Health Marketing Quarterly

Publication details, including instructions for authors and subscription information:
http://www.tandfonline.com/loi/whmq20

Patient Influences on Satisfaction and Loyalty for GP Services

Sharyn Rundle-Thiele \(^a\) & Rebekah Russell-Bennett \(^b\)

\(^a\) Griffith Business School, Griffith University, Nathan, Queensland, Australia

\(^b\) School of Advertising, Marketing and Public Relations, Queensland University of Technology Brisbane, Queensland, Australia

Available online: 04 May 2010

To cite this article: Sharyn Rundle-Thiele & Rebekah Russell-Bennett (2010): Patient Influences on Satisfaction and Loyalty for GP Services, Health Marketing Quarterly, 27:2, 195-214

To link to this article: http://dx.doi.org/10.1080/07359681003745162

PLEASE SCROLL DOWN FOR ARTICLE

Full terms and conditions of use: http://www.tandfonline.com/page/terms-and-conditions

This article may be used for research, teaching, and private study purposes. Any substantial or systematic reproduction, redistribution, reselling, loan, sub-licensing, systematic supply, or distribution in any form to anyone is expressly forbidden.

The publisher does not give any warranty express or implied or make any representation that the contents will be complete or accurate or up to date. The accuracy of any instructions, formulae, and drug doses should be independently verified with primary sources. The publisher shall not be liable for any loss, actions, claims, proceedings, demand, or costs or damages whatsoever or howsoever caused arising directly or indirectly in connection with or arising out of the use of this material.
Little is known about the influence that patients themselves have on their loyalty to a general practitioner (GP). Consequently, a theoretical framework that draws on diverse literature is proposed to suggest that along with satisfaction, patient loyalty is an important outcome for GPs. Comprising 174 Australian patients, this study identified that knowledgeable patients reported lower levels of loyalty while older patients and patients visiting a GP more frequently reported higher levels of loyalty. The results suggest that extending patient-centered care practices to encompass all patients may be warranted in order to improve patient satisfaction and loyalty. Further, future research opportunities abound, with intervention and dyadic research methodologies recommended.

KEYWORDS demographics, healthcare, knowledge, loyalty, patient-centered care, satisfaction

INTRODUCTION

Today patients in countries such as Australia have freedom of choice in healthcare, and there is sometimes fierce competition between healthcare service providers. Given this competition, healthcare success does not only result from having good technical skills but also from satisfying customers and encouraging them to return to the practice. For example, patient dissatisfaction has been linked to doctor switching and research indicates that a 5%
patient dissatisfaction rate can cost a physician $150,000 in lost revenue (Gesell, 2003). While satisfaction is important in healthcare, it should not be the only objective for healthcare practitioners. Consider Mittal and Lasser (1998), who suggest that only a minimal satisfaction threshold is required in some service contexts, after which other factors influence loyalty formation and depletion. Cronin, Brady, and Hult (2000) found that while satisfaction directly influenced behavioral intentions (i.e., repatronage) in the hairdressing, sports, fast-food, and telecommunications industries, it was not a direct influence in the healthcare industry. This demonstrates a need to look beyond mere satisfaction as a key service outcome for healthcare to examine other service outcomes such as loyalty.

For services such as healthcare, customers have essential participation roles (also termed coproduction or cocreating roles) that, if not fulfilled, will affect the nature of the service outcome (Bitner, Faranda, Hubbert, & Zeithaml, 1997; Kelly, Donnelley, & Skinner, 1990; Kelly, Skinner, & Donnelley, 1992). This suggests that customers themselves can enhance or detract from their own satisfaction and loyalty.

While considerable research effort has been directed towards understanding the impact of service provider inputs (e.g., service quality and service value) on health service outcomes (e.g., satisfaction and loyalty), only selected customer inputs and service outcomes have been considered in the healthcare sector. The research that does exist on customer inputs is rarely (if ever) combined with service provider inputs in a single study. Further, there has not been a single study that has examined all inputs simultaneously to identify the individual contribution of each input for a range of service outcomes.

This article first proposes a theoretical framework that suggests that both service provider and customer inputs influence healthcare service outcomes. Extant relationships are summarized and areas not previously studied are noted to guide this research. This article does not seek to replicate the established relationships in the proposed theoretical framework; rather, it seeks to build understanding of the influence that patients themselves have on their own service loyalty. Thus, this study will identify the variables that should be included in an empirical test of the complete theoretical model proposed in this article. Overall, the aim of this article is to identify and test patient inputs to the health service outcomes of satisfaction and loyalty.

**LITERATURE REVIEW**

To date, satisfaction has been a central focus in the healthcare context. Research suggests that patients who experience a good health outcome are more likely to be satisfied than patients who experience a bad health
outcome (Amyx, Mowen, & Hamm, 2000). There is further evidence in the literature to suggest that satisfied customers are:

1. More likely to be loyal (Bendall-Lyon & Powers, 2004; Gummerus, Liljander, Pura, & van Riel, 2004; Shemwell, Yavas, & Bilgin, 1998) and hence remain with the healthcare provider (Hausman, 2004), which suggests that satisfaction is a precursor to loyalty;
2. Less likely to complain (Shemwell et al., 1998);
3. More likely to recommend their GP (Bendall-Lyon & Powers, 2004; Hausman, 2004);
4. More likely to comply with medical and pharmaceutical treatment (Cho, Lee, Kim, Lee, & Choi, 2004) and cancer treatment (Gesell, 2003); and are
5. More likely to have higher perceptions of quality of life (Howard, Rayens, El-Mallakh, & Clark, 2007).

Acknowledging the importance of service outcomes for survival in the healthcare industry, researchers have investigated the relationship between innumerable factors and these key service outcomes. The two dominant service outcomes in the literature appear to be satisfaction and loyalty, so these will now be discussed.

Customer satisfaction is an evaluation or a cognitive appraisal of an object (Oliver, 1997). Satisfaction can be measured at multiple levels (e.g., at the attribute, overall, cumulative, or transaction-specific level) depending on the nature of the service provider and the aims of the research. It is useful to measure satisfaction with specific service attributes and overall satisfaction in order to identify service attributes that require improvement (Rust, Zoharik, & Keiningham, 1985). Given that cumulative satisfaction is deemed to be a more valuable indicator than transaction-specific satisfaction (see Anderson, Fornell, & Lehmann, 1994; Jones & Suh, 2000), this is what will be measured in this research.

It is important that research does not over-emphasize satisfaction as the sole service outcome because it is not an end in its own right (Bennett & Rundle-Thiele, 2004). Further, there is conflicting evidence about its role in influencing loyalty and other behavioral outcomes. While Hausman (2004) suggests that satisfaction is an important outcome in its own right due to its influence on repatronage intentions and word of mouth, Cronin et al. (2000) found that satisfaction has no direct influence on loyalty (measured by behavioral intentions) in healthcare. Mittal and Lassar (1998) found that the relationship between satisfaction and loyalty is asymmetrical; that is, dissatisfaction usually leads to switching but that satisfaction does not always generate loyalty to a health clinic.

Researchers (e.g., Bendall-Lyon & Powers, 2004; Cronin et al., 2000; Hausman, 2003, 2004; Mitall & Lassar, 1998; Shemwell et al., 1998) have captured healthcare loyalty using attitudinal measures, including intention to
recommend and intention to return. Given that loyalty is multidimensional (Rundle-Thiele, 2005), three dimensions of loyalty will be examined in this study: situational loyalty, resistance to competing offers, and attitudinal loyalty. Situational loyalty can be defined as the propensity to stay loyal through a variety of purchase and consumption situations (Dubois & Gilles, 1999). In this study situational loyalty is measured by the likelihood of a person attending the same medical practice if they moved location. Resistance to competing offers can be defined as customers being neither immune to nor protected from competing offers (Ganesh, Arnold, & Reynolds, 2000). In this study this construct is measured by the likelihood of a person continuing to attend the same practice if they are required to pay more out-of-pocket expenses per consultation. This article adopts Jacoby and Chestnut’s (1978) definition of attitudinal loyalty as a customer predisposition towards a GP, which is a function of psychological processes.

Both customers and service providers play a role in creating service outcomes such as satisfaction and loyalty. Therefore, the factors that have been researched in association with satisfaction and loyalty can be classified into two different types: (a) service provider inputs and (b) customer inputs. These inputs will now be discussed in turn.

Service Provider Inputs to Healthcare Satisfaction and Loyalty

Research concerned with understanding the relationship between service provider inputs and healthcare service outcomes have largely focused on patient satisfaction (see Table 1). Much of this research has been done by healthcare researchers rather than marketing researchers (e.g., published in Archives of Paediatrics and Adolescent Medicine, the Journal of Behavioural Health Services, and Research and Clinical Governance). Table 1 summarizes key studies that examine the relationship between service inputs and service outcomes.

SERVICE-QUALITY, PERCEIVED VALUE, AND RELATIONSHIP QUALITY

Five service provider inputs have been shown to impact on satisfaction with and loyalty to a healthcare service provider. These service provider inputs include (a) technical quality, (b) functional quality, (c) environment quality (all dimensions of service quality), (d) perceived value, and (e) relationship quality. These inputs fall into two broad categories: quality and value. Previous research in the services literature indicates that these are both key factors that lead to satisfaction and loyalty (Cronin et al., 2000). One study has also found that waiting time (a dimension of service quality) is not only an antecedent to satisfaction but also a moderator of the satisfaction-loyalty relationship (Bielen & Demoulin, 2007).
### Table 1: Satisfaction and Loyalty Research in Healthcare

<table>
<thead>
<tr>
<th>Reference</th>
<th>Context</th>
<th>Longitudinal/Cross-sectional</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammentorp et al. (2005)</td>
<td>Paediatric hospital</td>
<td>Longitudinal</td>
<td>The greatest gap between priorities and satisfaction was in the waiting time related to admission, waiting time related to fulfilments of the child's needs and information given about care and treatment. Parents were most satisfied with the nurses' behavior; however, physicians' performance was given the highest priority score.</td>
</tr>
<tr>
<td>Amyx, et al. (2000)</td>
<td>GP</td>
<td>Cross-sectional</td>
<td>Patients who experienced a good health outcome were more satisfied than patients who received a bad health outcome. Patients who were given the freedom to select their physician but did not receive their chosen physician were least satisfied. There was no difference in satisfaction between patients who had a choice of physician and those who did not.</td>
</tr>
<tr>
<td>Baker et al. (1998)</td>
<td>Mental health</td>
<td>Cross-sectional</td>
<td>Clients identified nursing services, food services and the treatment philosophy as the three areas of greatest satisfaction.</td>
</tr>
<tr>
<td>Bendall-Lyon and Powers (2004)</td>
<td>Teaching hospital</td>
<td>Cross-sectional</td>
<td>Structure satisfaction (e.g. admitting, food and room attributes) and process satisfaction (e.g., surgery, intern and doctor) contribute equally to global satisfaction. Global satisfaction, in turn, directly influences intention to return and intention to recommend a healthcare service provider.</td>
</tr>
<tr>
<td>Bielen and Demoulin (2007)</td>
<td>Hospital</td>
<td>Cross-sectional</td>
<td>Waiting time is both an antecedent to satisfaction and a moderator of the satisfaction-loyalty relationship.</td>
</tr>
<tr>
<td>Cronin et al. (2000)</td>
<td>Healthcare, long distance carriers, fast food, spectator sports, entertainment</td>
<td>Cross-sectional</td>
<td>Both service quality and service value were significant predictors of satisfaction. Satisfaction and service quality influenced behavioral intentions directly in all industries except healthcare.</td>
</tr>
</tbody>
</table>

(Continued)
<table>
<thead>
<tr>
<th>Reference</th>
<th>Context</th>
<th>Longitudinal/ Cross-sectional</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Deeter-Schmelz and Kennedy (2003)</td>
<td>Large regional medical centres</td>
<td>Employees and customers surveyed</td>
<td>Team cohesion is linked to quality of patient care, which in turn was associated with patient satisfaction. The social aspects of professional service relationships affect satisfaction but the strength of the relationship varies with the context (e.g., medicine shows a stronger link). Social aspects also make the client more loyal and willing to recommend although these links are weaker than those caused by technical aspects.</td>
</tr>
<tr>
<td>Hausman (2003)</td>
<td>Social work, church, hairdresser, GP.</td>
<td>Cross-sectional</td>
<td>Satisfaction is an important outcome in its own right. Satisfaction influences intention to repatronise and to recommend a GP. Satisfaction had no effect on compliance.</td>
</tr>
<tr>
<td>Mittal and Lassar (1998)</td>
<td>Healthcare and car repair</td>
<td>Cross-sectional</td>
<td>Satisfied customers are not necessarily loyal customers and it is therefore very important to consider both satisfaction and loyalty. In healthcare a threshold level of functional quality is needed to initiate satisfaction. Once this functional quality and the resulting satisfaction are in place technical quality will lead to loyalty.</td>
</tr>
<tr>
<td>Shemwell et al. (1998)</td>
<td>GP</td>
<td>Cross-sectional</td>
<td>Service quality is positively related to satisfaction. Satisfaction is negatively related to complaint behavior. Satisfaction is positively related to affective commitment and continuance commitment.</td>
</tr>
</tbody>
</table>
First, quality factors can influence satisfaction and loyalty in a variety of ways. For example, technical quality influences patient satisfaction, with studies indicating that patients who experience a good health outcome are more satisfied than patients who receive a bad health outcome (Amyx et al., 2000). The information given about care and treatment is also related to satisfaction (Ammentorp, Mainz, & Sabroe, 2005). Functional quality, including waiting time (Ammentorp et al., 2005), admission procedures (Bendall-Lyons & Powers, 2004), staff manners, staff level of empathy, staff level of caring (Gronroos, 1984), treatment philosophy (Baker, Zucker, & Gross, 1998), and team cohesion (Deeter-Schmelz & Kennedy, 2003), has been shown to influence satisfaction in the healthcare context (Baker et al., 1998). Evidence presented by Mittal and Lasser (1998) suggests that even if staff were empathetic and caring (i.e., functional quality was high), if a problem was not fixed (i.e., low technical quality) then the customer was less likely to come back the next time to that service (i.e., low loyalty). Environment quality, which includes food services (Baker et al., 1998; Bendall-Lyons & Powers, 2004) and room attributes (Bendall-Lyons & Powers, 2004) also influences satisfaction (Baker et al., 1998).

Second, perceived value has been found to be a key moderator between satisfaction and loyalty, explaining why satisfied customers do not always repurchase (Pan & Chen, 2004). Perceived value has specifically been found to impact on satisfaction and loyalty (i.e., behavioral intentions) in healthcare settings (Cronin et al., 2000), with service value explaining 67% of the variance in satisfaction.

Empirical evidence exists demonstrating the impact of service provider inputs on satisfaction, and to a lesser extent loyalty, in healthcare settings. However, these inputs are only part of the explanation for service outcomes and it is important to now consider the role that the customer themselves play, termed customer participation, in shaping their own satisfaction and loyalty.

Customer Participation

Customer participation, which has also been referred to as cocreation (e.g., Hsieh, Yen, & Chin, 2004), cocontribution, and partial employment (e.g., Bitner et al., 1997; Kelly et al., 1990; Kelly et al., 1992), refers to the fact that customers participate in service delivery both through their presence and in most cases their active involvement (Kotze & Plessis, 2003). In a healthcare context, customers are an essential part of the service production and can enhance or detract from their own service outcomes (Kotze & Plessis, 2003; Yen, Gwinner, & Su, 2004). Indeed, researchers suggest that the quality of a customer's participation should result in improved quality of service (Ennew & Binks, 1996; Hsieh et al., 2004), which in turn may lead to satisfaction (Harris, Harris, & Baron, 2001; Hsieh et al., 2004).

Researchers (e.g., Kotze & Plessis, 2003) propose that customer participation may take a variety of forms, with some researchers (e.g., Keh & Teo,
suggesting that customers can demonstrate both in-role and extra-role behaviors, such as saying positive things about the organization or cooperating with employees in the organization. Furthermore, customer participation levels can vary from low participation, where all that is required is a customer’s physical presence, to high participation, where the customer is a coproducer contributing effort, time and other resources to the service production. Higher levels of participation are expected in credence services such as healthcare (Kotze & Plessis, 2003; Yen et al., 2004).

Customer Inputs to Service Provider Outcomes of Satisfaction and Loyalty

Despite acknowledgement in the literature of the role that customers play in service creation, little research has been directed towards understanding the influence that patients have on their own loyalty. Table 2 summarizes the known influences that patients have on their own satisfaction.

Customer Inputs

Researchers have previously examined the influence of individual customer characteristics (e.g., demographics and cultural background) on service outcomes, namely satisfaction and loyalty. While studies suggest there are no general gender differences in satisfaction with health services (Cho et al., 2004; Hausman, 2004), some studies have found that female patients are more likely to be satisfied when their doctor is female (Vukmir, 2006). Education has also been found to influence satisfaction, with patients from higher educational backgrounds being more satisfied than those from lower educational backgrounds (Vukmir, 2006). There is evidence to suggest that older patients experience more interpersonal physician interactions, believe communication to be more open, are more compliant with their physician (Hausman, 2004), so as a result older patients were more satisfied with their medical services compared to younger patients (Chitwood, Comerford, & McCoy, 2002; Cho et al., 2004; Hausman, 2004; Kolb, Race, & Seibert, 2000). This is further supported by Venn and Fone (2005), who note that older age is associated with higher levels of satisfaction in 41 of 52 studies they reviewed.

While Hausman (2004) identified that older patients were more likely to comply with GP advice when they interact more with GPs, studies have not considered whether the frequency of visits with a GP influences a patient’s own satisfaction and loyalty. Mattila and Wirtz (2002) examined both self-assessed and objective knowledge, identifying little difference between these two measures of knowledge. However, differences were noted by these authors for patterns of information search in a GP context. The role of a customer’s knowledge in their own satisfaction and loyalty has not been previously examined.
<table>
<thead>
<tr>
<th>Author (Year)</th>
<th>Context</th>
<th>Longitudinal/ Cross-sectional</th>
<th>Findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venn and Fone (2005)</td>
<td>GP</td>
<td>Cross-sectional</td>
<td>Satisfaction varied with age, gender, employment status, marital status and reported health status. Health status was found to influence satisfaction with ill and distressed patients reporting lower levels of satisfaction.</td>
</tr>
<tr>
<td>Chitwood et al. (2002)</td>
<td>GP</td>
<td>Cross-sectional</td>
<td>Satisfaction increased with the number of months that a patient had health insurance for. Those who had received healthcare reported higher satisfaction than those who had not. Satisfaction increased with age.</td>
</tr>
<tr>
<td>Cho et al. (2004)</td>
<td>General hospital</td>
<td>Cross-sectional</td>
<td>Older patients tended to be more satisfied with medical care services than their younger counterparts.</td>
</tr>
<tr>
<td>Hausman (2004)</td>
<td>GP</td>
<td>Cross-sectional</td>
<td>Elderly patients are more likely to comply with GP advice when they interact more with GP’s. Older patients do not want to be involved in making healthcare decisions.</td>
</tr>
<tr>
<td>Kellogg et al. (1997)</td>
<td>Variety of contexts</td>
<td>Cross-sectional</td>
<td>Preparation (e.g., seeking referrals), building relationships and information exchange (providing and seeking information) are associated with higher satisfaction frequencies.</td>
</tr>
<tr>
<td>Kolb et al. (2000)</td>
<td>Hospital: Psychiatric care</td>
<td>Cross-sectional</td>
<td>Older customers were more satisfied than younger customers. Patients were less satisfied if they had been hospitalized in the past two years for psychiatric reasons.</td>
</tr>
<tr>
<td>Malthouse et al. (2004)</td>
<td>Health insurance and GP</td>
<td>Cross-sectional</td>
<td>Satisfaction with medical care and cost varies by the type of health insurance that a customer has.</td>
</tr>
<tr>
<td>Mattila and Wirtz (2002)</td>
<td>Chinese physician service</td>
<td>Cross-sectional</td>
<td>Self-assessed knowledge is strongly linked to the use of internal memory and word of mouth sources. Objective knowledge has a positive impact on the customers’ motivation to search for information.</td>
</tr>
<tr>
<td>Vukmir (2006)</td>
<td></td>
<td>Cross-sectional</td>
<td>Afro–American patients were less satisfied with their patient-physician relationships compared to whites. Females were more likely to trust female doctors and thus rate them higher. Better educated customers reported higher levels of satisfaction.</td>
</tr>
</tbody>
</table>
A Proposed Model of Service Provider and Customer Inputs to Service Outcomes in Healthcare

A theoretical framework incorporating previous research is now presented (see Figure 1).

The majority of research considering the influence that customers have on service outcomes has been satisfaction-centric (e.g., Chitwood et al., 2002; Cho et al., 2004; Kolb et al., 2000; Malthouse, Oakley, Calder, & Iacobucci, 2004; Kellogg, Youngdahl, & Bowen, 1997; Venn & Fone, 2005), with little emphasis on other key service outcomes (Hausman, 2004). This article responds to a call for research by Hausman (2004), who recommends that further study be directed towards fully understanding how interpersonal

![FIGURE 1](image1.png)

**FIGURE 1** Inputs to healthcare service delivery: A coproduction approach.

![FIGURE 2](image2.png)

**FIGURE 2** Tested model.

- H1: Satisfaction would influence loyalty
- H2: Satisfaction would mediate the effect of customer inputs on loyalty
- H3: Frequency of visits would influence satisfaction
- H4: Knowledge of visits would influence satisfaction
- H5: Age would influence satisfaction
reactions affect healthcare outcomes. The research reported in this article extends current knowledge by considering the influence that a patient's knowledge, age, and visitation frequency has on their satisfaction and loyalty. The model for testing this is presented in Figure 2.

**METHOD**

Recent trends of commercialization, corporatization, and amalgamation, have changed the face of Australian general medical practice. These changes have resulted in less medical centers, tighter government scrutiny of service levels provided, increased red tape, and more stringent accreditation requirements (Kilmartin, 2000). Success in general practice depends not only on having good technical skills but also on satisfying customers and encouraging them to return to the practice. An important rationale for the present study is to improve the current understanding of satisfaction and loyalty in the increasingly-competitive general practitioner (GP) context. In the year 2001/2002 in Australia, AU$10 billion (approximately 9% of gross domestic product) was spent on medical care (Australian Bureau of Statistics, 2003, 2004). The GP context was chosen because of the 46,000 practitioners in Australia, two-thirds are GPs (Australian Bureau of Statistics, 2003, 2004).

Six hundred questionnaires, accompanied by a reply paid envelope, were distributed through three different health related outlets, namely a gym, a physiotherapy practice, and a general medical clinic. In Australia medical health funds cover well-being (gym), allied (physiotherapy), and medical health services (GP). By accessing each of the three categories we were able to maximize variation in the responses capturing a spectrum of people from healthy to sick. Following the initial instructions, respondents completed questions relating to their satisfaction and loyalty, followed by questions about their demography, and then questions assessing their medical knowledge. A total of 190 completed surveys were returned, which represents an acceptable response rate of 32% (Green, Tull, & Albaum, 1988). Of this number, 174 were deemed usable, which represents and effective response rate of 29%.

**DATA ANALYSIS**

Structural equation modeling was chosen as the method of data analysis for this study because it provides a means of determining which independent variables are the best predictors of our service outcomes, specifically loyalty and satisfaction. Structural equation modeling allows us to simultaneously explore the extent of the relationships between the sub-constructs of loyalty and satisfaction and their relationships with the key customer input variables (Kline, 1998).
RESULTS

The demographic profile of the study respondents is reported in Table 3. A majority of respondents were aged over 35, were female, and were married. More than half of the respondents had two or more people in their household and approximately half of the respondents held a diploma, college or University degree. The majority of respondents had an annual household income of AU$55,000 or less. This sample is comparable with other Australian samples (see Rundle-Thiele, 2005).

Data was collected regarding three types of loyalty: situational loyalty, resistance to competing offers, and attitudinal loyalty. Table 4 provides the descriptive statistics, intercorrelations, and reliabilities for satisfaction and the three types of loyalty. Items assessing consumer resistance to competing offers, sourced from Ganesh et al. (2000), were concerned with ascertaining the likelihood of returning to the general practice if fees rose. Items assessing

<table>
<thead>
<tr>
<th>TABLE 3</th>
<th>Demographic Profile of the Health Care Sample</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>Gender</td>
</tr>
<tr>
<td>18–24</td>
<td>11.5%</td>
</tr>
<tr>
<td>25–34</td>
<td>17.8%</td>
</tr>
<tr>
<td>35–44</td>
<td>22.4%</td>
</tr>
<tr>
<td>45–54</td>
<td>16.1%</td>
</tr>
<tr>
<td>55+</td>
<td>31.6%</td>
</tr>
</tbody>
</table>

| Marital status | Household size | Annual household income (AU$) | |
|----------------|----------------|---------------------------------|
| Married | 63.8% | 1 | 8.0% | Less than $35,000 | 27.0% |
| Single | 20.7% | 2 | 39.1% | $35,000–$54,999 | 21.8% |
| Divorced/Separated | 5.7% | 3 | 17.2% | $55,000–$74,999 | 13.2% |
| Widow/Widower | 4.0% | 4 | 18.4% | $75,000–$94,999 | 12.6% |
| Defacto | 5.7% | 5 | 12.6% | $95,000–$134,999 | 12.1% |
| 6 or more | 3.4% | | | $135,000 and over | 6.9% |
| No response | 1.1% | | | No response | 6.4% |

<table>
<thead>
<tr>
<th>TABLE 4</th>
<th>Descriptive Statistics, Reliabilities,* and Intercorrelations</th>
</tr>
</thead>
<tbody>
<tr>
<td>M (SD)</td>
<td>AL</td>
</tr>
<tr>
<td>Attitudinal loyalty (AL)</td>
<td>3.66 (0.8)</td>
</tr>
<tr>
<td>Resistance to competing offers (R)</td>
<td>3.71 (1.05)</td>
</tr>
<tr>
<td>Situational loyalty (SL)</td>
<td>4.04 (0.9)</td>
</tr>
<tr>
<td>Satisfaction with GP (S)</td>
<td>4.29 (0.6)</td>
</tr>
</tbody>
</table>

*The alpha reliabilities for scales are reported on the diagonal in bold. Satisfaction was measured with two items.
*Correlation is significant at the 0.05 level (2-tailed).
**Correlation is significant at the 0.01 level (2-tailed).
situational loyalty, sourced from Dubois and Gilles (1999) and Bloemer and Kasper (1995), sought to determine the likelihood that a patient would continue to visit the GP if they moved suburbs. Attitudinal loyalty items, measuring intention to recommend and loyalty to the GP, were sourced from Beerli, Martin, and Quintana (2004), Delgado-Ballester and Munuera-Aleman (2001), Ganesh et al. (2000), and Huber and Herrman (2001). Finally, satisfaction measures capturing a patient’s satisfaction with the quality of treatment received, attention, and overall satisfaction with the GP were sourced from Bennett and Rundle-Thiele (2004).

Both satisfaction and situational loyalty were high, while attitudinal loyalty and resistance to competing offers were moderate, suggesting that respondents would consider other practitioners if their practitioners fees became higher and that they were somewhat less likely to recommend their general practitioner or center. The correlations or the strength of the association between the service outcomes indicate (at best) moderate associations between the constructs in the GP context. For example, satisfaction and attitudinal loyalty were moderately associated (with a correlation of 0.53) while satisfaction and situational loyalty had a very poor association (with a correlation of 0.09). The reliabilities for the service outcome constructs were between 0.77 and 0.84, which is below the recommended level of 0.85 (Kline, 1998) and thus suitable for use in structural equation modeling.

A model was identified in the literature review (see Figure 2) and a full structural model was estimated to test this identified model. The structural model is shown in Figure 3 and the goodness of fit statistics for the model are displayed in Table 5. Hypotheses 1, 2, 3 and 5 were supported. While there was some empirical support for Hypotheses 4, this relationship was not statistically significant.

![Diagram](http://example.com/diagram.png)

**FIGURE 3** Customer inputs and service outcomes. The estimates reported are from an MLS solution using AMOS.
A review of the relevant fit statistics for the model provides evidence of fit in the model. For example, the IFI and TLI of 0.968 and 0.931 respectively and the RMSEA of 0.057 indicate an acceptable fit with the data. Finally, the \( \chi^2 \) of 21.75 indicates this model fits the data. The model suggests that satisfaction and loyalty are highly related and that customer input variables, such as patient age and the frequency of visits, are related to satisfaction. Notably, despite a very weak relationship, patient knowledge is negatively related to satisfaction, suggesting that knowledgeable patients are more likely to be dissatisfied with their GP.

The direct, indirect and total effects for the path model (see Table 6) imply that satisfaction has a very important mediating role, which suggests that satisfaction is generally necessary for loyalty. Indeed, loyalty increases by 1 for each reported 1 point increase in satisfaction. The data suggest that customer input variables do impact satisfaction with statistically significant relationships. For example, both the frequency of visits and age influence satisfaction, with satisfaction increasing by 0.1 for each reported 1 increase in visits and increasing by 0.05 for each for each 10 years of age.

**DISCUSSION**

The research reported in this article extends our knowledge in three different ways. First, while many studies have considered the relationship between customer input variables (e.g., age and satisfaction), the relationships...
between patient input variables and service outputs such as loyalty have not been examined previously in healthcare. Second, the role of customer knowledge and the frequency of visits in service outcomes such as satisfaction and loyalty had not been examined previously. Finally, while age had been found to influence satisfaction with healthcare providers in countries such as the United States, Korea, and the United Kingdom, the relationship between age and satisfaction had not been tested on Australian patients. Each contribution to knowledge will now be discussed in turn.

**Loyalty**

As reported in Table 2, many studies have been conducted to examine the relationship between customer input variables (e.g., demographics and health insurance ownership) and satisfaction. This study sought to extend the current understanding of the relationship between customer input variables and additional service outcomes such as loyalty. This is important because satisfaction is not an end in its own right (see Bennett & Rundle-Thiele, 2004; Mittal & Lassar, 1998). The results of this study suggest that customer input variables influence both satisfaction and loyalty. Given that satisfaction does not always lead to loyalty (see Bennett & Rundle-Thiele, 2004; Mittal & Lassar, 1998) the results of this study suggest that medical practices should monitor a range of key service outcomes, including satisfaction and loyalty.

**Visit Frequency and Patient Knowledge Influence Service Outcomes**

To date, countless customer input variables have been examined with many factors influencing customer satisfaction. Prior studies (e.g., Kolb, Race, & Seibert, 2000; Venn & Fone, 2005) have identified that chronically ill patients and patients who have been hospitalised for psychiatric reasons were less satisfied while insured patients and older patients were more satisfied than their counterparts. This study contributed to the literature by considering the role of patient knowledge and the frequency of visits on satisfaction. While the relationships are weak, the results of this study indicate that patient knowledge is negatively related to satisfaction and suggest that knowledgeable patients are likely to be less satisfied than their less knowledgeable counterparts. Interestingly, the frequency of visits may increase satisfaction.

**The Importance of Age for Satisfaction and Loyalty**

The results of this research suggest that older Australian patients are likely to be more satisfied and hence loyal to their GP when compared to younger Australian patients. This is consistent with age and satisfaction-related findings in the United States, Korea, and the United Kingdom (Chitwood et al., 2002; Cho et al., 2004; Hausman, 2004; Kolb et al., 2000; Venn & Fone, 2005).
IMPLICATIONS FOR MEDICAL PRACTICE

In countries such as Australia, patients can choose their GP. Success in general practice depends not only on having good technical skills but also on satisfying customers and encouraging them to return to the practice. Medical practitioners are well aware of the importance of satisfaction and thus management practices such as “patient-centered care” have evolved for the management of chronic patient health problems such as diabetes, asthma, and arthritis. These practices involve systematic reviews, shared goal setting, written management plans, and regular follow-ups (Bauman, Fardy & Harris, 2003). Patient-centered care requires patient feedback and input into the medical management of the patient’s medical condition, thus ensuring quality care and improved patient compliance with treatment regimes.

This research suggests that the concept of patient-centered care should be extended to manage all patients, not just patients with chronic health problems, because regular patient visits to GPs are likely to improve satisfaction. In this study, satisfaction increased by 0.1 with each visit to a GP. To improve satisfaction and loyalty, patient-centered care practices should be extended to encourage all patients to return to clinics. For example, GPs could work with patients on written management plans to set health goals. Further initiatives could include regular follow-ups with patients to monitor their progress on health goals and ancillary services could be provided within the clinic to encourage patients to visit the clinic more frequently.

We acknowledge that age and patient knowledge can not be controlled by GPs. Older patients are likely to visit GPs more often and therefore they may be more likely to develop a relationship with their GP. In this research older patients were more satisfied and hence more loyal to their GP. These results suggest that GPs could adopt a segmentation approach that seeks to build satisfaction and loyalty in younger patients. Specifically, general practitioners should monitor satisfaction for all young patients to ascertain reasons for low levels of satisfaction and ensure that processes are in place to address patient dissatisfaction in younger cohorts. While GPs cannot control the level of knowledge a patient possesses prior to a visit, they can influence subsequent knowledge levels by providing appropriate information or directing them to online resources which are consistent with the advice given by the GP. This may be particularly important for patients who seek higher levels of control over their health.

CONCLUSIONS AND FUTURE RESEARCH

While the relationship between satisfaction and customer variables had been well established in the healthcare literature, little was known about the influence that customers themselves have on their own loyalty. This study
extends current knowledge by identifying that customers influence their own loyalty to a GP. Specifically, this study found that knowledgeable patients were likely to report lower levels of loyalty while older patients and patients visiting a GP more frequently were likely to report higher levels of loyalty. This study extended prior research and confirms that in addition to reporting higher satisfaction, older Australian patients report higher levels of loyalty than their younger counterparts.

Given that younger patients report lower levels of satisfaction with GPs than older patients, more research is required to identify reasons for lower satisfaction levels in younger patients and for higher satisfaction levels in older patients that can be controlled by medical practices. These efforts will assist the medical profession to identify changes to current practices that will allow general practitioners and medical centers to maintain (or more importantly, build) patient satisfaction and loyalty.

Patients are an essential part of healthcare; thus, both healthcare providers and customers can affect the nature of the service outcome. In future, research should utilize a dyadic approach to allow researchers to consider the interactive nature of healthcare provision. This would require simultaneous consideration be given to service provider and customer inputs when seeking to understand service outcomes such as satisfaction and loyalty (as represented diagrammatically in Figure 1). Such endeavors will lead to an improved understanding of how to improve satisfaction and loyalty.

The concept of patient-centered care was proposed as a means that could be used to improve satisfaction and loyalty in a healthcare context based on the finding that patients visiting their GP reported higher satisfaction. An intervention-based study utilizing a longitudinal design should be employed by researchers to test whether GPs, medical centers, and patients would benefit from extending the practice of patient-centered care to all patients.

Satisfaction was correlated with two of the three types of loyalty in this study, namely attitudinal loyalty and resistance to competing offers. There was no significant relationship between situational loyalty and satisfaction. More research is required to ascertain the nature of the relationship between satisfaction with the GP and situational loyalty (willingness to travel further distances to stay with the same GP). Potential moderator variables could be convenience, relationship quality with the GP and medical history with the GP (e.g., patients with more serious illness may have a higher likelihood of seeking to remain with the same GP).

REFERENCES


