Can employees predict customers’ assessments of service and attitudes to providers?

Alison M Dean  
The University of Newcastle  
Faculty of Business & Law  
University Drive,  
Callaghan NSW 2308  
AUSTRALIA  
Email: Alison.dean@newcastle.edu.au  
Tel: (+61) 2 4921 7393  
Fax: (+61) 2 4921 6911

Linda McGuire  
Monash University  
Department of Management  
Dandenong Rd  
Clayton Vic 3168  
AUSTRALIA  
E-mail: linda.mcguire@buseco.monash.edu.au  
Tel: (+61) 3 9905 5177

Bill Suen  
Monash University  
Faculty of Pharmacy & Pharmaceutical Sciences  
Parkville Vic 3052  
AUSTRALIA  
E-mail: bill.suen@pharm.monash.edu.au  
Tel: (+61) 3 9903 9054
Can employees predict customers’ assessments of service and attitudes to providers?

Paper type: Empirical

Abstract

Purpose: The study reported in this paper had two aims. First, it compares customer and employee views on overall service in community pharmacies and, second, it tests whether employees can predict both customers’ evaluations of service quality and their feelings of loyalty to the pharmacy.

Design / Methodology / Approach: Survey data were collected from 15 pharmacies in Australia using a matched-pairs design. In particular, employees (n=41) were recruited to complete a survey and when they had done so, their next five customers were invited to complete a corresponding customer survey. Data were obtained from a total of 181 customers, with between three and five customers matched to each employee.

Findings: In general, employees have a very good idea of customers’ attitudes. However, statistical analysis of employees’ perceptions of customer views, and the actual views of customers, suggests that employees underestimate customer perceptions of quality but they overestimate the strength of customers’ loyalty and commitment.

Managerial Implications: This study suggests that using employee data to predict customers’ responses to service quality is a sound strategy but managers need to focus on loyalty outcomes as well as quality of service. More specifically, they need to identify and develop factors that bring forward customers’ feelings of affective commitment and behavioral intentions.

Originality: This study has two major strengths. First, its design using data from employee-customer dyads is based on true service encounters and provides statistical power. Second, the study has its genesis in a strong practical orientation with respect to theory development and testing.

Keywords: service quality, affective commitment, customer loyalty, matched pairs design, employee and customer views, Australia
Introduction

Contemporary literature emphasises the concept of value co-creation where employees and customers work together to provide ‘service-for-service’ (Vargo & Lusch, 2008). Fundamental to value co-creation is the need for frontline staff to understand customers and to build and maintain a collaborative focus on the quality of service. However, little recent research appears to have emphasised understanding the dual perspective of employees on the quality interface despite the on-going emphasis that scholars place on employee-customer interactions (Bolton & Saxena-Iyer, 2009; Fisk, 2008). Rather, studies have tended to use employees’ predictions of customers’ views as surrogate measures (e.g., Malhotra & Mukherjee, 2004; Yee et al., 2008).

The use of employee measures as a proxy for customers’ evaluations of service quality has been largely rationalised by the emergence of two streams of relevant literature concurrently with many studies on the conceptualisation, dimensions and measurement of service quality. Theory on both the service profit chain (Heskett et al., 1997; Silvestro & Cross, 2000; Yee et al., 2008) and service climate (Hallowell & Schlesinger, 2000; Mayer et al., 2009; Schneider et al., 1998) has been reported and developed. In essence, these two streams of literature show that employees’ attitudes and behaviours during service encounters are related to customer responses. However, while the studies demonstrate that an employee’s feelings are related to a customer’s feelings, they do not extend the analysis to investigate whether employee data can be used to predict customers’ responses.

The current study responds to this gap. First, we investigate quality using employee-customer dyads and second, we test whether employees are able to predict both customers’ evaluations of service quality, and their commitment and loyalty responses. In doing so, we respond to the call for research by Cronin (2003), who stated that using employee data to predict customers’ responses has the potential to provide information that can be gathered quickly and cost-effectively, but it represents an under-researched area.

Background to the study

We develop the background to the current study by considering literature that provides a rationale for the premise that employees will be able to predict customers’ attitudinal responses. We commence with the two streams of literature mentioned above, and then we consider customer attitudes in more detail, with special reference to perceived service quality, customer commitment and loyalty.

The service profit chain

Past studies in service management signify that service quality has a crucial role in the sequence known as the service profit chain, in which employees’ experiences are linked to
customers’ responses and profit (Heskett et al., 1997). The service environment in the company commences with ‘internal service quality’ and is reflected by employees’ attitudes which contribute to service quality for customers, and result in customer satisfaction, loyalty and company success. Service profit chain theory has been widely tested in many contexts (e.g., Loveman, 1998; Silvestro & Cross, 2000) and recently, a meta-analysis of 28 relevant studies by Brown and Lam (2008) found that employee job satisfaction is positively and substantively linked to customer satisfaction, with the link completely mediated by customer-perceived service quality. Hence, there appears to be consensus in this literature that employee and customer attitudes are linked.

**Service climate**

Service climate is a general orientation to service that emphasizes human resource practices, managerial priorities and, most importantly, customer orientation (Schneider et al., 1998). Schneider et al. (1998, p. 151) defined service climate in terms of ‘employee perceptions of the practices, procedures and behaviours that get rewarded, supported, and expected with regard to customer service and customer service quality’. Like service profit chain studies, Schneider et al.’s (1998) definition emphasises the role of the internal environment in delivering high quality to customers, via employees on the frontline. The emphasis on employees and customers is reflected by the two key dimensions of Borucki and Burke (1999), namely ‘concern for customers’ and ‘concern for employees’; and confirmed in studies that have found a direct link between a positive service climate, as assessed by employees, and customers’ evaluations of service quality (Borucki & Burke, 1999; Schneider et al., 1998). Hence, service climate studies seem to suggest that employees’ views on service quality will be consistent with customers’ experiences of it.

**Service quality as an antecedent of customer loyalty and commitment**

Much emphasis has been placed on service quality because the service profit chain and other studies have found direct relationships between service quality, service encounter satisfaction and customers’ self-reported loyalty (e.g., Butcher et al., 2001; Cronin et al., 2000; Dean, 2007; Zeithaml et al., 1996). In the current study, loyalty is defined as an attitude that reflects customers’ behavioral intentions, including the likelihood that they will engage in positive and active communication about the service provider (Fullerton, 2003; Zeithaml et al., 1996). Gaining customer loyalty is the ultimate goal and outcome of service quality and we include it as a key measure of customer attitude.

Loyalty is distinguished from customer commitment in that the latter reflects positive feelings, rather than positive behaviors, with this approach to commitment being consistent with ‘affective commitment’ as it is used in service literature. Zins (2001) conceptualised customer commitment as measuring the strength of customers’ attitudes towards the service
provider, with service loyalty as an outcome behaviour based on attitude. Early service studies rarely distinguished customer commitment from loyalty but recent work has established their separate definitions and effects (Dean, 2007; Fullerton, 2003). We believe the distinction to be appropriate and useful. For the current study, affective commitment is defined ‘as the degree to which a customer is psychologically bonded to the service organization on the basis of how favorable the consumer feels about the organization’ (Jones et al., 2010, p. 18).

Bendapudi and Berry (1997) emphasized that distinguishing between customer loyalty and affective commitment is important because each attitude may have different implications for managers. In particular, customers perhaps remain loyal to a service provider for a period of time because they are ‘constrained’ rather than ‘dedicated’. Hence, if employees are able to use service interactions to predict either or both of customers’ feelings about the organization (affective commitment) or their intentions to remain a customer (loyalty), managers would be better placed to determine priorities for the on-going process of service delivery.

Employees as predictors of customer attitudes

The literature reviewed in the first two sections above unequivocally demonstrates positive relationships between employee and customer attitudes, with respect to customer service, service quality and satisfaction. Other earlier studies involving both employees and customers have also demonstrated positive links (see Dean, 2004 for a review). Hence, it appears logical that employees will be able to predict customers’ attitudes. In fact, scholars allege that frontline employees understand service quality issues and problems, and are very likely to be able to evaluate the quality of the services that they deliver (Gilmore, 2001; Little & Dean, 2006; Sergeant and Frenkel, 2000). Additionally, Malhotra and Mukherjee (2004) identify a further eight studies that have ‘effectively used employees’ perceptions of service delivery in measuring performance’. However, these assumptions are not always backed by evidence that the constructs in questions have been assessed accurately. Consequently, our goal was to pursue such evidence for several attitudinal constructs. More specifically, the current study aimed to:

1. compare customers’ and employees’ views on the overall quality of service provided by specific pharmacies; and
2. test whether employees can predict customers’:
   a. assessments of elements of service quality, and their
   b. feelings of loyalty and commitment to the pharmacies.

Research design and methodology
Design

This study used a matched pairs design. Survey data were collected from 15 community pharmacies in the metropolitan area of Melbourne, Australia, over a three day period. Frontline employees \((n=41)\) were invited to complete an employee survey and as soon as they did so, the customers they subsequently served were invited to complete a corresponding survey. When at least five customers had been surveyed for each employee, the Research Assistant then invited another employee and another series of customers to participate. Data were obtained from a total of 181 customers, with between three and five customers matched to each of the 41 employees. This methodology therefore generated data based on 181 service encounters in specific situations, and it thereby provides more statistical power than a simple cross-sectional design.

Details of sample

Customers: The sample was nearly three-quarters women (73%) with a wide distribution of ages. About one-third of the total was in each of the age brackets: 18 to 44 years (33%), 45 to 64 years (37%) and 65 years and older (30%). More than half of the sample (62%) did not give details of their household income and, for those who did, their income was relatively low (60% had an income of AUD $60000 or less). The majority of the respondents (61%) had been customers of the pharmacy for more than five years, and they use the pharmacy quite frequently (43% use it weekly or fortnightly, with another 32% using it monthly).

Employees: The employee sample was almost entirely female (92%) and relatively young with two-thirds (66%) being 34 years or less. Their tenure indicated two major groups: those who had been employees five years or more (31%), and those who had been employed less than two years (54%). Many employees were pharmacy assistants, holding some specialised certificate or diploma training (62%), with only a very small number of the sample of employees (10%) having pharmacy degrees.

Measures

Where possible survey questionnaires were customised from existing scales and covered the areas of overall service, perceived service quality, affective commitment and likely future behaviour. As well as comparing the actual views of customers and employees, we were especially interested in testing how accurately employees can estimate customers’ feelings. Consequently, we asked employees what they thought the customer view would be on the same key variables.

The sources of items were as follows. Overall service was adopted from Cronin et al. (2000) and included job knowledge and skills of employees, overall quality, overall superiority and satisfaction measures. Perceived service quality was customised from the SERVQUAL battery (Parasuraman et al. 1988, 1991) with two additional items developed for
the study. Expectations were not measured separately because researchers appear to agree that the most psychometrically rigorous means of measuring service quality is to use perceptions scores (Cronin et al., 2000; Dabholkar et al., 2000; Page & Spreng, 2002).

Affective commitment used the measure of Dean (2007), which consistent with other service studies, adapted Mowday et al.’s (1979) short Organizational Commitment Questionnaire (OCQ) for employees. Two extra items were included from White and Schneider (2000), which emphasised commitment of customers to a relationship with a service provider. Loyalty was measured by behavioural intentions, using the 5-item preference scale of Zeithaml et al. (1996), subsequently tested and applied in many service studies. All measures used 7-point Likert scales. Details of items and anchors are provided in Tables 1 to 3.

Method of analysis

Exploratory factor analyses, using more than one construct in each analysis, were used to establish discriminant validity between service quality, commitment and loyalty. For the customer survey, service quality demonstrated only one factor while the data for employees’ opinions of customers’ views on service quality split into two factors. The two factors could be broadly termed ‘items relating to the store’ and ‘items relating to service’. The items in commitment and loyalty loaded as expected from the literature. All scales demonstrated high internal consistency with coefficient alpha values ranging from .91 to .98 (Nunnally & Bernstein, 1994). Paired samples $t$-tests were employed to test the difference between mean values and Pearson correlation coefficients were used for testing associations between major variables.

Findings and discussion

Comparison of customer and employee views on overall service

To commence the analysis, we considered global assessments of service and satisfaction made by employees and their customers. T-tests for the statistical differences between means were performed. Table 1 provides the findings.

Table 1 shows that, in general, both customer and employee responses were positive, with mean values around six on a scale of 1 to 7. Interestingly, customers rate the job knowledge and skills of employees significantly higher than do the employees themselves. However, there is no statistical difference in customer and employee views on the overall quality of service, or the superiority of service compared to other pharmacies. Item 4 in Table 1 shows a significant difference in level of satisfaction with the service provided by pharmacy, with customer views again higher. These preliminary findings seem to suggest that customers may be somewhat generous in their assessments of quality and satisfaction, a result
that is not inconsistent with previous studies where satisfaction ratings are recognised as positively skewed.

**Take in Table 1 about here**

**Table 1: Comparison of customer and employee views on global measures of service**

**Comparison of customers’ views on specific aspects of service quality and employees’ predictions of those views**

The major goal of this study was to test whether employees could accurately predict customers’ views. We first consider perceived service quality. Customers were asked to signify their feelings about the quality of service that the pharmacy provides on 13 items. They were not asked expectations and perceptions separately but rather, to respond to how well the service met their expected levels. This assessment occurred immediately after the matched employee had been asked to indicate they thought their customers’ opinions of the quality of service would be on the same 13 items. Table 2 provides the findings.

**Take in Table 2 about here**

**Table 2: Customers’ assessments of specific aspects of service quality and employees’ predictions of customers’ assessments**

Table 2 shows that customers’ assessments of service quality were significantly higher, as shown by the paired samples $t$-test, than employees expected them to be. Eight items demonstrated the statistical difference and for the other five items in the table, customers and employees assessments were very similar, and very high. Thus, it appears that customers’ expectations for service quality are being met by their community pharmacies to a similar or greater extent than that predicted by employees. Therefore employees views as a proxy for customers are either accurate (no significant differences) or appropriate (they do not exaggerate the customer view, rather they provide a somewhat conservative estimate).

Having seen that customers predict quality more highly than do employees, next we consider whether there appears to be a similar pattern with respect to other attitudes. As indicated in the introduction, we tested loyalty and commitment.

**Comparison of customers’ loyalty responses and employees’ predictions of those responses**
Loyalty and affective commitment were selected because of the importance of retaining customers and their links to perceived service quality in previous studies. In the current study, customers’ average assessment of the items consisting service quality (Table 2) correlated strongly with the average score attributed to loyalty ($r=.67$, $p<.001$) and affective commitment ($r=.62$, $p<.001$), confirming the role of perceived service quality in assuring positive customer attitudes. We now return to the proposed links between customers’ loyalty and affective commitment, and employees’ estimates of the strength of those attitudes. Table 3 provides the results.

Table in Table 3 about here

Table 3: Customers’ loyalty and commitment responses and employees’ predictions of customers’ responses

Table 3 shows that customers demonstrated relatively high absolute levels of loyalty and commitment to their community pharmacies. In particular, customers appear likely to act as advocates for their particular pharmacies, and that they intend to remain customers in the future. However, Table 3 also shows that despite the high absolute values, employees appear to overestimate the strength of customers’ loyalty and commitment to their pharmacy. Where the $t$-test shows a significant difference in ratings, the customers’ assessments were always consistently lower than that which the employee predicted for them.

The underestimating effect was particularly noticeable for feelings of commitment, with the greatest difference shown for Item 11, ‘My relationship with specific employee(s) of this pharmacy is very important to me’. This item and the previous one, which emphasises the relationship with the pharmacy itself suggest that customers may have positive feelings but employees and managers need to be wary of assumptions about the strength of those feelings.

The finding that employees overestimate customers’ affective commitment and loyalty intentions is a most interesting result. The service climate and service profit chain literature emphasise the importance of service quality in the quality-satisfaction-loyalty sequence and, indeed, quality does demonstrate a positive correlation with loyalty (and commitment) in the current study. However, future researchers might wish to investigate the assumptions underlying employees’ estimates, other factors that contribute to the development of positive customer affect, and the various means by which those factors could be enhanced.

In addition to exploring other factors, a larger scale study in different contexts is needed to further test the degree of correlation between staff and customer perceptions. We
recognise that the design of the current study meant that targeted customers were, of necessity, already patrons of specific pharmacies and so positive findings are not unexpected.

**Conclusion and final remarks**

The aims of this study were to compare customers’ and employees’ views on the overall quality of service provided by specific pharmacies; and test whether employees can predict customers’ a) assessments of elements of service quality, and b) their feelings of loyalty and commitment to the pharmacies. We investigated these aims using 181 employee-customer dyads, involving 41 employees from 15 pharmacies in a large city in Australia.

The major findings of the study are first that customer and employee assessments of overall service are very similar, with no significant difference shown for evaluations of overall quality and overall superiority of service. However, when 13 individual aspects of service quality were tested, for eight of them customers’ assessments were significantly higher than those of employees. This finding suggests that employees’ estimates of customers’ assessments are ‘safe’; they are either not significantly different or they are more conservative. Managers are therefore unlikely to err on the negative side if they use employee measures as surrogates.

In contrast to perceived service quality, employees’ estimates of customers’ loyalty and affective commitment appeared approximately the same in absolute values but statistical tests showed that employees underestimated customers’ views, particularly on items pertaining to affective commitment. Because of the importance of positive affect to on-going relationships with providers, this discrepancy means that managers should use employees’ views on customers’ psychological attachment to the form or its employees with considerable caution.

**References**


### Table 1: Comparison of customer and employee views on global measures of service

<table>
<thead>
<tr>
<th></th>
<th>General feelings about service at this pharmacy</th>
<th>Cust’er views</th>
<th>Emp’ee views</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>How would you rate the job knowledge and skills of employees in the pharmacy to deliver superior quality work and service?</td>
<td>6.14</td>
<td>5.80</td>
<td>3.30**</td>
</tr>
<tr>
<td>2</td>
<td>How would you rate the overall quality of service provided by the pharmacy?</td>
<td>6.22</td>
<td>6.14</td>
<td>ns</td>
</tr>
<tr>
<td>3</td>
<td>When compared to other pharmacies, how would you rate the overall superiority of service provided by this pharmacy?</td>
<td>5.96</td>
<td>6.08</td>
<td>ns</td>
</tr>
<tr>
<td>4</td>
<td>What is your overall level of satisfaction with the service you receive [provide to customers] at this pharmacy?</td>
<td>6.23</td>
<td>6.03</td>
<td>2.30*</td>
</tr>
</tbody>
</table>

Note: 1 From 1 (Poor) to 7 (Excellent); 2 From 1 (Inferior) to 7 (Superior); 3 From 1 (Very low) to 7 (Very high)

*p<.05, **p<.01, ***p<.001; ns=not significant at p<.05
Table 2: Customers’ assessments of specific aspects of service quality and employees’ predictions of customers’ assessments

<table>
<thead>
<tr>
<th>Assessment of service quality on…</th>
<th>Cust view*</th>
<th>Employee estimate of cust view*</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Physical facilities, visual appeal, practicality of store layout</td>
<td>5.92</td>
<td>5.56</td>
<td>4.01***</td>
</tr>
<tr>
<td>2 The appearance of employees</td>
<td>6.23</td>
<td>5.82</td>
<td>4.87***</td>
</tr>
<tr>
<td>3 Providing services at the time it promises to do so</td>
<td>6.23</td>
<td>6.01</td>
<td>2.55*</td>
</tr>
<tr>
<td>4 Performing the service right the first time</td>
<td>6.28</td>
<td>5.94</td>
<td>4.26***</td>
</tr>
<tr>
<td>5 Willingness to help customers</td>
<td>6.41</td>
<td>6.30</td>
<td>ns</td>
</tr>
<tr>
<td>6 Giving prompt service</td>
<td>6.25</td>
<td>6.23</td>
<td>ns</td>
</tr>
<tr>
<td>7 Employees have the knowledge to answer questions</td>
<td>6.06</td>
<td>5.68</td>
<td>4.60***</td>
</tr>
<tr>
<td>8 The courtesy and general attitude of employees</td>
<td>6.38</td>
<td>6.10</td>
<td>3.44**</td>
</tr>
<tr>
<td>9 The ability of employees to inspire trust and confidence</td>
<td>6.25</td>
<td>6.32</td>
<td>ns</td>
</tr>
<tr>
<td>10 Providing caring, individualised attention</td>
<td>6.29</td>
<td>6.22</td>
<td>ns</td>
</tr>
<tr>
<td>11 Providing appropriate health-related advice</td>
<td>6.22</td>
<td>6.01</td>
<td>3.17**</td>
</tr>
<tr>
<td>12 Providing a range of products to suit my needs</td>
<td>6.17</td>
<td>5.89</td>
<td>5.82***</td>
</tr>
<tr>
<td>13 Providing operating hours that are convenient for me</td>
<td>6.34</td>
<td>6.26</td>
<td>ns</td>
</tr>
</tbody>
</table>

Note: *All values based on responses to a scale from 1(Fails to meet my [their] expected service level) to 7 (Far exceeds my [their] expected service level) *p<.05, **p<.01, ***p<.001; ns=not significant at p<.05
Table 3: Customers’ loyalty and commitment responses and employees’ predictions of customers’ responses

<table>
<thead>
<tr>
<th>Likely behaviour in the future</th>
<th>Cust view*</th>
<th>Employee estimate of cust view*</th>
<th>t-test</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 I am likely to say positive things about this pharmacy to other people.</td>
<td>5.86</td>
<td>6.00</td>
<td>ns</td>
</tr>
<tr>
<td>2 I would recommend this pharmacy to someone who seeks my advice.</td>
<td>5.87</td>
<td>6.10</td>
<td>-1.72</td>
</tr>
<tr>
<td>3 I would encourage friends and relatives to do business with this pharmacy.</td>
<td>5.80</td>
<td>6.03</td>
<td>-1.80</td>
</tr>
<tr>
<td>4 I consider this pharmacy my first choice to buy the appropriate goods and services.</td>
<td>5.73</td>
<td>6.03</td>
<td>-2.30</td>
</tr>
<tr>
<td>5 I am likely to do more business with this pharmacy in the next few years.</td>
<td>5.98</td>
<td>6.28</td>
<td>-2.52</td>
</tr>
</tbody>
</table>

Feelings of commitment to this pharmacy

| 6 I really care about the fate of this pharmacy.                                               | 5.38       | 5.61                            | ns     |
| 7 I feel a great deal of loyalty to this pharmacy.                                            | 5.25       | 5.86                            | -3.88***|
| 8 I am willing to put in effort to help this pharmacy be successful.                          | 5.27       | 5.16                            | ns     |
| 9 I feel a sense of belonging to this pharmacy.                                               | 5.13       | 5.85                            | -4.35***|
| 10 My relationship with this pharmacy is very important to me.                                | 5.04       | 5.63                            | -3.83***|
| 11 My relationship with specific employee(s) of this pharmacy is very important to me.       | 4.98       | 5.83                            | -5.22***|

Note: *All values based on responses to a scale from 1 (Strongly disagree) to 7 (Strongly agree)
*p<.05, **p<.01, ***p<.001; #p<.10; ns=not significant at p<.05