A Service Quality Measure in Patients with Cataract

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Abstract

Measuring patients' perception from health service quality as an important element in the assessment of service quality has attracted much attention in recent years. The study attempt to assess the quality of services provided to the patients with cataract and to improve the quality of such services. An applied study was carried out through descriptive-survey method. The collected data was analyzed using SPSS-16. In addition, performance-importance matrix was developed in EXCEL. Based on the importance-performance matrix, the element with the highest rank was "patients' perception", which was at the top quarter with a weight equal to 0.074. This means high importance and low performance. The conclusion is that elements that have the highest priority in quadrant 1 for immediate improvement so that patients who are undergoing treatment can be more satisfied with the services provided.

Keywords: *Service Quality; Analysis; Measure; Patient; Cataract*

Abbreviations

IPA: Importance-Performance Analysis; SQQ: Service Quality Questionnaire

Introduction

Quality of service is an effort to fulfill the needs and desires of customers as well the accuracy of service delivery so that the service they receive is in line with expectations or customer desires [1]. "Vision 2020: The Right to Sight" is a global initiative for the prevention of blindness that was launched in 1999 by the International Agency for Prevention of Blindness and the World Health Organization (WHO) [2]. Vision2020 promotes the development of health systems to deliver integrated, sustainable, affordable, accessible and equitable eye care services through district level structures. The approach that each country takes to implement a prevention of blindness program depends on existing human resources, infrastructure and population needs [2]. Recently the WHO Global Action Plan (2014 - 2019) has provided an updated approach with increased emphasis on the health systems approach and integration of eye care into the general health system. The vast majority of blindness in Iran, in common with many other countries and the global estimates, is due to treatable or preventable causes, such as cataract and refractive errors that can be alleviated by developing preventive or therapeutic strategies [3]. The survey found that about 10% of over 50 year olds suffer from bilateral visual impairment and 1.5% of people in this age group are blind. Cataract was the main cause, accounting for 47.5% of severe visual impairment and 31.7% of blindness; it remains the largest eye care need in this district. Uncorrected refractive error is responsible for almost 10% of severe visual and 50% of moderate visual impairment.

A similar pattern has been reported from other countries in the Middle East [4]. This paper attempts to identify both the importance and performance of service quality to the patients with cataract in eye Hospital by using the IPA model. The results may prepare the ground and momentum to move toward the objectives of WHO vision-2020 to eliminate preventable loss of sight by 2020.

Materials and Methods

The purpose of this study was to explore quality of services provided to the patients with cataract. This will provide the direction to improve the service quality by using IPA method. The study was carried out as a descriptive work and the sample group consisted of two groups. Group one included 10 ophthalmologists, five researchers in management of health medical services, and five researchers in ophthalmic nursing. The participants in this group were selected through convenience sampling. Group two included hospitalized and outgoing patients diagnosed with cataract who visited cornea clinic at different occasions. With variance of the pilot sample equal to 0.539 (CL = 95%, error = 5%) the number of participants needed in the study including hospitalized and outgoing patient with cataract was estimated 446 patients who were selected through convenience sampling. Step one (obtaining opinions of experts): To determine the elements of quality of services, literature review and interviewing experts were conducted. The expert's opinion was requested for three times and adjustments were made at each step. Service quality questionnaire (SQQ) with 32 questions was designed. The questionnaire was provided to 20 experts. The SQQ was administered on three occasions to determine the elements based on fuzzy Delphi method. At the second stage, the number of statement was increased to 36 based on the experts' opinion and at the third stage, 31 elements of quality of medical services to the patients with highest importance were selected. Step two (patients' opinion): The questionnaire of quality of services from patients' point of view was designed based on the SQQ. In addition to the importance of each element of quality of services, the questionnaire also measures performance of the hospital in terms of that element from the patients' viewpoint. To measure reliability of the questionnaire using Cronbach's alpha, 30 patients in Cornea Clinic filled out the questionnaire and the alpha value was obtained equal to 0.76.

For data gathering, the questionnaire was provided to the patients who visited the clinic after their cataract surgery for follow up. Out of 446 questionnaires administered, 396 were returned. Descriptive reports were generated in SPSS (v16) and data analyses and importance-performance matrix generation were conducted in EXCEL.

Results and Discussion

To determine the degree of importance-performance of the elements based on the 5-point Likert scale, the views expressed by 396 patients were integrated (aggregated) and the importance-performance value of the elements affecting the quality of services to the patients with cataract was obtained (Table 1). As the data analyses showed, 45.5% of the respondents were male, and 54.5% were female. As to the age of developing cataract, the disease inflicted 13.3% at the age below 50 years old and 12% at the age above 50 years.

Element	Performance	Importance	Code
Accessibility	2.697	3.281	C1
Reliability	2.357	3.291	C2
Privacy	2.907	3.341	C3
Comprehensiveness	2.692	3.258	C4
Support services	2.264	3.238	C5
Knowledge of personnel	2.372	3.386	C6
Waiting time	2.339	3.225	C7
Responsiveness	2.785	3.056	C8
Tangible items	2.689	2.981	C9
Assurance	2.196	3.545	C10
Sympathy	2.401	3.801	C11

Clean appearance of personnel	2.603	3.023	C12
Flexibility	2.78	3.144	C13
Decorum and modesty	2.31	3.251	C14
Communication	2.638	2.883	C15
knowing patients	2.294	3.752	C16
Patient safety	2.35	3.199	C17
Continuous services	2.291	3.207	C18
Integrity and honesty	2.399	2.952	C19
Complaint management	2.397	3.407	C20
Law obedience	2.691	3.034	C21
Accuracy of services	2.647	3.055	C22
Financial	2.415	2.785	C23
Paying attention to personal matters	2.574	3.031	C24
Monitoring and feedback	2.664	2.938	C25
Values	2.815	2.807	C26
Public information services	2.287	3.172	C27
Confidentiality of information	2.409	2.941	C28
Cleanness of environment	1.931	3.315	C29
Technology and innovation	2.233	3.287	C30
Rapid provision of services	1.947	3.234	C31
Value amount	2452	3.179	-

Table 1: Importance-performance value of the elements of quality of services to cataract patients.

In addition, we used the mean of all implicitly derived degrees of importance for attributes and the mean of all performance for attributes to divide the IPA matrix into four quadrants (Figure 1).
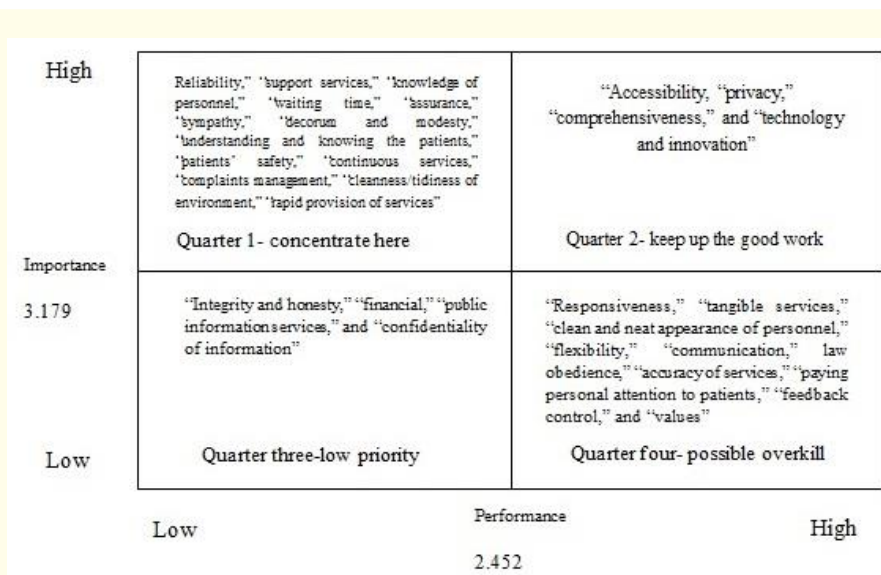

Figure 1: Result of IPA model.

As shown in figure 1, "concentrate here" of quadrant I was key success factors to improve service quality, but performance levels are fairly low. This suggests that improvement efforts should be concentrated here, included C2, C5, C6, C7, C10, C11, C14, C16, C17, C18, C20, C29 and C31.The organization should concentrate on where the importance is high and the performance low and pay immediate attention to these elements in order to improve customer satisfaction with the quality of services.

Quadrant II "Keep up the good work" contains the elements C1, C3, C4 and C30, which indicate the organization's main area of strength and recommend that it keeps up that quality.

Quadrant III "Lower priority" contains the elements C19, C23, C27 and C28. The managers should not pay too much attention to this area and should spend only limited resources on it.

Quadrant IV "Possible overkill" contains the elements C8, C9, C12, C13, C15, C21, C22, C24, C25 and C26. Concentration on this area is a waste of resources.

The next step after identifying the factors that have a weak role in improving the quality of services to patient with cataract is to improve on them

Thus, the priority improvement factors were in quarter 1.

According to Lee., *et al.* [5], the main elements for improving the quality of medical services include the medical team, expert pharmacists, professional nurses and the speed and quality of providing medical services. Lee also confirmed the importance of quality assessment in a competitive health care setting. So in this study the results of data analyses using IPA showed that the hospital needed to pay more attention to the elements "reliability," "supportive services," "knowledge of personnel," "waiting time," "assurance," "sympathy," "decorum and modesty," "understanding and knowing patients," "patient's safety," "continuous services," "complaint management," "cleanness/tidiness of environment," and "rapid provision of services" in providing medical services to patients with cataract.

The element "reliability" refers to accuracy in providing services and represents patient's trust in the physician, diagnosis skills, treatment, and physician's ability to find a suitable treatment for the patients fast. The results showed that this element was highly important, while the performance of the hospital in this regard was not good.

The elements "Accessibility", "privacy", "comprehensiveness", "technology and innovation" were at the quarter two.

The next objective of the study was to determine the variable levels and their effectiveness in improving the quality of services provided to the patients with cataract

Conclusion

The accessibility component of the hospital received a score of 2.697 which indicates the high performance of the hospital in this component, as well as a score of 3.28 indicates the importance of this component to the patient. Based on the importance-performance matrix, the element with the highest rank was "patients' perception", which was at the top quarter with a weight equal to 0.074. This means high importance and low performance.

Direct communication with the patients and paying attention to their needs not only improve patients' solidarity with hospital, but also increases their satisfaction and quality of services provided.

The findings could be valuable for healthcare managers/providers and provide them with useful information about the special needs of their patients and the existing problems. In this case, they can channel their efforts to satisfy their patients' demands and eliminate the weak point.

Acknowledgements

Conflict of Interest

There are no financial interests or any conflict of interest for the authors.

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Volume 10 Issue 12 December 2019