

Evaluation of the Quality of Health Service Providers: The Iranian People Perspective 2014Saeed Asefzadeh¹, Soheyla Gholami², Roya Rajaei³, Marziye Najafi³, Mehran Alijanzadeh⁴

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Type of article: Original**Abstract**

Introduction: Quality is the center of attention in all service providing organizations that are effective in promoting satisfaction of patients who are referred to medical centers. The aim of this study was to investigate the quality of health service providers in a case study of Qazvin, Iran, in 2014.

Methods: This descriptive study was conducted on 1,002 people who were residents of Qazvin Province (Iran) in 2014. The people were selected randomly from the population of the study area. The main variables studied were education, perceptions, expectations, and gaps in service quality. The data collection tool was the standard Servequal questionnaire. To determine the reliability of the research tool, we used Cronbach's Alpha coefficient and the test-retest method. Statistical analyses were conducted using SPSS and the ANOVA test.

Results: The mean age of people included in the study was 32 ± 9.9 years, and the average waiting time to receive services was 73 ± 47 minutes. Hospitals and doctors' offices had the highest quality gap of -1.420 ± 0.82 and -1.01 ± 0.75 , respectively. The service quality gaps in medical centers, health providers of rural area, and health providers of urban area were -0.883 ± 0.67 , -0.882 ± 0.83 , and -0.804 ± 0.62 , respectively. There was a significant relationship between peoples' perceptions and expectations concerning the quality of health services and their educational levels.

Conclusion: The higher gaps in quality in hospitals and in doctors' offices require more attention. Managers and policy makers should consider developing and implementing plans to reduce these gaps in quality and to promote better health services in these two sectors.

Keywords: quality of services; service providing centers; health system

1. Introduction

In this century, new changes have resulted in rapid development of service-providing sectors, especially in the health sector (1). Services provided in different parts of society are considered as the heart of value-creation in the economy (2). Today, quality of services, especially in institutes with high volume of customers, including financial and care services, has found a great importance in such a way that it could be considered as an essential strategy to achieve the intended results in a competitive market (3). Quality has been converted into a big challenge to meet expectations of service receivers and their satisfaction (4). The problem of lack of quality in providing services occurs in organizations that do not focus on identifying and meeting customers' needs and demands. Lack of direct relation of organizations with customers finally will result in improper performance and lack of accountability to customers' expectations (5). Evaluating the quality of health services is a prominent scale to measure the amount of

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realization of health and medical organizations (6). It should be noted that customers' satisfaction is obtained when organizations that provide health services, such as hospitals, medical centers, and clinics, pay attention to customers' expectations as well as their needs and implement required plans to meet customers' expectations (7). In today's competitive market, promotions are transferred to the society directly by patients or their families, and this issue is very important for medical organizations' providing positive experiences for patients and their families and positive perceptions of patients for services received are very important for service-providing organizations (8). The quality of health services generally is recognized as satisfaction of the patients who are referred to medical centers, which have a direct effect on quality and the customers' satisfaction. Therefore, most medical organizations seek to promote the quality of services to ensure that customers are satisfied with the services they receive (9). Patients who receive health services are regarded as the main beneficiaries of health system. Therefore, providing health care according to patients' preferences, expectations, and demands could promote the quality of hospital services (10, 11).

Expectations are one of the main determinants of customer evaluation of the quality of services, and the main step in providing quality services is accurate identification of customers' expectations. In fact, responding to patients' expectations is considered as one of the current challenges of the health system, and, in spite of its importance, the identification of patients' needs and demands has been neglected (12). Customers' perception is the key factor in their judgment of the quality of services. Customers compare their observations of the process of providing services with their expectations of those services, and they judge the quality of the services they receive based on the difference between their expectations and what they actually received. Therefore, a quality control strategy is required to reduce these gaps (13). The Servequal model is one of the most prominent tools to measure customers' expectations and perceptions. It is a diagnostic method for introducing weak and strong points of the quality of organizations' services (14). It measures the following five main dimensions of the quality of services:

- 1) Tangible aspects of service: physical facilities, equipment, appearance of personnel
- 2) Reliability of service provider: performing committed function accurately and reliably
- 3) Responsiveness of service provider: tendency toward helping and responding to customers' needs
- 4) Assurance provided by service provider: ability of personnel to induce trust and reliability
- 5) Empathy of service provider with customers: personal attention to customers (15).

This model has been used in many studies. In their study, Safi et al. concluded that quality gaps existed in terms of all five dimensions of the quality of health services in the medical centers north of Tehran. The lowest gap, i.e., -0.68, was in empathy, and the highest gap, i.e., -0.88, was related to physical aspect of services (16). In the study by Alidoosti on the rural society of Shahr-e-Kord, the results suggested that health services provided in health providers of rural area are far from favorable, and 37% of the people in the study were weakly satisfied with the services provided (17). In a study of private hospitals in Malaysia, the findings showed that there was a significant gap between customers' perceptions and expectations of provided services that required basic interventions in these hospitals to reduce the gap of service quality (18). In the study by Padma et al. in the hospitals of India, patients were regarded as main concern of health service providers and hospitals paid special attention to patients' perceptions to promote the quality of services (19). Various studies have been conducted all around the world on the quality of health services. In studies conducted by Purcãrea (20), John (21), Chakravarty (22), Zarei (23), Nekoei-Moghadam (24), Li (25), Abedi (26), Xu (27), and Handayani (28), it was specified that there is a negative gap between perceptions and expectations of customers concerning the quality of provided services in health care providing units. It was believed that the need to promote quality of services and paying more attention to individuals in the society were the critical factors for the organizations. Garrard and Lin, in their studies, evaluated Servequal as a proper instrument to measure quality of services and stated that this instrument should be used to identify the gap between perceptions and expectations (14, 29). A study conducted in Qazvin Province, Iran, showed that there was a gap in the quality of health services in this Province. However, in this study, the gap distribution was not clear between service providers (30). With regard to the gap in quality of services in Qazvin Province (30) and the lack of studies conducted to measure the quality of health services in Qazvin City, the topic of this study in comprehensive health plans of Qazvin province and unified consensus of health exports of Qazvin to conduct a study on determination of the study of health services among providers was the main reason to conduct this study. In addition, assuring health services is very important for the health system and people, since they are very critical. Evaluating the quality of these services through people's perceptions and expectations is a good instrument. Therefore, the aim of this study was to investigate the quality of health-providing services according to residents of Qazvin Province in 2014.

2. Material and Methods

This descriptive study was conducted with residents of Qazvin Province, Iran, in 2014. A samples size of 400 subjects was selected using the sample size formula and considering the maximum possibility of higher expectations of people compared to their perceptions, $p = 0.50$ and error coefficient of 5%. By considering cluster effect 2, sample size was considered to be 800 subjects. However, 1,002 subjects were studied for more accuracy. Due to the rural population of 25% relative to urban population in Qazvin, 253 rural and 749 urban samples were selected. Cluster sampling was used and samples were selected randomly from the urban population of Qazvin province. The counties of Qazvin, Takestan, Abyek, Booyinzahra, Avaj, and Alborz were investigated. The samples selected from Qazvin, Abyek, Avaj, Alborz, Boein Zahra, and Takestan totaled 403, 51, 38, 121, 44, and 92, respectively. The difference between the numbers of urban and rural samples was because of their population ratio with the cities. In addition, among the rural population of Abyeh, Avaj, Alborz, Boein Zahra, Takestan and Qazvin villages, 24, 16, 21, 56, 44 and 82 samples were investigated respectively.

The standard Servequal questionnaire was used to collect data. This questionnaire included two sections: background variables (education, age, place of receiving services, waiting time to receive services) and main questions on five dimensions of service quality (physical, reliability, responsiveness, assurance, and empathy) in perceptions and expectations parts. The questionnaire consisted of 22 questions. There were four questions each in the physical, reliability, and responsiveness fields and five questions in the assurance and empathy fields. Quality of services was calculated using a 5-point Likert scale, ranging from strongly agree to strongly disagree. To determine the quality gap, scoring of customers to present situation (perceptions) of quality of health services provided was compared with their scoring to desirable status (expectations) of quality of health services. If the resulting score were positive, it showed that services provided were higher than peoples' expectations and in the case of being negative, it stated that health services provided did not meet peoples' expectations, and a quality gap exists. Zero score shows the lack of a quality gap, which demonstrates that health services provided are in line with peoples' expectations. The place of receiving services was shown as an option in the questionnaire, with six answers, including hospital, clinic, medical center, doctors' office, health providers of urban area, and health providers of rural area. In addition, the last place of referring to receive services was regarded as the option to be selected. The validity of the questionnaire was approved by Zarei and Nekoei-Moghadam in Iran (23, 24). Research tools were selected based on Cronbach's alpha score of 0.91 and test-retest method of 0.83 for reliability. Data were collected by going to peoples' houses in cities and villages and asking questions about the quality of units and health service providers in Qazvin Province. First, an explanatory workshop was held for interviewers, and its goal was to have experienced local forces of each area collect the data.

The Ethics Committee of Qazvin University of Medical Sciences approved this study with ID number of 8346. The importance of the study was explained to the participants by interviewers, and the participants were assured that the information they provided would be confidential. A consent form for participating in the study was completed by each subject. The data were analyzed using SPSS 21.00 and the ANOVA test.

3. Results

The mean age of the subjects was 32 ± 9.9 , and the average waiting time to receive services was 73 ± 47 minutes. The frequency distribution of the education of the people in the study was 6% illiterate, 34% junior diploma 30% high school diploma, 10% associate diploma, 18% Bachelor's degree, and 2% Master's degree and higher. The lowest perceptions of the quality of health service providers were related to hospitals, with an average of 3.26, followed by doctors' offices at 3.51. In addition, the highest perceptions of the quality of health service providing centers was related to health providers of urban area at 3.79 and medical centers at 3.70 (Table 1). The least expectations of people concerning the quality of service providers were related to clinics at 4.49, and their highest expectations were related to hospitals at 4.68. Respectively, the highest quality gap in health services was related to hospitals and doctors' offices with the values of -1.42 and -1.01, respectively, and the lowest gap was related to health providers of urban area and health providers of rural area with the values of -0.80 and -0.88, respectively (Table 1). The highest perception of 3.68 was related to junior diploma and the highest expectation of 4.69 was related to Master's degree. Furthermore, the lowest perception and expectations values of 3.30 and 4.48 were related to those who held Associate's diplomas (Table 2). There was a significant relationship between perceptions ($p = 0.000$), expectations ($p = 0.01$), and quality gap of health services ($p = 0.000$) with the health service provider. There was a significant relationship between people's perceptions and education ($p = 0.000$). In addition, there was a significant relationship between peoples' expectations and education. However, no significant relationship was observed between quality gap of health services and education ($p = 0.2$) (Table 3).

Table 1. Mean and standard deviation of perceptions and expectations of Qazvin residents of the quality of health services provided in health service providing centers in 2014 (n=1002)

Variables	Location of services received	n	Mean	SD
People's perceptions of service quality	Hospital	228	3.268	0.808
	Clinic	149	3.501	0.574
	Medical center	259	3.706	0.641
	Doctors' office	211	3.519	0.714
	health providers of urban area	103	3.796	0.589
	health providers of rural area	50	3.682	0.665
People's expectations of service quality	Hospital	228	4.689	0.402
	Clinic	149	4.497	0.618
	Medical center	259	4.590	0.492
	Doctors' office	211	4.535	0.533
	health providers of urban area	103	4.601	0.535
	health providers of rural area	50	4.565	0.633
Service quality gap	Hospital	228	-1.420	0.828
	Clinic	149	-0.991	0.735
	Medical center	259	-0.883	0.674
	Doctors' office	211	-1.016	0.751
	health providers of urban area	103	-0.804	0.624
	health providers of rural area	50	-0.882	0.831

Table 2: Mean and standard deviation of perceptions and expectations of Qazvin residents of the quality of health services provided in health service providing centers in different educational levels in this Province in 2014 (n = 1002)

Variables	Level of education	n	Mean	SD
public's perceptions of service quality	Illiterate	63	3.581	0.707
	Junior diploma	344	3.686	0.673
	High school diploma	297	3.475	0.669
	Associate degree	104	3.309	0.739
	Bachelor's degree	178	3.509	0.749
	Master's degree	16	3.539	0.845
Public's expectations of service quality	Illiterate	63	4.596	0.550
	Junior diploma	344	4.671	0.449
	High school diploma	297	4.565	0.532
	Associate degree	104	4.481	0.552
	Bachelor's degree	178	4.509	0.570
	Master's degree	16	4.696	0.425

Table 3: Relationship between people's perceptions and expectations of residents of Qazvin Province with the place of receiving health services and different educational levels in this Province in 2014 (n = 1002)

Variables		F statistics (ANOVA test)	p-value
Service quality and place of receiving services	People's perceptions	11.49	0.000
	People's expectations	2.16	0.01
	Service gap	14.33	0.000
Service quality and level of education	People's perceptions	5.91	0.000
	People's expectations	3.78	0.002
	Service gap	1.39	0.223

4. Discussion

Study of quality gap in all health service providers and comparing them with each other was one of the main issues in this study that has never been found before in other studies and was considered as its strong point. In current study, the highest quality gap of -1.42 in health services was related to hospitals and the lowest quality gap of -0.80

was related to health service providers of health providers of urban area. In a study conducted by Jenaabadi et al. in hospitals of Zahedan, there was a significant difference in all dimensions of quality between average of perceptions and expectations score. Quality gaps in tangibles, reliability, responsiveness, assurance, and empathy were -0.690, -0.685, 0.795, -0.755, and -0.840, respectively (31). In a study conducted of the hospitals of Arak, the quality gap of health services was reported to be -1.20 (32), and that complied with the findings of this study. It appears that Arak and Qazvin are very similar in terms of results because both are industrial cities.

In a study by Mohammadi on a medical center in Zanjan, negative gaps were observed in all five quality aspects. In Mohammadi's study, the averages of people's perceptions and expectations for the quality of health services were 3.04 and 4.26, respectively, and the quality gap was -1.22 (33), which complied with the current study in terms of quality gap. The results of a study conducted in Khorramabad showed that the quality gap of health services was -0.69 (34), which complied with our findings. The results of a study conducted by Ghobadi on doctors' offices of Ardebil revealed a quality gap of -0.65 in health services (35). Quality gap in doctors' offices was higher in Qazvin Province than in Ardebil, which requires reforms and fundamental policy making to reduce this gap. The results of a study conducted by Noronesa in Fasa revealed that doctors' offices need fundamental reforms in terms of meeting patients' expectations to promote quality of health services (36). In studies conducted by Sahebzadeh in Isfahan (37) and Azizi in Darab (38), customers' satisfaction with health service providers was not favorable, and that requires policies and plans to promote present situation and move toward favorable status. In studies by Butt in Malaysia (39), Rohini in India (40), Bakar in Turkey (41), and Arasli in Cyprus (42), there was a negative gap between patients' perceptions and expectations in all dimensions of quality of services. In spite of different values of this gap in various studies, it is clear that there is a gap in providing health services all around the world, and fundamental interventions are required to reduce this gap in services. In a study by Gorji (43) and Mohammadnia (44), negative gaps were observed in quality of health services between customers' perceptions and expectations. Contrary to all studies conducted in Iran, the research society of which was limited, in this study people were investigated in person in all areas of Qazvin Province by referring to people's houses, which is considered as one of the strong points of this study. In addition, in this study all health service providers, including hospitals, clinics, medical centers, health providers of urban area, doctors' offices, and health providers of rural area were compared that have never considered before in other studies. Studies by Taner (45), Schröder (46), and Suki (47) estimated people's perceptions to be lower than their expectations in terms of quality of health services, which demonstrated a quality gap and lack of meeting expectations of people who were referred to receive health services. In a study conducted in Peru, a relationship was found between people's satisfaction with health services and their education and type of services received (48). In a study conducted in Indonesia, the results showed that trained staff and experienced physicians promote the quality of services and increase satisfaction (49). In a study conducted by Al-Borie in Saudi Arabia, a significant relationship was found between education and perceptions and satisfaction from the quality of health services (50) that complied with results of current study.

Of limitations of this study were scattered counties in Qazvin province. Therefore, it was attempted to use local experts to collect data and investigate all regions as far as possible.

5. Conclusions

The results of this study showed that there was a service quality gap in all health service providers; however, it was higher in hospitals and doctors' offices. Since providing human and material resources of health system always involves problems, the practical importance of these findings lies in the fact that weak points could be emphasized more to reduce quality gap in services of hospitals and doctors' offices. To reduce quality gap in services, it is suggested that authorities consider customers' complaints and deal with them, make essential services available 24 hours a day, promote motivation of staff and physicians to pay more attention to customers, and the staff and physicians should consider the requests and reasonable needs of customers. Conducting a complementary study on quality gap of services between state and private sectors in Qazvin Province with descriptive methodology could be an appropriate path for future studies in this field.

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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