# Effective customer relationship management of health care: a study of hospitals in Thailand

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## ABSTRACT

This article investigates the effects and the relative importance of the four perceived service quality dimensions on corporate image, customer satisfaction, and customer loyalty. To obtain results, factor analysis and multiple regression techniques are applied to data collected from 500 Thai outpatients of the five largest private hospitals in Bangkok. The findings indicate that the four dimensions significantly affect corporate image, customer satisfaction, and customer loyalty. More specifically, the doctor concern dimension is the most important factor affecting customer satisfaction and customer loyalty. The tangibles dimension is the most important factor affecting corporate image.

Keywords:  health care, relationship management, Thailand, corporate image, service quality

## INTRODUCTION

The healthcare industry in Thailand is highly competitive as it has opened to the private sector (Hasin, Seeluangsawat, and Shareef, 2001). At present, the competition is even more intense given the high market value of the Thai healthcare industry. This has forced private hospitals to compete with each other to gain as much market share as possible. As a result, many private hospitals are more emphasizing more on marketing to compete for an increased market share (www.siamturakij.com, 2008a).

In Thailand, total market value of all private hospitals in 2006 was over 49,000 million baht ($1.5 billion) and this business is both globalizing and growing rapidly (www.thannews.th. Com, 2008). Private hospital has high potential in serving patients in Bangkok as the proportion of private hospitals in Bangkok accounted for 66.9% of health care in 2005 (www.moph.go.th, 2008). Outpatients are the majority of private hospital's customers accounting for 94.6% of total patients or 45.3 million in 2006 (www.nso.go.th, 2008). For these reasons, this study focused on Thai outpatients of private hospitals in Bangkok.

Corporate image, customer satisfaction, and customer loyalty may help service companies to compete in this highly competitive environment. As corporate image will play an increasingly important role in this environment of increasing competition and identical service offerings by attracting and retaining customers (Andreassen and Lindestad, 1998). In addition, customer satisfaction is considered by healthcare providers as a key component of strategy and a significant determinant of long term viability and success under competitive situation (Andaleep, 1998). Moreover, maintaining and expanding customer loyalty is significant for any service company's long term success (Kandampully, 1998).

The delivery of consistently superior service quality has become a very important prerequisite for many companies success (Parasuraman, Zeithaml, and Berry, 1988) because it affects corporate image (Nguyen and LeBlanc, 1998), customer satisfaction (Lee, Lee and Yoo 2000), and customer loyalty (Bloemer, Ruyter, and Wetzels, 1999). Accordingly, the improvement of perceived service quality will enhance corporate image, customer satisfaction, and customer loyalty. As a result, the company can effectively compete and succeed in an increasingly competitive environment.

For the measurement of perceived service quality, this study applied perceived service quality using four dimensions (i.e., doctor concern, staff concern, convenience of care process, and tangibles) from Choi et al. (2005) which is modified from the original dimensions of SERVQUAL (Parasuraman et al., 1985, 1988). Although there is the criticism on SERVQUAL that it focuses only on measuring service process (GrÖnroos, 1990; Mangold and Babakus, 1991), it is appropriate for healthcare service because customers (the patients) are unable to evaluate technical quality. Therefore, their evaluations are based on service process or functional quality (Friedman, 1979).

## LITERATURE REVIEW

Brand loyalty requires both psychological and behavioral measurements (Knox and Walker, 2001). Brand loyalty is conceptually identified as the biased (i.e. non-random), behavioral response (i.e. buy), expressed over time, by some decision making unit (i.e. individual, family, or company), with respect to one or more chosen brands out of a set of such brands (i.e. considering a set of brands before "selecting in" and "selecting out" particular

brands), and is a function of psychological process (i.e. decision making, evaluative process) that is developed to some degree of commitment toward a brand or multi-brands by consumers. The commitment is a significant factor in distinguishing brand loyalty from simple repeat purchase behavior (Jacoby and Kyner, 1973).

Similarly, customer loyalty is defined as a very strong commitment to repurchase or re-patronize a preferred product or service consistently in the future and a resistance in switching brand, although having powerful situational influences and marketing efforts (Oliver, 1999). In addition, Oliver (1999) suggested that true brand loyalty exists when all three decision making phases: (1) beliefs (cognitive); (2) affect (affective); and (3) intention (conative), are pointed toward a single brand preference. Cognitive loyalty occurs when consumer belief in one brand is preferable to alternatives because of the knowledge and/or the information about brand attributes. Affective loyalty occurs when the consumer likes and has good attitudes toward one specific brand. At this stage, the consumer has both cognition and affective loyalty in his/her mind. Conative loyalty occurs when consumer has behavioral intention toward a specific brand.

Oliver (1980) found that customer satisfaction can be affected by expectation and disconfirmation. Expectation is seen as an adaptation level or a reference point used to compare actual performance with the perceived performance. The comparison resulted in disconfirmation. If perceived performances are higher than the reference point (expectation), it results in positive disconfirmation. If the perceived performances are lower than the expectation, it results in negative disconfirmation. These disconfirmation effects will make the post-decision deviate from the adaptation level. Then, the total effects cause customer (dis)satisfaction.

Ross et al. (1987) concluded that patient (dis)satisfaction is the result of an interaction between expectations and perceived performance of service. If the patient has a positive expectation and it is substantially disconfirmed by perception of poor service performance, then the patient will be dissatisfied. The opposite is also true.

Oliver (1981) defined customer satisfaction as "an evaluation of the surprise inherent in a product acquisition and/or consumption experience". Parasuraman, Zeithaml, and Berry (1988) found that satisfaction is related to a specific transaction, whereas, service quality is a global judgment relating to the service's superiority. Similarly, Patterson (1993) found that consumers compare between perceived performance (P) and prior expectation (E), which results in negative confirmation (when P<E), confirmation (when P=E), and positive confirmation (when P>E). Negative confirmation often tends to lead to a customer's dissatisfaction. Confirmation is likely to lead to customer (merely) satisfaction. Lastly, positive disconfirmation tends to lead to a greater level of customer satisfaction.

GrÖnroos (1984) discovered that corporate image is extremely important for service organizations because customers can typically see the firm and its resources when they use service as it requires an interaction of customers with the service providers. He found that the corporate image forms as a result of how customers perceive the components of the firm that they can see. The most salient part that customers can see and perceive is the firm's service. Therefore, image may be built up mainly by the technical and functional quality of firm's service.

Kurtz and Clow (1998) defined the corporate image or firm image as "the overall or global opinion customers have of a firm or organization". If customers perceive the company as high image, they tend to patronize it. On the other hand, if company's good image is damaged, customer will be dissatisfied and are not likely to return to the company. Moreover, they will tell their negative experiences to others.

Choi et al. (2005) reported that most past studies on healthcare industry adopt process quality in measuring perceived service quality. GrÖnroos (1990) analyzed that the SERVQUAL instrument focuses on measuring service process (process quality). Choi et al. (2005) developed the measurement of perceived service quality through modifying SERVQUAL's dimensions and scales (Parasuraman, Zeithaml, and Berry, 1985, 1988; Parasuraman, Berry, and Zeithaml, 1990) in order to fit with Korean health care system. The SERVQUAL is a 22-items instrument used to measure consumer perceptions of service quality. The 22-items spread in five dimensions: tangible, reliability, responsiveness, assurance, and empathy (Parasuraman, Zeithaml, and Berry, 1988).

Choi et al. (2005) conducted 3 focus group interviews and found that the process quality was the main concern for Korean patients. This quality composed of four dimensions: physician concern, staff concern, convenience of care process, and tangibles. In the first stage, there are totally 30 questions developed from the focus group interviews and SERVQUAL scale items (Parasuraman, Zeithaml, and Berry, 1990). After measurement analysis and purification, the scale items are reduced down to 19 items and the four dimensions is confirmed in validity. The SERVQUAL is modified to fit with service quality of hospital in Korea where health care system is different from U.S. and Europe. Patients in the Korean health care system have the freedom to select the hospital (Choi et al., 2005) which is similar to Thai health care system where patients have the right to change medical service providers and medical service.

Image may be built up mainly by both the technical and the functional quality of the company's service (GrÖnroos, 1984). Smith and Clark (1990) reported that quality of physician, advanced technology, and overall quality all have a strong and positive relationship with the hospital image. Similarly, Nguyen and LeBlanc (1998) explained that the collective perception of service quality from repeated service encounters is expected to form the overall corporate image of the company.

In addition, service quality is an antecedent of customer satisfaction (Cronin and Taylor, 1992, Fornell, 1992; Oliver and DeSarbo, 1988). Also, Anderson, Fornell, and Lehmann (1994) proposed that customer satisfaction is affected by overall quality, expectations, and price. Moreover, Lee, Lee, Yoo (2000) summarized that consumer will be (dis)satisfied with service only after they perceive and experience the service. It implied that service quality' evaluation may come before customer satisfaction.

Bloemer, Ruyter, and Wetzels (1999) reported that some perceived service quality dimensions affect some service loyalty dimensions in all four industries including health care. Cronin, Brady, and Hult (2000) found a direct relationship between service quality and behavioral intention (a component of customer loyalty) across six difference service industries including health care. Petrick (2004) found that service quality has a direct influence on repurchase intention and that positively relates to positive word of mouth. Repurchase intention and word of mouth are components of customer loyalty. These indicate that perceived service quality has a direct influence on customer loyalty.

Accordingly, this study investigates the effects of the four perceived service quality dimensions on corporate image, customer satisfaction, and customer loyalty of Thai outpatients of private hospitals in Bangkok. The hypotheses are defined in order to test the effects of four perceived service quality dimensions on corporate image, customer satisfaction, and customer loyalty in conceptual framework as follows:

$H_1o$:   Four dimensions of perceived service quality do not affect corporate image.
$H_1a$:   Four dimensions of perceived service quality affect corporate image.

$H_2o$:    Four dimensions of perceived service quality do not affect customer   satisfaction.
$H_2a$:    Four dimensions of perceived service quality affect customer satisfaction.
$H_3o$:    Four dimensions of perceived service quality do not affect customer loyalty.
$H_3a$:    Four dimensions of perceived service quality affect customer loyalty.

## RESEARCH METHODOLOGY

Descriptive research and survey research techniques were applied in this study. The primary data was collected by distributing questionnaires to 500 Thai outpatients at five largest private hospitals in Bangkok. The five largest private hospitals were selected based on the judgment sampling technique by using the number of beds as a criterion. Thereafter, quota sampling is applied to equally distribute 100 questionnaires to each one of the five hospitals (see Table 1).

The questionnaire comprises two screening questions and another 5 parts. For the first part, there are 19 questions on perceived service quality variables and the questions are developed from the study of Choi et al. (2005). The second part contains 3 questions on image variable and the third part contains four questions on customer satisfaction variable. The questions of part three and four are taken from Clow, Fischer, and Bryan (1995). The forth part consists of three questions on customer loyalty.

The study applied Cronbach's coefficient alpha as a tool to measure the internal consistency of the construct or concept (Sekaran, 2003). If the value is less than or equal to 0.6, it indicates that the internal consistency is unsatisfactory (Malhotra, 2004). All variables in this study have Cronbach's alpha greater than 0.6 indicating the satisfactory results: doctor concern ($\alpha = 0.846$), staff concern ($\alpha = 0.857$), convenience of the care process ($\alpha = 0.797$), tangibles ($\alpha = 0.819$), corporate image ($\alpha =$ which are developed from Beerli, Martín, and Quintana (2004). Part 1 to part 4 are measured by using a five-point Likert scale, ranging from strongly disagree (1) to strongly agree (5). The last part is a demographic profile which contains questions about each respondent's gender, age level, occupation, educational level and monthly personal income level.

## RESULTS AND CONCLUSION

Factor analysis and multiple linear regression techniques were applied for data analysis. For factor analysis, the researchers extracted factors by using Varimax orthogonal rotation under principal component analysis (Ho, 2006). Moreover, Factor loadings should be greater than 0.3 to be important (Field, 2000). In addition, the factor scores are used for further analysis as factors scores can be used to solve multicollinearity problem for multiple regression analysis (see Field, 2000).

The results indicated that factor analysis is appropriate with the sample data (KMO's value = 0.916; sig. value of Bartlett's Test = .000). Moreover, the four dimensions extracted are identical to four perceived service quality dimensions of Choi et al. (2005). The first dimension extracted is 'doctor concern' which compose of psqdoc1-5, the second dimension is 'staff concern' including psqstaf1-5, the third dimension is 'tangibles' containing psqtan1-4, and the fourth dimension is 'convenient of the care process' containing psqpro1-5 (See Table 2). Therefore, the four dimensions are used for hypothesis testing.

From Table 3, four dimensions of perceived service quality affect corporate image ($H_1o$: all P-value = .000), customer satisfaction ($H_2o$: all P-value = .000), and customer loyalty ($H_3o$: all P-value = .000). Also, 'doctor concern' is the most important factor affecting customer satisfaction (Beta value = 0.390) and customer loyalty (Beta value = 0.350) and the second most important factor affecting corporate image (Beta value = 0.372). Then, 'staff concern' is the second most important factor that has an impact on customer satisfaction (Beta value = 0.387) and customer loyalty (Beta value = 0.284). In addition, 'tangibles' is the most important factor influencing corporate- image (Beta value = 0.437). Lastly, although 'convenience of the care process' is the third and fourth important factors affecting corporate image (Beta value = 0.187), customer satisfaction (Beta value = 0.252), and customer loyalty (Beta value = 0.262), it still significantly affects all these variables. Therefore, one should not ignore this dimension.

## RECOMMENDATIONS

The results of this research indicated that 'doctor concern' is the most important factor affecting customer satisfaction and customer loyalty and the second most important factor affecting corporate image (see Table 3). Therefore, the management should hire the right people as experts and well-known doctors to serve their patients as they lead to reputation and positive image of the hospital. Moreover, the doctors should be trained on interpersonal skills so as to provide politeness, comfort, and individual attention to their patients.

Next, 'staff concern' is the second most important factor affecting customer satisfaction and customer loyalty. For nursing staff, the management should hire a service minded nursing staff. The nursing staff and other hospitals staff should be trained on interpersonal skill to provide care, empathy, and courtesy to patients.

Furthermore, 'tangibles' is the most important factor influencing corporate image. Management should provide clean facilities e.g. patient examination room and toilet. Moreover, clean and fresh odor is also important for hospitals in reducing patients' stresses. Hospital should provide enough amenities (e.g. public telephones, seating, and toilets etc.) for both patients and their family members and friends. Also, hospital should provide up to date care facilities as it can communicate professionalism. For signs, symbol, and artifacts, management should provide adequate signs in communicating direction, location name, and room number so that patients can easily find ways to the designated place. Moreover, the sign must be easy to read and very clear for everyone.

In addition, 'convenience of the care process' should be improved especially for waiting time because this items has the lowest mean (mean = 3.36 and SD = 1.045). Therefore, the hospital should improve the waiting process. Finally, the hospital's management should continue to collect data about perceived service quality of outpatients on regular basis. This way they can keep track on perceived service quality of their hospital and continuously improve their service quality.

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**APPENDIX:  QUESTIONNAIRE**

Perceived Service Quality (developed from Choi et al., 2005)

1. The doctor was polite.
2. The doctor adequately explained my condition, examination results, and treatment process.
3. The doctor allowed me to ask many questions, enough to clarify everything.
4. The doctor paid enough consideration to my concerns for deciding medical procedure.
5. The doctor made me feel comfortable.
6. Hospital staffs (e.g. nursing staffs, pharmacist, receptionist, and cashier **excluding doctors**) were friendly and polite.
7. Nursing staffs thoroughly explained the medication process.
8. Nursing staffs tried to help me as much as they could.
9. Nursing staffs sincerely cared for me.
10. There was a good coordination among hospital staffs **excluding doctors.**
11. The procedure of the lab test (e.g. blood checking and urine checking) was convenient.
12. The lab test's result was done in a prompt way.
13. The payment procedure was quick and simple.
14. The process of making the appointment with doctor was simple and easy.
15. I did not have to wait long for the medical examination from the doctor.
16. The waiting area for medical examination, medical examination room, waiting area for payment, and toilet were clean.
17. It was easy to use the amenities (e.g. cafeteria, public telephone etc.) in this hospital.
18. The hospital has up-to-date care facilities (e.g. medical equipments, laboratories, medical examination room etc.).
19. It was easy to find way to care facilities (e.g. laboratories, medical examination room etc.) and amenities (e.g. cafeteria, public telephone etc.).

**Figure 1: The determinants of image, customer satisfaction, and customer loyalty based on perceived service quality: perceptions of Thai outpatients of private hospitals in Thailand.**
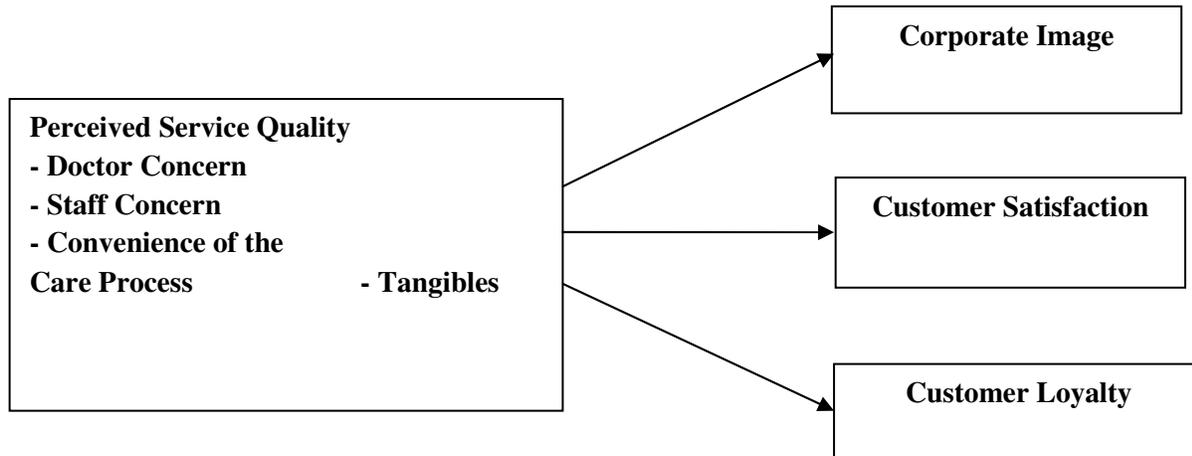


**Table 1: Five Largest Private Hospitals in Bangkok in 2007 and Number of Questionnaires**

| Hospital's Name | Number of questionnaires |
|---|---|
| 1.Bumrungrad International Hospital (554 beds) | 100 |
| 2.Phyathai 2 Hospital (550 beds) | 100 |
| 3.Kasemrad Bangkok Hospital (500 beds) | 100 |
| 4.Hua Chiew Hospital (450 beds) | 100 |
| 5.Thonburi Hospital (435 beds) | 100 |
| Total | 500 |

Source: http://203.157.6.200/king/ac/stat.asp (2008)

**Table 2** The result of factor analysis on perceived service quality

**Rotated Component Matrix** [a]

|  | Component | | | |
|---|---|---|---|---|
|  | 1 | 2 | 3 | 4 |
| psqdoc4 | .789 | | | |
| psqdoc3 | .751 | | | |
| psqdoc5 | .731 | | | |
| psqdoc2 | .711 | | | |
| psqdoc1 | .663 | | | |
| psqstaf3 | | .824 | | |
| psqstaf4 | | .810 | | |
| psqstaf2 | .323 | .683 | | |
| psqstaf5 | | .659 | | .314 |
| psqstaf1 | | .608 | | |
| psqtan2 | | | .814 | |
| psqtan3 | | | .736 | |
| psqtan1 | | | .726 | |
| psqtan4 | | | .676 | |
| psqpro3 | | | | .781 |
| psqpro5 | | | | .742 |
| psqpro4 | .320 | | | .630 |
| psqpro2 | | | .337 | .619 |
| psqpro1 | | .371 | | .502 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 6 iterations.
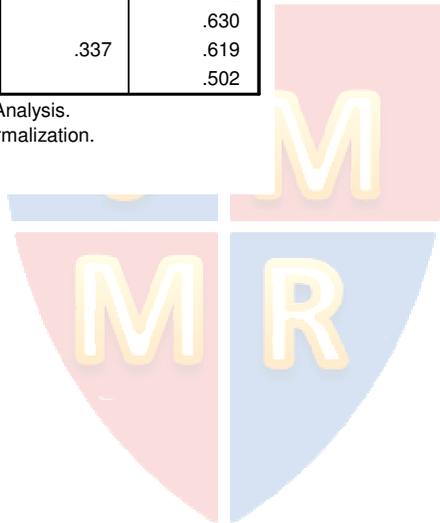
**Table 3**: Summary of Hypothesis Testing Results

| Hypothesis | F-value | P-value | Significant level | Results |
|---|---|---|---|---|
| H$_1$o: Four dimensions of perceived service quality do not affect on corporate image. | 106.812 | .000 | .05 | Reject Ho |
| | Standardized Beta | P-value | Significant level | Results |
| Doctor concern | .372 | .000 | .05 | Reject Ho and Support Ha |
| Staff concern | .314 | .000 | .05 | |
| Tangibles | .437 | .000 | .05 | |
| Convenience of the care process | .187 | .000 | .05 | |
| Hypothesis | F-value | P-value | Significant level | Results |
| H$_2$o: Four dimensions of perceived service quality do not affect on customer satisfaction. | 89.077 | .000 | .05 | Reject Ho |
| | Standardized Beta | P-value | Significant level | Results |
| Doctor concern | .390 | .000 | .05 | Reject Ho and Support Ha |
| Staff concern | .387 | .000 | .05 | |
| Tangibles | .230 | .000 | .05 | |
| Convenience of the care process | .252 | .000 | .05 | |
| Hypothesis | F-value | P-value | Significant level | Results |
| H$_3$o: Four dimensions of perceived service quality do not affect on customer loyalty. | 55.521 | .000 | .05 | Reject Ho |
| | Standardized Beta | P-value | Significant level | Results |
| Doctor concern | .350 | .000 | .05 | Reject Ho and Support Ha |
| Staff concern | .284 | .000 | .05 | |
| Tangibles | .195 | .000 | .05 | |
| Convenience of the care process | .262 | .000 | .05 | |