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THE ROLE OF KNOWLEDGE MANAGEMENT CUSTOMER-ORIENTED APPROACH ON ENHANCING SERVICE QUALITY; CASE STUDY: THREE LARGE PRIVATE HOSPITALS IN SHIRAZ

***Seyedeh Elnaz Torbati, Iman Jokar and Elham Liravi**

Science and Research Branch, Islamic Azad University, Fars, Iran

**Author for Correspondence*

ABSTRACT

Customer knowledge management system constituting of overlap between two knowledge management system and customer relations management can be applied. This study tried to investigate the position of customer knowledge management in enhancing service quality following exploring customer relation and knowledge management systems as well as providing different, formal and systematic systems rather to other related systems to these two. To do this, the necessity of customer knowledge management is studied after analyzing knowledge management, user and customer notions as well as different customer knowledge in service centers such as hospitals. Studying properties, advantages and regarded requirements in this organizational approach, a model appropriate to service centers' mission and purposes. Three dimensions of customer knowledge management including knowledge from customer, knowledge about customer and knowledge for customer are considered as independent variable and service quality as dependent variable. A questionnaire was designed to evaluate the proposed model validity, distributed among some experts area; moreover, reliability and validity were determined using Cronbach alpha formula. Data were analyzed through one sample t-test and regression. Results showed that customer knowledge significantly influences on enhancing service quality; and of customer knowledge management dimensions, knowledge from customer dimension with 89% has the highest impact on enhancing service quality.

Keywords: *Customer Knowledge Management; Customer Relations Management; Knowledge Management; Service Quality*

INTRODUCTION

Knowledge is counted as a key competitive factor in the world economy. However, successful presence in today dynamic market requires concerning another important component referring customer.

Customers' management knowledge enables organizations to recognize emergent opportunities in the market with higher probability and to increase their competing advantage. Customer knowledge management is related to acquiring, sharing and extending customers' knowledge toward customer benefit between organization and customer.

Today, establishing and maintaining relation to customer not only for selling goods and services but also for getting their information and knowledge is a new concept discussing in the framework of knowledge management systems.

Hospitals as servicing institutes permanently seek for realizing their customers' requirements and expectations to achieve an active presence in the present dynamic market. Customer relation system like most innovative technologies helps organizations to more effectively manage their relation to customers. Customers' relation management is of the most critical elements every organization must consider.

Health unit possess a special place in servicing sector; even little mistakes are irretrievable; therefore, high quality service providing according to professional standards are utmost importance. In the past, ensuring of the quality of health services was traditionally relied upon technical knowledge of physicians and nurses who were expected to best apply this knowledge in patients' treatment. Hence, organizational performances of therapeutic cares are complex organizations that each expert's work is regarded a part of the system requiring their best in servicing patient.

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Service quality plays a critical role in hospitals as the superior service quality is not only a selective nor optional strategy but also superior and better service quality precisely distinguishes successful and inefficient hospitals.

Understanding service quality notion and trying to improve it may lead to high qualified service providing in servicing institutes; it can be anticipated that through increasing services' quality level customers' satisfaction will be enhanced (Nematian, 2004).

Main Purpose

Enhancing service quality through customer knowledge management

Secondary (Alternative) purposes:

1. Studying the effect of knowledge from customer dimension in customer knowledge management on enhancing services quality
2. Studying the effect of customer knowledge dimension in customer knowledge management on enhancing services quality
3. Studying the effect of knowledge about customer in customer knowledge management on enhancing services quality

MATERIALS AND METHODS

Research Hypotheses

Main Hypothesis

Customer knowledge management has a significant effect on enhancing services quality.

Alternative Hypotheses

First Hypothesis: Knowledge from customer dimension in customer knowledge management significantly influences on enhancing quality of services.

Second Hypothesis: Knowledge about customer dimension in customer knowledge management significantly influences on enhancing quality of services.

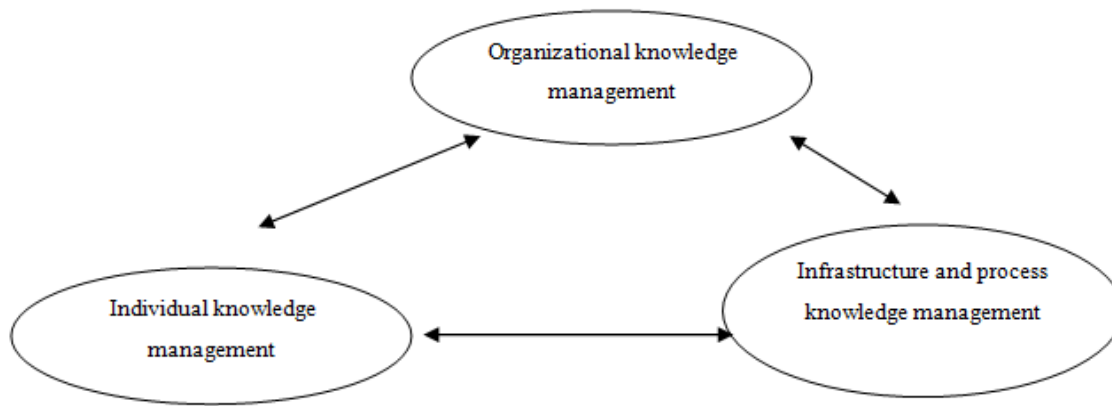
Third Hypothesis: Knowledge for customer dimension in customer knowledge management significantly influences on enhancing quality of services.

Statement of the Problem

Knowledge management contains all approaches that an organization manages its own knowledge assets including how to gather, save, transfer, utilize, update and establish knowledge (Fedlala, 2003; cited from Tajo et al., 2010).

Customer knowledge is progressively known as a remarkable source along with marketing directing us toward supporting researches, development, as well (Gilbert et al., 2002).

Sonasi and Sorri proposed a model in which knowledge management consists of 3 interrelated subsystems requires balancing by organization (Mousakhani et al., 2010).



Knowledge management systems in Sonasi and sorri perspective

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Knowledge Management Subsystems

Customer Knowledge

Knowledge is a type of organization property independently works focusing on departments' integration. Customer knowledge pertains to customer understanding of organization, goal, tendencies and requirements (Irannejad, 2008).

Staff Knowledge

The competing atmosphere governing on today's business made the managements call, more than ever, for data and information related to inter organization activities and underlining knowledge (Fadaii *et al.*, 2011).

Defining Customer Relation Management

Customer relation management is customer oriented trading model which concentrates company's functions around customers' requirements and not productions, sources or processes so that customer satisfaction, loyalty and persistence will increase (Plessis and Boon, 2000).

Knowledge Trends in CRM Process

Knowledge trend, playing a critical role in customers and company interactions, is determined to objectify the customer knowledge management concept: knowledge for, knowledge from and knowledge about.

At first stage, a continuous knowledge trend directing from company to customers (knowledge for customer) is a prerequisite for supporting customers in purchase cycle. Knowledge for customers consists of information about productions, markets and providers. This knowledge dimension also influences on customer understanding of service quality.

Inter layer of CKM model contains KM. Organizations gather customers' related data and information, from various sources, to identify customers' demands and requirements. Yet, most organizations encounter challenges in converting these gathered data in to knowledge. Therefore, the problems are resolved through using data mining techniques and tools to reveal some patterns among data stacks (Bienstock *et al.*).

Research History

Pashazade *et al.*, (2012), in a paper, studied management maturation level and the relation between knowledge management maturity and innovation and quality of services in addition to the relation between innovation and service quality in Maskan Bank, Uremia; and finally, demonstrated the positive, significant relation between knowledge management maturation and services quality.

Zokaei (2011) in a study, on suggesting an approach to measure customers' knowledge management value, provided common strategies in knowledge management measurement, followed by detailed studying of customers' knowledge management, in addition to introducing balanced scorecard method as the selective approach in its searching and integration with knowledge management discussions.

Hosseini (2010) in a study showed that organizational culture and knowledge management possess an intermediate status; moreover, there is a significant relation between organizational culture and knowledge management; and, establishing knowledge management requires change in organizational culture.

Asgari studied the relation of organizational structure, culture, technology factors with knowledge management. The findings showed that there is a significant relation between organizational structure and knowledge creation and distribution.

Khatibian *et al.*, (2009) presented a model to evaluate knowledge management maturity in organizations and found that implementing knowledge management in organizations if the organization is adequately matured may cause in to considerable changes in the organizational process, infrastructure and culture.

Rinarthez *et al.*, (2007) suggested some criteria such as customer maintaining rate, minimizing returns volume causing satisfaction and customer being applied in addition to traditional criteria like sale amount and interest yield to evaluate customer relation management performance.

Pirooz *et al.*, (2006), in a study, offered a basis for understanding the relation between quality management and knowledge creating in a knowledge oriented attitude that how quality management trends lead to improving organizational performance.

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Research Process

The present research studied and closely examined customer knowledge management contribution in enhancing services quality. The research stated the problem through exploring various references in literature. The participants were the staffs of 3 large private hospitals in Shiraz. The data were gathered using an 18 five choice questions questionnaire. Research reliability was investigated by distributing 30 questionnaires among hospital experts; then research reliability was estimated through using SPSS software and Chronbach alpha.

RESULTS AND DISCUSSION

Data Inferential Analysis

The researcher, in this type of analysis, computes statistic using sample values. Statistic is a term referred to sample and investigates sample feature. For instance, mean, variance, ration are statistic samples. Statistic changes from each sample to the other. However, parameters are steady (static) in the participant community; yet, are unknown. Parameters are statistically estimated by the help of statistic referring as statistical deduction or inference (Seddighiani and Ebrahimi, 2002).

Main Hypothesis

Customer knowledge management significantly influences on enhancing services quality which is statistically defined as follows:

$$\left\{ \begin{array}{l} H_0=m=0 \\ H_1=m\neq 0 \end{array} \right.$$

H₀= customer knowledge does not increase services quality.

H₁= customer knowledge does increase services quality.

Table 4-4 Main hypothesis test

One sample t-test						
Test Value = 0						
	T	Degree of freedom	Bilateral significance level	Mean difference	Confidence distance 95%	
					low	high
Customer knowledge management	41.726	149	0.000	1.929	1.84	2.02

According to the above table, observed p- value (significance level) is significant at the level less than 0.05; so, the null hypothesis is rejected and alternative one is maintained. It means that customer knowledge in customer knowledge management influences on enhancing services quality.

First Alternative Hypothesis

Knowledge from customer, in customer knowledge management, causes increasing services quality. This hypothesis is statistically explained as follows:

$$\left\{ \begin{array}{l} H_0=m=0 \\ H_1=m\neq 0 \end{array} \right.$$

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H₀= knowledge from customer does not increase service quality.

H₁= knowledge from customer does increase service quality.

Results of first hypothesis test

First hypothesis one-sample t-test

	One sample t-test Test Value = 0			Confidence distance 95%		
	t	Degree of freedom	Bilateral significance level	Mean difference	low	high
Knowledge from customer	38.223	149	.000	1.956	1.85	2.06

According to table, the observed p-value (significance level) is significant at the level less than 0.05; therefore, null hypothesis is rejected and the alternative hypothesis is maintained i.e. knowledge from customer influences on increasing service quality in customer knowledge management.

The effect of customer knowledge management on enhancing service quality was measured with regression test. The regression test results are as follows:

First alternative hypothesis regression test

	Non-standard correlations		Standard correlations		Significance level
	B	Standard error	β	t	
Intercept	.342	.607		5.101	.000
Knowledge from customer	.811	.033	.898	24.827	.000

Beta value was 89% regarding aforementioned table indicating that knowledge from customer influences 89% on service quality.

Second Alternative Hypothesis

Knowledge about customer increases service quality in customer knowledge management.

This hypothesis is statistically defined as follows:

$$\left\{ \begin{array}{l} H_0=m=0 \\ H_1=m\neq 0 \end{array} \right.$$

H₀= knowledge about customer does not increase service quality.

H₁= Knowledge about customer does increase service quality.

Second hypothesis test results

One-simple t-test

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Second alternative hypothesis one sample t-test

	T	Degree of freedom	Test Value = 0		Confidence level of 95%	
			Bilateral significance level	Mean difference	low	high
Knowledge about customer	32.334	148	.000	2.093	1.96	2.22

According to the above table, the observed p-value (significance level) was significant at the level less than 0.05; hence, null hypothesis is rejected and alternative hypothesis will be maintained indicating that the knowledge about customer influences on the service quality in customer knowledge management. The effect of customer knowledge management on the service quality enhancement was evaluated using regression as follows:

Second alternative hypothesis regression test

	Non-standard correlations		Standard correlations	t	Significance level
	B	Standard error	β		
Intercept	.636	.068		9.374	.000
Knowledge about customer	.617	.030	.859	20.338	.000

Beta (β) is 85% according to above table i.e. knowledge about customer influences about 89% on the service quality enhancement.

Third Alternative Hypothesis

Knowledge for customer causes service quality enhancement in customer knowledge management. This hypothesis is following defined in a statistical framework:

$$\left\{ \begin{array}{l} H_0=m=0 \\ H_1=m\neq 0 \end{array} \right.$$

H_0 = knowledge about customer does not enhance service quality.

H_1 = knowledge about customer does enhance service quality.

Results of the third hypothesis test

One-sample t-test

Third alternative hypothesis one-sample test

	T	Degree of freedom	Test Value = 0		Confidence distance 95%	
			Bilateral significance level	Mean difference	low	high
Knowledge about customer	38.625	149	.000	1.808	1.72	1.90

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Observed p-value (significance level) is significant at <0.05, according to the table; therefore, null hypothesis is rejected and the alternative one is maintained suggesting the impact of knowledge for customer in enhancing service quality in customer knowledge management.
 The effect of customer knowledge management on service quality enhancement was calculated by regression. The regression results are provided in the following:

	Non-standard correlations		Standard correlations	t	Significance level
	B	Standard error	β		
Intercept	.350	.072		4.870	.000
Knowledge for customer	.873	.038	.884	23.024	.000

The value of Beta is 88% meaning that knowledge for customer influences 88% on enhancing service quality.

Conclusion

Research main hypothesis stated that customer knowledge management significantly influences on enhancing service quality. The first main hypothesis was assessed applying one-term t-test. The obtained findings demonstrated maintain this hypothesis meaning that the main hypothesis of the significant contribution of customer knowledge management on enhancing service quality is maintain with the probability of 95%. The first alternative hypothesis stated that knowledge from customer significantly influences on enhancing service quality in customer knowledge management. The first alternative hypothesis was evaluated through using one-term t-test and the results suggested maintaining the hypothesis. In other words, main hypothesis will be maintained with the probability of 95%.

The second alternative hypothesis expressed that knowledge about customer significantly influences on service quality enhancement in customer knowledge management. Second alternative hypothesis was measured in terms of one- term t-test, the results of which showed hypothesis maintaining indicating that the main hypothesis of significant effect of knowledge about customer on increasing service quality will be maintained at 95%.

The third alternative hypothesis was evaluated through using one-term t-test. Findings presented that the hypothesis is maintained i.e. main hypothesis of the significant impact of knowledge for customer in service quality enhancing will be maintained at 95%. Therefore, it can be stated that people agreed upon that knowledge presence for customers, influences on enhancing service quality in service providing organizations.

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Research Article

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