

MEASURING HEALTHCARE SERVICE QUALITY: FOCUS ON PROCESSES AND RESULTS AS A SECOND-ORDER DIMENSIONS

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ABSTRACT

The purpose of this study is to examine measurement dimensions for healthcare service quality (HCSQ) adopted in previous studies and service quality accreditation and certification systems in the international community, and to propose a new measurement for HCSQ, focusing on two second-order dimensions: processes and results. The proposed research model will be tested using data collected from respondents in the hospital with more than 500 beds in South Korea. The study provides new measurement items for HCSQ through measurement model.

Keywords: HCSQ, measurement items for quality, measurement model

1. INTRODUCTION

Healthcare industry is receiving much attention around the world recently as one of the fastest growing service industry in the developed and developing countries. The concerns for healthcare quality and patient safety have been increased including costs, malpractice and dispute of medical, and healthcare reform (Bowen and Ostroff, 2004; Lee et al., 2011, 2012).

The healthcare service quality (HCSQ) introduced by Myers (1969) has been measured with several dimensions in previous studies (Donabedian, 1981; Bowers et al., 1994; Shelton, 2000). However, measurement items of HCSQ have been used and modified by researcher's intention based on commonly used items in the service industries instead of a standardized item (e.g., Evans and Lindsay, 2009; Lee et al., 2011). The healthcare industry also has measured customer satisfaction and service quality through various institutions and/or international accreditation and certification systems (e.g., IOM, JCI, ISO, etc.).

The purpose of the study is to develop the quality measurement items for healthcare service and present the efficient operation strategy for improvement of care service through the difference by form of treatment (e.g., inpatient, outpatient and emergency). In order to develop the measurement items of HCSQ with more objective and universal, survey is performed twice using questionnaires. The first questionnaire is designed to measure relative importance of HCSQ items, and second questionnaire with the quality measurement items according to the results of first survey will be performed.

2. LITERATURE REVIEW

2.1 Measurement item for Healthcare Service Quality

Myers (1969), who studied in HCSQ as one of pioneers, presented accessibility, effectiveness, improvement of care quality, and continuity as items for the quality measurement of the healthcare service. Donabedian (1981) presented components of quality measurements as efficacy, effectiveness, efficiency, legitimacy, optimality, acceptability and equity. Vuori (1982) presented effectiveness, efficiency, adequacy, and quality improvements of scientific-technical as properties for quality measurements.

Parasuraman et al. (1988) suggested the five dimensions: Tangible, reliability, responsiveness, assurance, and empathy. As study related with SERVQUAL model, Carmen(1990) reported six quality items as Tangible, reliability, safety, empathy, convenience, and cost. Bowers et al. (1994) proposed that reliability, responsiveness, communication, accessibility, and understanding and consideration of patients. Jun et al. (1998) approached to measure quality of healthcare service based on perception of patients and presented eleven dimensions: Tangible, reliability, responsiveness, technology, competence, courtesy, communication,

As mentioned above, dimensions of the measurement items on the HCSQ are differently used or measured by intentions of the researcher. The reasons are as follows: scope of healthcare services has different approaches based on diseases; healthcare system is complicate to deal with human life; and the number of care units or levels can be changed according to type or

conditions as severity of disease. This study based on previous studies to propose measurement items for HCSQ. Various measurement items for HCSQ have been used, and especially, SERVQUAL model is the most frequently used in healthcare system.

2. 2 Healthcare Service Accreditation Systems

Healthcare service accreditation is that measurement and/or evaluation of the healthcare service, which is provided by the healthcare providers or institutions, and it evaluated provided care services focusing on ability, authority and reliability based on standardized assessment items (JCI, 2008).

The USA developed an international evaluation standard through JCI (Joint Commission International). The accreditation system is implemented at more than 15,000 medical institutions across the world. As December 2011, 320 hospitals in the 42 countries acquired the accreditation. Healthcare Quality Association on Accreditation (HQAA) evaluates high quality of provided care service and medical equipment on the standards and cost saving on the reasonable treatment.

Accreditation Canada (AC) was established in 1995, and it provided the obligatory standard for the hospital institutions to provide actual and effective quality improvements and safety. The quality evaluation of the healthcare service includes various care units of treatments and services with more than 30 standardized items that can improve quality on management of operations, employees, patients, and potential customers. Currently, more than 70 countries is implemented the system (AC, 2011).

Korea Institute for Healthcare Accreditation (KOIHA) is established in 2010. It focused on quality improvements of the healthcare service and treatment environment of customer-orientated. As of January 2012, 93 hospitals received the accreditation, and the concerns for achieving the accreditation system are fast growing trends. The evaluation criteria are as follows: professional service, administration and supporting service, departmental service sector, patients' rights and convenience, performance and outcome, and facilities and staffing levels.

The evaluation criteria based on the international accreditation institutions showed that they are ultimately evaluated to improve the patient's safety and medical treatment of disease.

3. MEASUREMENT ITEMS OF HEALTHCARE SERVICE QUALITY

3.1 The Relative Importance on Measurement Items for Healthcare Service Quality

As the healthcare service quality is evaluated by customer's experiences and expectations, the items of quality that customers consider as important are relatively different (Kim and Choi, 1999). Thus, healthcare organizations need to know what important factors are considered by customers before deciding measurement items for HCSQ in advance. Kim and Choi (1999) proposed priorities on importance of measurement items for HCSQ as follows: reliability

(40.6%), responsiveness (13.0%), courtesy (9.9%), safety (9.4%), and customer understanding (6.3%).

To develop quality measurement items, this study investigated the importance of measurement items for HCSQ based on previous study and evaluation criteria of accreditation institutions. Also, questionnaires based on nine items were designed to analyze the sequence of importance on measurement items. The questionnaires were distributed to outpatients, inpatients, and family members of patients in emergency room at H-hospital in Korea. Participation in this survey was totally voluntary. Five hundred (500) questionnaires were distributed and received 367 (73.4%) responses.

The average of measurement items using top three ranked items by respondents was calculated as shown Table 3-1. From the results of Table 3-1, the study selected five measurement items ranked as the one to five in rankings on the average. It seems that the consumers have different feeling about service quality through subjects and normal to measure priority (Kim and Choi, 1999).

Table 3-1: Ranking of Importance on Measurement Items for HCSQ

Measurement items	Measurement items						
	Importance 1	Importance 2	Importance 3	Total	Average	%	Ranking
Degree of improvements	84	61	109	254	85	23.5	1
Safety	59	49	52	160	54	14.9	3
Efficiency	53	49	41	143	48	13.3	4
Tangible	49	73	89	211	70	19.3	2
Empathy	44	47	24	115	38	10.5	5
Assurance	26	33	12	71	24	6.6	6
Accessibility	23	14	12	49	16	4.4	7
Timeliness	13	18	10	41	13	3.6	9
Responsiveness	11	18	13	42	14	3.9	8
Total	362	362	362			100.00%	

This result was similar to the results of study of Kim and Choi (1999). Next, measurement items for HCSQ developed based on the results of Table 3-1.

3.2 Measurement Items of HCSQ: Processes and Results

Service quality has to measure expectations and perceptions of customer including service ability of providers because perceived service is measured as internal decision-making and a result of activities (Won, 1998). The HCSQ means degrees of care services that improve effect of results of treatments and health through provided service (IOM, 1990). Therefore, health providers should try to continue efforts to improve customers' need and satisfaction through quality measuring.

However, measurement of HCSQ is difficult; first, it is relatively more difficult rather than evaluating the quality of products; second, customers do not consider only results as important,; and third, only customers can evaluate the quality (Kim and Choi, 1999). Thus,

the measurement items for HCSQ should be considered two aspects of processes and results, and then the quality will have to be assessed.

4. RESEARCH METHODOLOGY

4.1 Research Model for Measurement Items of HCSQ

Figure 1 shows the research model describing to measure HCSQ through the relative importance of quality items and criteria of international accreditation institutions.

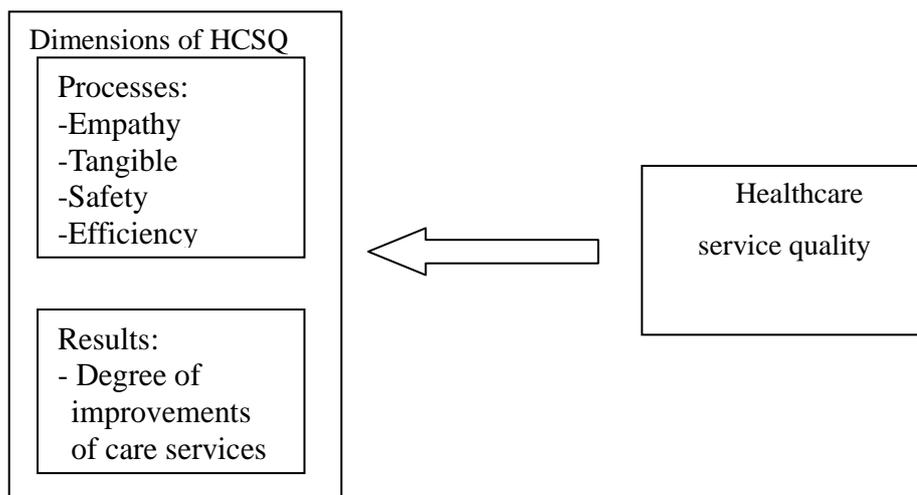


Figure1: The proposed model

4.2 Data Collection

We selected a hospital, third-tier hospital with 500 beds in Korea for this study. The hospital is called as “H-hospital,” hereafter. H-hospital has healthcare service accreditation obtained by Korea Institute for Healthcare Accreditation (KOIHA) in June 8, 2011.

A survey questionnaire was developed through discussion with directors of quality improvement (QI) departments in Korean hospitals to test the proposed model. The questionnaire was developed in English first and then translated into Korean by operations management faculty in South Korea. The Korean version was translated back into English by American operations management experts who are bilingual. The two English version questionnaires had no significant difference. An initial questionnaire for patients and/or patients’ families was tested in a pilot survey involving thirty patients in one of the hospitals in South Korea.

To collect data, inpatients, outpatients, and patients of emergency room or the patient’s family member were selected. Five hundred questionnaires were distributed in H-Korean

hospital.

5. Conclusion and Limitation

This study proposed a research model to investigate measurement items of HCSQ and difference analysis of quality measurement items on care service areas. The results of the study shed insights about the relative importance of quality items as degree of improvements of care services (ranked 1), tangible (ranked 2), safety (ranked 3) efficiency (ranked 4), and empathy (ranked 5). Based on characteristics of healthcare, it is sufficiently causing problems for quality measurement items. However, for healthcare organizations that aim to provide high quality care, the primary items understand as the most important factors by patients thought. As the customer's demands are attainable when providers or suppliers recognize the demands, leaders or managers have to consider about what are quality items that customers recognize as the relative importance.

With regard to this study, several limitations should be considered when interpreting the findings. The study suggested research model to measure quality of healthcare service through pre-test with ranking of importance on measurement items for HCSQ. Future research should test the proposed research model using data to analyzing the measurement items.

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