) because it supersedes it in literature, and it is deemed a higher level of ‘theoretical abstraction (Zeithaml, 1988) since it is a higher level of assessing a service. Also, studies such as Kobayashi et al. (2011) and Gardner et al. (2014) utilised the well-established Donabedian’s (1996) ‘Structure-Process-Outcome’ model to assess medical service quality hence this choice.

3.2 Mode of Data Collection and Method of Analysis

A pilot run was first conducted with 20 staff members randomly selected at Moorfields Eye Hospital and this proved useful feedback in improving on the questionnaire. The final questionnaire was administered to a representative sample of 300 customers seen in the outpatient clinic at Moorfields Eye Hospital in winter over a three-month period. The

questionnaire was offered to customers by clinic clerks on arrival to the outpatient clinic waiting room. Those participants who were willing were asked to complete the form only once they had completed their examination with the nursing staff and any other allied healthcare professionals (e.g., technicians, optometrists etc) and consultation with the doctor.

Insert Table (iii) here

The respondents were made of 118 (47.8%) males, 121 (49.0%) and 8 (3.2%) of those who preferred not to disclose their gender. The age groups, income levels, and educational qualifications of the respondents show evidence of a good representation across the different income groups and educational qualifications (Table iii).

The anonymity and confidentiality of the respondents were ensured throughout that study. The main inclusion criteria were for respondents to be adults at least 18 years of age with no hearing loss or mental health issues. Participation was voluntary and only respondents who consent to take part were required to complete the questionnaire. The questionnaire was given high ethical approval for use by the 'Research and Development' department of Moorfields Eye Hospital NHS Trust. The data was analysed using SmartPLS a partial least square-structural equation modelling (PLS-SEM) tool (Ringle, Wende and Becker, 2015). It is a popular tool for developing structural models and has strong statistical power due to its rigor (Hair et al., 2013). Full VIF analysis was used to test for common method bias (Kock, 2015).

4.0 Results

The quality assessment of the model revealed composite reliability and Cronbach Alpha values which exceed the 0.70 criterion for all the constructs (Table iv). In addition, the convergent validity of the constructs is confirmed by the average variance extracted (AVE) scores greater than 0.5 criterion (Table iv). The constructs therefore had very high reliability and validity.

Insert Table (iv) here

The cross-loadings of the items on the key constructs were very high and significant (Table ivb) whilst the square root of the construct's AVE showed values greater than the correlation with the other constructs. In addition, the HTMT values were all greater than zero. Therefore, discriminant validity was not an issue in this study.

Insert Table (iv(b)) here

The cross-loadings for both the outer and inner models were also assessed for multicollinearity. All the VIF values were less than 5 (Hair et al., 2013) hence multicollinearity is not a concern in this study. In addition, all VIF values (factor level) from the full collinearity test were less than 3.30 (Kock, 2015), therefore common method bias was not an issue in this study.

The predictive relevance of the model was determined using the blindfolding approach. The explanatory power (R^2) of the quality of service, patient satisfaction and service value were 0.25, 0.46 and 0.63 respectively (p=0.00). Therefore, the constructs and the overall model had significant predictive relevance.

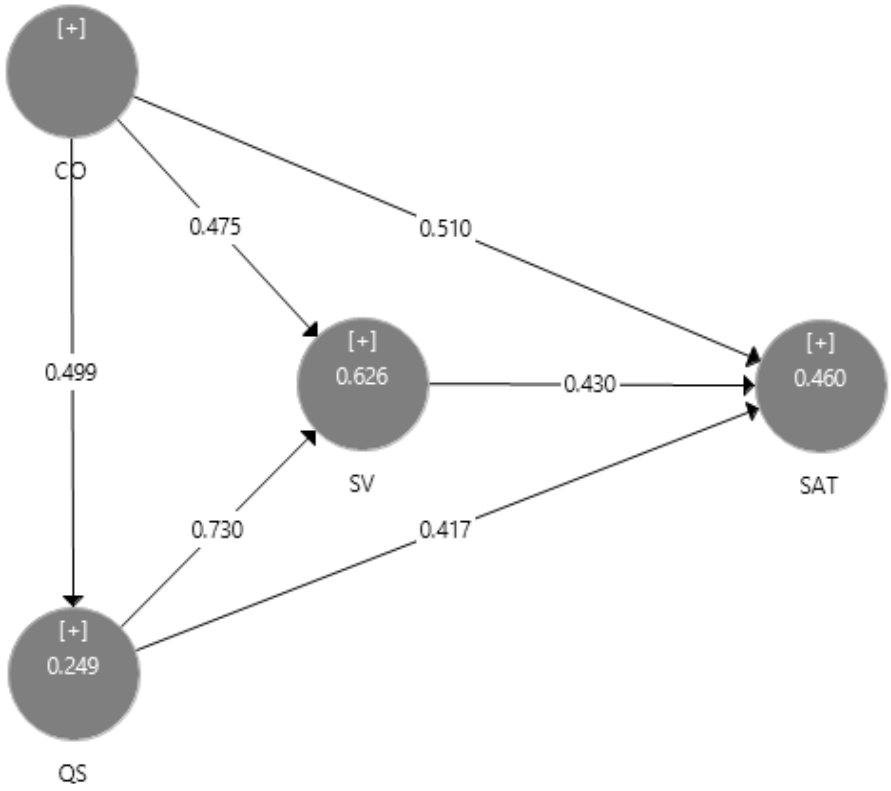

Figure 5 : Path Diagram for Customer Orientation (CO), Quality of Service (QS), Service Value (SV) and Patient Satisfaction (SAT)

Using the criterion of 0.20 for meaningful consideration of the path coefficients as a guide (Chin 1998), the results (Fig. 5, Table v), showed positive and significant relationship between customer orientation and patient satisfaction (β=0.51, p=0.000), and between customer orientation and quality of service (β=0.50, p=0.000). In addition, quality of service had a significant and positive relationship with service value (β=0.73, p=0.000) and service value showed significant and positive relationship with patient satisfaction (β=0.43, p=0.000). Furthermore, the direct relationship between customer orientation and service value was positive and significant (β=0.48, p=000) and quality of service showed positive relationship with patient satisfaction (β=0.42, p=0.000).

Insert Table (v) here

The results (Table v) showed full mediation effect of service value on quality of service and patient satisfaction. The mediation effect of service value (H3b) on the relationship between quality of service and patient satisfaction was 70.09% and significant (β=0.31, p=0.000) but the mediation effect of service value on the relationship between customer orientation and patient satisfaction was not significant (β=0.05, p=0.076), thus H3a was not supported. Similarly, the mediation effect (H2a) of quality of service on the relationship between customer orientation and satisfaction (β=0.05, p=0.390) was not supported.

Quality of service was, however, found to have a mediation effect (β=0.36, p=0.000) on customer orientation and service value. The findings suggest that customer orientation is more predictive of quality of service than service value. Also, quality of service is more predictive of service value than customer orientation and service value is more predictive of patient satisfaction than quality of service.

5.0 Discussion

Existing studies have focused only on the nature of the functional and conceptual, relationship between the three variables - service quality, service value and satisfaction. This has led to a consensus on the relationship between the three variables (Lai and Chen, 2011; Ryu et al., 2012; Paparoidamis et al., 2015) and the convergence of opinion that favourable service quality perceptions lead to improved satisfaction and value realisation. The resultant positive value directly influences satisfaction, customer loyalty and positive feedback (Cronin et al., 2000). However, a more discerning evaluation shows little uniformity on which of the three variables (or combinations) directly influences the consequence measures.

The results of this study suggest that customer orientation has significant impact on patient satisfaction (Jaworski and Kohli, 1993; Ndubisi, 2012; Lee et al., 2013). Customer orientation had significant impact on quality of service. The indications are that when service providers orient their customers towards what they do, they are obliged to provide quality services to match what they have promised their customers. Similarly, customer orientation, provoke expectations of high service value among customers which can only be redeemed by providing high quality services. The facets of customer orientation considered in this study were commitment to patients, providing value-based services to patients, priorioritins patient needs, pursuing patient satisfaction, measuring patient satisfaction and providing follow up services (Narver and Slater, 1990; Kelley, 1992; Perryer, 2009).

Another key finding was the positive and significant relationship between quality of service and patient satisfaction (Mahon, 1996; Hush et al., 2011; Lyu et al., 2013). The measures of quality of service considered were quality of treatment, quality of physicians, quality of reception staff', medical equipment', resources' and improving quality of life. Patients are the consumers of healthcare services; hence their satisfaction with medical services is strongly tied to the quality of physicians, staff, facilities, equipment and the quality of care they receive. Through their encounters with medical service structure, process and outcomes (Donabedian, 1996), patients are more positioned to assess their experiences against their efforts in the form of time, cost, convenience, and improvement of their health to determine the service value. It was therefore consistent to observe that quality of service had the strongest relationship (73%) with service value.

The significance of service value in patient satisfaction was confirmed by the results of the study. The data for the study revealed not only a significant and positive relationship between service value and patient satisfaction (Hargreaves, 2015; Lai and Chen, 2011), but found that service value was the strongest predictor of patient satisfaction even more than quality of service. Studies show that the value of a service is largely defined by perceptions of quality (Cronin et al., 2000). Therefore, improving on any of the items that reflect the service value construct would lead to improvement in customer satisfaction. The facets of 'Service Value' assessed in this study are those of hospital facilities, ambience, attractiveness and overall costs to patients with respect to travel, medication etc (Petrick, 2002). The empirical analyses thus support the hypothesis that "service value has positive impact on patient satisfaction". The implications of the results for healthcare service providers is the need to assess which of antecedent factors can be feasibly improved in order to obtain the strongest customer satisfaction. Since service value had the strongest impact on the overall customer satisfaction, it stands to reason therefore, that healthcare providers would be better served by investing in 'service value' as a higher priority to make the greatest 'wins' on customer satisfaction.

The outcomes of this study, not only empirically tests and confirms the value-based healthcare framework (European Union, 2019) within an NHS setting, but proposes a service-value model for patient satisfaction which has the potential to equally impact service delivery in both the public and private health sectors in the EU member countries and worldwide. Studies have found no differences between public and private health service providers in terms of quality and service satisfaction (Moscone et al., 2020; Pérotin et al., 2013). The outcomes of this study therefore provide a use case for a paradigm shift in the focus on quality-based services which have hitherto characterised health service delivery in both the private and public sectors across the world, to a value-based service delivery (NHS, 2017; Teisberg et al., 2019). In the current service dominant economy (Witt and Gross, 2020), value-based service should perhaps be the topmost priority if service organisations in both private and public sectors are to remain in business. The outcome of the study is expected to impact medical care worldwide as personal value is predicted to drive services including personalisation of healthcare services (Prainsack, & Van Hoyweghen, 2020; Kettley et al., 2017). It is expected that both private and public healthcare service institutions would re-design their business models by extending their current quality-based service models to include a value-based service component in line with the demands of the ever-changing service dominant society.

5.1 The Case for a Shift from Quality of Service-Based to Service Value-Based Patient Satisfaction Model

There has been a long-held controversy over the use of quality-based metrics in assessing patient experience (Chatterjee et al., 2015). Whereas, quality of products and operations, tend to characterise and define clients and customer satisfaction in a production economy, value addition and expectations characterises the service economy (Kim, 2006; Witt and Gross, 2020; OECD, 2000). The case for a shift from quality-based patient satisfaction to value-based patient satisfaction framework is even more necessary now than ever given the servitisation of the healthcare industry (Guarcello & de Vargas, 2020) and the shift to value-based healthcare (NHS, 2017; Teisberg et al., 2019). Thus, there has been a shift from goods dominant logic, where quality of service was the key determinant of satisfaction to service dominant logic where value is now the focus of and key determinant of satisfaction (Kowalkowski, 2010; Vargo and Akaka, 2009).

Following the shift to VBHC, and the general shift from production economy to service economy (Shek et al., 2015), the tools for assessing patient satisfaction equally needs to be adapted to match the focus in healthcare services delivery. There is the need for academics, healthcare practitioners and policy makers to consider assessment metrics that reflect the focus on service value as proposed in this study. This paper thus extends the work of Porter (2010), by proposing a corresponding value-based patient satisfaction framework to replace the current quality-based metrics for assessing patient satisfaction. The results of the study make several unique contributions.

5.2 Contribution to Theory

There is still a paucity of literature that specifically explores and explains the relationship between the customer orientation, quality of service, service value and patient satisfaction. This research has therefore made a significant contribution to theory by addressing, at least in some part, the gap in knowledge patient satisfaction. This study clearly assessed the extent of the inter-relationship between the key constructs. The results confirm that patient satisfaction is the dependant variable and the other three constructs namely customer orientation, quality

of service and service value are the predictor variables although service value turned out to be a strong mediator.

5.3 Contribution to Knowledge

Current literature has been dominated by studies of the three constructs of service quality, value and satisfaction. There is a distinct lack of published literature that explores these with the fourth construct 'customer orientation'. Till date, only a study by Lee et al. (2010) has looked at the relationship between these four constructs in the context of a medical centre in South Taiwan. However, even in their study, quality of service was not clearly defined. The paucity of literature regarding these four constructs means that this study which investigated the inter-relationship between the four constructs, particularly within the context of a UK medical centre, makes a unique contribution to a prominent gap in knowledge. More specifically, this research provides insight into patient satisfaction in healthcare service delivery and the requirements for achieving a high standard of patient satisfaction.

5.4 Contribution to Management and Policy

The results of the study makes significant contributions to the management of business services, management practitioners as well as Management of health service provider including Moorfields Eye Hospital (London, UK) and those other healthcare providers about the need to shift focus from quality-based models to value-based models in their effort to improve customer satisfaction. The results suggest that whilst providing quality services is important; offering high service value is key to customer satisfaction. Therefore, business service providers must consider service value in addition to quality service initiatives. Given the significant mediation effect of service value on patient satisfaction, it is imperative that assessment of quality of health service delivery includes metrics on service value. Policy makers such as the independent bodies (e.g., Care Quality Commission – CQC, etc.) should include measures of service value in future assessment of healthcare services delivery.

6.0 Conclusion, Limitations and Future Research Directions

This study set out to ascertain the extent to which customer orientation, service value and quality of service influences patient satisfaction as well as examining the mediating role of service value in these relationships. Using evidence from out-patients at Moorfields Eye Hospital NHS Trust in the UK, the study established that to a very large extent (i.e., between 41.7% - 51.0%) customer orientation, quality of service and service value influences patient satisfaction. The results showed a very high level of customer orientation and 'quality of service' at Moorfields Eye Hospital culminating in customers overall feel that Moorfields Eye Hospital offers service value that exceed the expectations of the patients.

The results of the study indicate that quality of service alone no longer determines patient satisfaction, rather quality of service is more predictive of service value which in turn influences patient satisfaction. This is a significant finding which is in stark contrast to studies (e.g., Cronin et al., 2000; Lee et al., 2010) which emphasised quality of service as key determinant of customer satisfaction. The full mediation effect of service value on the relationship between quality of service and patient satisfaction, are indications that Moorfields Eye Hospital has shifted its strategy from a quality of service-based model, to a service value-based model in order to achieve a high level of patient satisfaction. In an era, where customers are becoming more sophisticated, with ever increasingly expectations of service providers, providing quality service is not enough. A more pragmatic approach that

focuses on meeting the service value expectations of customers seems appropriate and relevant for consideration by service providers.

The fact that the model only explains 46% of the variation in patient satisfaction as a result of changes in customer orientation, quality of service and service value, suggests that there are other variables which directly or indirectly influences patient satisfaction. Therefore, future studies should explore those other factors. Also, due to the limitations of quantitative study, qualitative approaches such as interviews and focus groups discussion would be useful in understanding the reasons for the observed relationships. The items of the service value construct were limited to hospital settings. Future studies could extend the measures of service value in terms of numbers and to other service industries. In addition, although the study was set within a single tertiary eye hospital, and cognisant of the fact that healthcare services delivery is universal, the researchers did not anticipate potential differences in the outcomes with other sectors of healthcare. Besides, the value-based healthcare framework (European Union, 2019) which served as the foundation of this study was not sector specific. This is informed by evidence from a study by Moscone et al. (2020) who found that public and private providers in Italy generally do not differ in clinical quality; and also in patient satisfaction in public and private hospitals in England (Pérotin et al., 2013). Consequently, the researchers do not anticipate any differences across healthcare sectors. However, future comparative studies that tests our proposed value-based patient within different health sectors, between general and specialised hospitals, and between private and public health institutions would be useful.

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List of Tables

Table (i): Summary of Literature on the Key Constructs (SQ, SV, SAT and CO and Outcomes)

Authors	Constructs	Link(s) to Outcomes	Empirically Researched	Limitation
Cronin, Brady and Hult (2000)	CO, SQ, SV, BI	BI	YES	SAT
Brady and Cronin (2001)	CO, CSP, OB	OB	YES	SQ, SV, SAT
Athanassopoulos (2000)	SV, SQ, SAT	SQ	YES	CO
Bansal & Taylor (2015)	SQ, SAT	SAT	YES	CO, SAC
Brady & Cronin (2001)	CO, SAT	SAT	YES	SQ, SV
Bolton and Drew (1991)	SQ, SAT, SV	SV	NO	CO
Chahal and Kumari (2011)	SQ, SAT	SQ, SAT	YES	CO, SV
Cronin et al. (1997)	SAT, SQ, SV	SV	YES	CO
Cronin and Taylor (1992)	SQ, SAT	SAT	YES	CO, SV
Hargreaves (2015)	SQ, SV, SAT	SAT	NO	CO
Ishaq (2012)	SQ, SV	SV	YES	CO, SAT
Izogo & Ogba (2015)	SQ, SAT	SQ	YES	CO, SV
Kaura et al. (2015)	SQ, SAT	SQ	YES	CO, SV
Lai and Chen (2011)	SQ, SV, SAT	SQ, SV, SAT	YES	CO
Lim and Tang (2000)	SQ, SAT	SAT	YES	CO, SV
Lee at al. (2012)	SQ, SAT	SQ, SAT	YES	CO, SV
Lee et al. (2010)	SQ, SAT, SV, CO	SQ, SV, CO	YES	None
Oliver (1999)	SAT	SAT	NO	CO, SV, SQ
Padma et al. (2010)	SQ, SAT	SQ, SAT	YES	CO, SV
Parasuraman, Berry, and Zeithaml (1988)	SQ	SQ	YES	CO, SV, SAT
Parasuraman, Zeithaml, and Berry (1991)	SQ	SQ	YES	CO, SV, SAT
Paparoidamis, Chumpitaz & Ford (2015)	SQ, SV, SAT	SQ	YES	CO
Patterson and Spreng (1997)	SAT, SV	SAT	YES	CO, SQ
Rahman, Khan & Haque (2012)	SQ, SAT	SAT	NO	CO, SV
Ryu, Lee, & Gon Kim (2012)	SQ, SV, SAT	SQ	YES	CO
Taylor (1997)	SQ, SAT	SQ, SAT	YES	CO, SV
Whelan et al. (2010)	CO, SAT	SAT, CO	YES	SQ, SV
Lim, Romsa, and Armentrout (2016)	SQ, SAT	SAT	YES	CO, SV
Zeithaml (1988)	SAQ, SQ, SV	SV	NO	CO
Zeithaml, Berry, and Parasuraman (1996)	SQ	SQ	YES	CO, SV, SAT
Zhao et al. (2012)	SQ, SAT	SQ, SAT	YES	CO, SV

NB: BI - Behavioural Intentions; OB - Outcome Behavior; CSP- Customer Service Perceptions

Table (ii): Sources of Instruments and Items Used for Developing the Research Instrument

Section	Constructs	Initial number of items (A)	Sources	Name of instrument	*Number of items used in the model (B)
1	Customer (patient) orientation	Six	Narver and Slater (1990); Kelley (1992); (Perryer 2009).	Customer Orientation scale - SOCO scale	Four
2	Quality of service	Nine	Donabedian (1988)	Structure-Process-Outcome	Six
3	Service value	Five	Petrick (2002)	Multi-Dimensional 'SERV-PERVAL' Scale.	Four
4	Patient satisfaction	Eight	Gupta and Govindrajan' (1984), Lee et al (2015)	business performance; patient satisfaction	Four
5	Personal characteristics	Four	-	-	Four

*** - some items were dropped in (B) after the test of multicollinearity/cross-loading of the items in (A).**

Table (iii): Background of the Respondents

Age	Freq.	%	Income	Freq.	%	Education	Freq.	%
18-25	5	2.0	(<£10k)	35	14.2	Rather not say	69	27.9
26-35	16	6.5	(£10-£25k)	36	14.6	GCSE	48	19.4
36-45	23	9.3	(£25k-£50K)	39	15.8	A-Level	24	9.7
46-55	35	14.2	(£50K-£100K)	38	15.4	Diploma	24	9.7
55years +	166	67.2	(>£100k)	17	6.9	First Degree	40	16.2
Rather not say	2	0.8	Rather not say	82	33.2	Higher Degree	42	19.0

Total frequency for each item = 247

Table (iv): Construct Reliability, AVE and Discriminant Validity

	Construct Reliability and Validity			Correlations of Constructs and √AVE test			
Constructs	Cronbach's Alpha	Composite Reliability	Average Variance Extracted (AVE)	CO	QS	SAT	SV
CO	0.88	0.92	0.73	0.86			
QS	0.91	0.93	0.69	0.50	0.83		
SAT	0.90	0.92	0.71	0.51	0.57	0.84	
SV	0.89	0.92	0.75	0.48	0.79	0.63	0.87

NB: CO – patient orientation, QS – quality of service, SAT – patient satisfaction and SV – service value

Table (iv(b)) : Cross Loadings of Items on the Constructs (Test of Significance)

Items-Construct	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P-values
Q1a <- CO	0.71	0.72	0.07	9.71	0.000
Q1c <- CO	0.81	0.81	0.05	17.38	0.000
Q1d <- CO	0.83	0.83	0.04	20.89	0.000
Q1e <- CO	0.81	0.81	0.03	25.47	0.000
Q2a <- SV	0.87	0.87	0.02	39.01	0.000
Q2b <- SV	0.89	0.89	0.02	42.49	0.000
Q2c <- SV	0.84	0.84	0.03	27.97	0.000
Q2d <- SV	0.86	0.86	0.03	28.46	0.000
Q3a <- QoS	0.84	0.84	0.04	22.03	0.000
Q3b <- QoS	0.87	0.87	0.03	31.40	0.000
Q3c <- QoS	0.85	0.85	0.02	35.42	0.000
Q3d <- QoS	0.82	0.82	0.04	20.54	0.000
Q3f <- QoS	0.87	0.87	0.03	28.66	0.000
Q3g <- QoS	0.90	0.90	0.02	46.94	0.000
Q4a <- HSAT	0.82	0.82	0.04	22.76	0.000
Q4b <- HSAT	0.78	0.78	0.04	19.05	0.000
Q4c <- HSAT	0.78	0.78	0.05	17.19	0.000
Q4d <- HSAT	0.81	0.81	0.04	22.50	0.000
Q4f <- HSAT	0.83	0.83	0.02	35.58	0.000

Table (v) : Summary of Path Coefficients and Hypothesis Tested

Total Effect	Original Sample (O)	Sample Mean (M)	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values	Outcome of hypothesis
CO -> SAT	0.51	0.52	0.08	6.06	0.000	H1 supported
QS -> SAT	0.42	0.42	0.07	6.10	0.000	H2 supported
SV -> SAT	0.43	0.42	0.12	3.68	0.000	H3 supported
CO -> QS	0.50	0.50	0.05	9.62	0.000	H4a supported
CO -> SV	0.48	0.48	0.06	8.71	0.000	H4b supported
QS -> SV	0.73	0.73	0.04	17.23	0.000	H4c supported
CO -> QS -> SAT	0.05	0.06	0.06	0.86	0.390	H2a not supported
CO -> SV -> SAT	0.05	0.05	0.03	1.77	0.076	H3a not supported
QS -> SV -> SAT	0.31	0.31	0.09	3.63	0.000	H3b supported
CO -> QS -> SV	0.36	0.37	0.04	8.27	0.000	H3c supported
CO -> QS -> SV -> SAT	0.16	0.15	0.05	3.37	0.001	-