Service Decision-Making: The Interrelationship of Service Quality, Satisfaction, Quality of Life and Behavioural Intent

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Abstract

This study extends previous research on service decision making by examining the relationship between service quality, process satisfaction, outcome satisfaction, quality of life and behavioural intent. The model was tested in a high involvement, high-contact, on-going health service environment. The impact of service quality, process satisfaction and outcome satisfaction and quality of life on the behavioural intentions of customers was specifically examined. A number of notable findings are reported including empirical results indicating that service quality has a direct impact on satisfaction as well as behavioural intentions. In turn, process and outcome satisfaction were found to play an important role in generating favourable behavioural intentions. Quality of life was found to be an outcome of the service decision-making process rather than an input into this process. The results obtained from this study have important implications for service providers as well as for future research in this area.

Introduction

The purpose of this study was to examine the relationship between service quality, process satisfaction, outcome satisfaction, quality of life and behavioural intent within a high involvement, high-contact, on-going service environment. The findings from this study have important implications for progressing theory and improving service outcomes. This paper is divided into four sections. First, the background to this research is discussed. Second, the literature on the relationship between these constructs is reviewed and the conceptual framework guiding this study is forwarded. The methodology of the study is then outlined and the results of this study are presented. A discussion of the implications of this research concludes this paper.

Background to the Research

Research into service quality and satisfaction is an important theme in the services marketing literature. Understanding the role of these constructs in generating outcomes such as positive word-of-mouth, loyalty and repeat patronage is fundamental to organisational success. Indeed, managers need to understand the influence of these constructs on customer decision making if they are to effectively evaluate organisational strategies and set appropriate employee goals. This study extends previous research in four ways. First, it simultaneously explores the interrelationships between service quality, satisfaction and behavioural

2298
intentions. Given the conflicting results forwarded in the literature further research is needed to clarify the relationship between these constructs and to examine how they generate favourable outcomes for service firms. Second, this research examines the role and impact of satisfaction on behavioural intentions from two perspectives: satisfaction with the service process and satisfaction with the service outcome. This conceptualisation provides a more sensitive view of the relationship between quality, satisfaction and intent than previously examined. Third, this study examines the role of quality of life perceptions as an additional decision making variable in the quality, satisfaction, intent relationship. To the researchers knowledge the role of quality of life, or consumer well-being, in customer decision-making has not been studied previously. This study examines how service evaluation impacts on, or enhances, an individual's well-being. Fourth, there is limited knowledge about service evaluation and decision making for services that are high in credence qualities, require high customer involvement during the service encounter as well as between encounters, are high in provider-customer contact and are provided on a frequent, on-going basis. Research into these areas will extend current service theory and provide practical insights that are fundamental to service success.

**Literature Review and Conceptual Framework**

**The Service Quality – Satisfaction Relationship**

Convergence on the relationship between service quality and customer satisfaction has not been reached (Rust and Oliver 1994). A review of the literature indicates five distinct perspectives on this relationship. The first perspective suggests that satisfaction is antecedent to perceived service quality (Bitner and Hubbert 1994; Bolton and Drew 1991; Parasuraman, Zeithaml, and Berry 1988). This perspective posits service quality as a global evaluation and satisfaction as transaction specific. On this basis an accumulation of transaction specific satisfaction judgments will result in a global evaluation of service quality. The second perspective evident in the literature posits service quality as an antecedent to satisfaction (Anderson and Sullivan 1993; Cronin and Taylor 1992; de Ruyter, Bloemer, and Peeters 1997). The basis of this perspective is that service quality, as a cognitive evaluation, precedes the more emotive satisfaction evaluation (Gotlieb, Grewal, and Brown 1994). Simply stated, positive service quality perceptions will lead to a more satisfied customer. The third perspective views service quality and satisfaction as an antecedent and consequent of each other (McAlexander, Kaldenberg, and Koening 1994). That is, the relationship between the constructs is non-recursive. The fourth perspective suggests that service quality and satisfaction converge to form a single construct. As such, they are not considered distinct constructs (Spreng and Singh 1993). The final perspective conceptualises service quality and customer satisfaction as distinct constructs in the minds of recent customers, but as overlapping construct for long-term customers (Dabhlokar 1995).

**The Role of Quality of Life Perceptions**

Quality of life reflects a general sense of well-being, life satisfaction and general happiness (Strumpel 1973). Such issues are increasingly being studied across a broad range of disciplines (Yuan 2001). Indeed, Kotler (1980) emphasises that marketing can seek to contribute to quality of life through exchange processes. The existence of a relationship between quality of life, service quality perceptions and service satisfaction is intuitively appealing. Simultaneous production and consumption, the variability of service provision and
the inherent intangibility of many services suggest that the service experience may impact significantly on customer's lives and ultimately on their quality of life. In turn, quality of life perceptions may have a direct impact on behavioural intentions. Although the role of marketing in enhancing individuals' well-being by satisfying their needs is inherent in the marketing concept (Sirgy, Samli and Meadow 1982) limited attention has focused on the role of quality of life in the services marketing literature.

**The Antecedents of Behavioural Intentions**

As a result of the ambiguous relationship between service quality and satisfaction the relationship between these constructs and behavioural intent also remains unclear. Three differing perspectives are evident in the literature. The first perspective conceptualises satisfaction as directly determining consumer behaviour. Service quality in contrast is viewed as indirectly influencing behavioural intent through its effect on satisfaction (Brady and Robertson 2001; Cronin and Taylor 1992; Goltche, Grewal, and Brown 1994). The second perspective posits service quality as directly influencing behavioural intentions, while satisfaction indirectly influences intentions through its effect on service quality perceptions (Boulding, Kalra, Staclin, and Zeithaml 1993; Zeithaml, Berry, and Parasurman 1996). The third perspective conceptualises both satisfaction and service quality as directly determining behavioural intention as a result of a non-recursive relationship between these constructs (McAlexander, Kaldenborg, and Koenig 1994).

**Conceptual Framework**

The conceptual framework shown in Figure 1 outlines the proposed relationships between service quality, process satisfaction, outcome satisfaction, quality of life and behavioural intentions. In this framework, the level of service quality (as perceived by the customer) contributes directly to customer satisfaction with the service, quality of life perceptions and behavioural intentions. The conceptual model is most suited to services which are variable, high in credence qualities, high in customer involvement, high in customer and service provider contact and where service interaction and provision is on-going. Many professional services and consumer personal services fulfil these criteria. In these situations customer judgements about the service may contribute to the customers likelihood to engage in either positive or negative service outcomes.

**Figure 1: The Relationship between Quality, Satisfaction, Quality of Life and Intent**

![Diagram showing the relationships between SQ, PSAT, OSAT, QOL, and BI]

Note: SQ=Service Quality, PSAT=Process Satisfaction, OSAT=Outcome Satisfaction, QOL=Quality of Life, BI=Behavioural Intentions.
Methodology

The data used in this study was collected from patients at two large metropolitan private hospitals. Specifically, private out-patient oncology clinics were chosen as the context for this study due to the high-involvement, high-contact, on-going nature of their service offering. The research sample consisted of 2370 patients. This sample represented a census of patients receiving treatment during the previous 12 mths. Data was collected via a mail survey. A total of 828 surveys were returned, of these 778 were usable questionnaires. This represented a response rate of 32.8%.

The theoretical definition and domain of each construct in the proposed model was derived from the literature. If possible existing measures were adapted from the literature. Table 1 shows the scales used to represent the research constructs, the number of items in each scale and the source of the measure. A seven point Likert response format was used were 1 = strongly disagree and 7 = strongly agree.

<table>
<thead>
<tr>
<th>Scale</th>
<th>No. of Items</th>
<th>Source of Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality</td>
<td>4</td>
<td>Parasuraman, Zeithaml and Berry (1988); Cronin and Taylor (1992); Brady and Cronin (2001)</td>
</tr>
<tr>
<td>Process satisfaction</td>
<td>3</td>
<td>Oliver (1980); de Ruyter, Bloemer and Peeters (1997)</td>
</tr>
<tr>
<td>Outcome satisfaction</td>
<td>3</td>
<td>Greenfield and Attkinson (1989); Hubbert (1995)</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>2</td>
<td>Aaronson, Cull, Kaasa and Sprangers (1996)</td>
</tr>
<tr>
<td>Behavioural intentions</td>
<td>7</td>
<td>Zeithaml, Berry and Parasuraman (1996); Headley and Miller (1993)</td>
</tr>
</tbody>
</table>

Results

The research model was assessed through structural equation modelling (SEM) using AMOS 4. A preliminary analysis of the data was undertaken to assess missing data, outliers, normality, multicollinearity, and non-response error. The two-step approach to structural equation modelling recommended by Anderson and Gerbing (1988) was then used to analyse the proposed research model. Based on this approach the measurement model was estimated and validated using confirmatory factor analysis prior to analysis of the structural model. The measurement model analysis indicated good fit to the data ($\chi^2 = 144.83$, df = 34, GFI = 0.97, IFI = 0.99, CFI = 0.99). As the coefficients for the measurement model were well above the criterion value of 0.50 and the modification indices for the model did not suggest any major improvements the observed indicators were found to serve as strong measures of their latent construct (Graver and Mentzer 1999).

The reliability and validity of the measures used in this study were then examined. Construct reliability was initially assessed via Cronbach alpha coefficients and then through SEM using Fornell and Larcker's (1981) construct reliability estimate and average variance extracted estimate. As can be seen in Table 2, Cronbach alpha coefficients were >0.70, construct reliability estimates were >0.80 and average variance extracted estimates were >0.50. These results suggest the measures used in this study are reliable and can be used with confidence (Fornell and Larcker 1981). Discriminant validity was also assessed for all possible pairs of constructs in the research model using Fornell and Larcker's (1981) stringent criteria. The results of this analysis supported the distinction of the research constructs, hence establishing their discriminant validity. As a satisfactory level of reliability and validity was established
for the measures used in this study the structural model and research hypotheses were examined. The proposed model fitted the data well ($\chi^2 = 210.54$, df = 37, RMR = 0.05, GFI = 0.95, NFI = 0.98, IFI = 0.98, CFI = 0.98). The squared multiple correlation for the behavioural intentions construct was 0.85, indicating that well over three quarters of the variance in behavioural intentions was explained by its service quality, process satisfaction and outcome satisfaction antecedents.

**Table 2. Measurement Model Analysis**

<table>
<thead>
<tr>
<th>Construct</th>
<th>No. of Items</th>
<th>Coefficient Alpha</th>
<th>Loading on Latent Construct</th>
<th>Construct Reliability</th>
<th>Average Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Service quality</td>
<td>4</td>
<td>0.95</td>
<td>0.92-0.97</td>
<td>0.95</td>
<td>0.83</td>
</tr>
<tr>
<td>Process satisfaction</td>
<td>3</td>
<td>0.94</td>
<td>0.90-0.95</td>
<td>0.94</td>
<td>0.85</td>
</tr>
<tr>
<td>Outcome satisfaction</td>
<td>3</td>
<td>0.91</td>
<td>0.86-0.88</td>
<td>0.92</td>
<td>0.80</td>
</tr>
<tr>
<td>Quality of Life</td>
<td>2</td>
<td>0.93</td>
<td>0.90-0.96</td>
<td>0.94</td>
<td>0.97</td>
</tr>
<tr>
<td>Behavioural intentions</td>
<td>7</td>
<td>0.95</td>
<td>0.96-0.99</td>
<td>0.95</td>
<td>0.74</td>
</tr>
</tbody>
</table>

The parameter estimates and critical ratio values for the research model are presented in Table 3. The proposed model was also compared to a series of competing models and found to be superior. As can be seen 7 of the 9 research hypotheses were supported.

**Table 3 Path Estimates for Proposed Encounter Construct Model**

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Relationship</th>
<th>CR</th>
<th>Supported</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_1$</td>
<td>Service quality _ Process satisfaction</td>
<td>0.85</td>
<td>29.95</td>
</tr>
<tr>
<td>$H_2$</td>
<td>Service quality _ Outcome satisfaction</td>
<td>0.71</td>
<td>21.35</td>
</tr>
<tr>
<td>$H_3$</td>
<td>Service quality _ Behavioural intent</td>
<td>0.58</td>
<td>12.19</td>
</tr>
<tr>
<td>$H_4$</td>
<td>Service quality _ Quality of life</td>
<td>-0.09</td>
<td>-0.701</td>
</tr>
<tr>
<td>$H_5$</td>
<td>Process satisfaction _ Quality of life</td>
<td>0.01</td>
<td>0.291</td>
</tr>
<tr>
<td>$H_6$</td>
<td>Process satisfaction _ Behavioural intent</td>
<td>0.34</td>
<td>8.546</td>
</tr>
<tr>
<td>$H_7$</td>
<td>Outcome satisfaction _ Quality of life</td>
<td>0.35</td>
<td>6.81</td>
</tr>
<tr>
<td>$H_8$</td>
<td>Outcome satisfaction _ Behavioural intent</td>
<td>0.06</td>
<td>1.95</td>
</tr>
<tr>
<td>$H_9$</td>
<td>Quality of life _ Behavioural intent</td>
<td>-0.00</td>
<td>-0.170</td>
</tr>
</tbody>
</table>

Note: standardised parameter estimates (.) were statistical significant based on a critical ratio (CR) value of $\pm 1.645$ (p<0.05) for a one tailed test of significance.

**Discussion and Conclusion**

Companies spend billions of dollars annually in an attempt to create repeat patronage, positive word-of-mouth communications and customer loyalty. As the service sector becomes more competitive service providers are increasingly looking to quality and satisfaction to achieve market leadership. This paper provides a clear understanding of these constructs and how they are linked. It also assists managers in understanding how these constructs impact on the quality of life perceptions and behavioural intentions of their customers. Such an understanding supports managers in evaluating the effectiveness of company strategies, setting employee service goals and managing the social implications of service provision.

There were three key findings of this research. First, it was found that service quality perceptions had a large positive influence on satisfaction with both the service process and service outcome. This emphasises, from a managerial standpoint, the important role of service quality in creating satisfied customers. This finding further suggests the importance of service quality as a strategic objective. Second, the finding that service quality, process
satisfaction and outcome satisfaction significantly impact on customers' behavioural intentions is important in that it suggests that quality and satisfaction combine to form the basis of service evaluation. From a managerial standpoint, this stresses that service managers need to implement an integrated program that jointly considers quality and satisfaction. Third, quality of life was found to represent an outcome of service evaluation rather than a contributor to the process. That is, satisfaction with the service outcome was the sole driver of quality of life perceptions. Akin to behavioural intentions, which represent the economic outcomes of service evaluation, quality of life represents the social outcome of the service evaluation process. This finding is particularly important to services where service consumption is highly credence based and where co-production results in high customer involvement and contact over an extended period of time. For these services meeting the economic challenges of business is intertwined with providing customers with service outcomes that do not adversely impact on their quality of life. Thus this study emphasises the role of marketing in enhancing societal well-being by satisfying consumer needs (Sirgy, Samli and Meadow 1982). In this way marketing seeks to contribute to quality of life through the exchange process (Kotler 1980). Further research is needed to clarify the role of quality of life in the service evaluation process.

Overall this study clearly indicates the complexity of consumer decision-making and the importance of service quality and satisfaction in contributing to the quality of life perceptions and behavioural intentions of customers.

References


