A STUDY OF SERVICE QUALITY GAP FROM THE PERSPECTIVE OF CORONAVIRUS PATIENTS ADMITTED TO FARHIKHTEGAN HOSPITAL IN TEHRAN, 2020

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Abstract: Introduction: Assessing the quality of hospital services from the patients' viewpoint is the most important tool for managers and decision-makers in the health sector to improve the quality of services and do long-term planning. Thus, the present study was conducted to assess the gap in the quality of hospital services from the perspective of the patients with coronavirus admitted to Farhikhtegan Hospital.

Methods: The present descriptive-analytical study was carried out on 100 patients admitted to the corona ward of Farhikhtegan Hospital through sampling. The required information was gathered using a questionnaire comprised two parts, including demographic characteristics and service quality assessment questions (SERVQUAL).

Results: The highest and lowest mean quality of services in the perception section were obtained forresponsivenessand tangibility, with the scores of 19.2 and 14.5, respectively. Interms of expectations, the highest and lowest mean scores of the quality of services were those of reliabilityand tangibility dimensions (20.2 and 16.8, respectively). The service quality gap was positive for responsiveness and empathy dimensions, and negative for the others.

Discussion and Conclusion: In order to improve the quality of services and reduce the gap in services, continuous planning and evaluation of service quality seems necessary.

Keywords: Service quality, expectations, SERVQUAL

INTRODUCTION

Evaluating and improving the quality of health care services is a high priority for both policymakers and technical agencies in developing countries [1]. One of the ways to improve the quality to achieve the goals of the organization is to receive feedback from service recipients [2]. Patient satisfaction is an important part of health care quality outcomes. The quality of health care services is often measured by considering the structure, process, and results [3]. Knowing the patients' opinions about the health care system helps service providers to make better decisions in the future to improve the quality of services [4]. Given that hospitals are patient-centered and one of the main goals of any hospital is to satisfy service recipients, patient satisfaction with the services somehow indicates the proper functioning of medical centers [5]. The most important factor in improving the quality of patient care is measuring the quality of hospital services. In a competitive treatment environment, quality measurement seems essential [6]. The quality of medical services is the result of comparing patients' expectations of performance and their understanding of how the services are provided [7]. A valid tool for measuring the quality of healthcare services is the SERVQUAL method, designed by Parasuraman et al. in

1985 [8]. This quality measurement tool can measure patients' perception in five dimensions, namely the physical or tangible dimension, including the facilities and equipment of the work environment; responsiveness that means the willingness of service providers to cooperate with patients; the reliability and trust building dimension;assurance and giving confidence to patients; and the empathy dimension [9].

Covid-19 was first reported in December 2019 in Wuhan, China, with lung infection symptoms, and spread rapidly worldwide [10]. In January 2020, the World Health Organization recognized the disease as a health emergency and a pandemic [11]. According to WHO statistics, 72543820 people have been infected with Covid-19 so far, of whom 1654153 died [12]. The first cases of the disease in Iran were found in February 2020, when 43 cases were infected and 8 deaths were registered, but the number has been increasing and so far, about 1,140,000 cases and about 53,000 deaths due to coronavirus have been registered in Iran [13].

Considering that the importance of hospitals as the main service providingcenters becomes evident during the outbreak of diseases such as Covid-19, access to patient

satisfaction with the quality of services is very important, and understanding patients' demands is a complicated task, which is obtained only by measuring patient satisfaction [14].

METHODS

The present study is a descriptive cross-sectional research carried out in 2020 in Farhikhtegan Hospital, Tehran. The sample size was 120 based on the volume formula, and the subjects were randomly selected from among the Covid-19 patients admitted to Farhikhtegan Hospital. The data collection tool was a standard translated SERVQUAL questionnaire, including patient demographics and the service quality assessment section with 5 questions on reliability, 4 questions on the physical dimension, 4 questions on assurance, 4 questions on responsiveness, and 5 questions on empathy. The questions were based on the Likert scale (strongly agree, agree, no comment, disagree, strongly disagree) with a score range of 5 (strongly agree) to 1 (strongly disagree). The validity and reliability of the questionnaire had been confirmed by many researchers in Iran, including Abolghasem Gorji et al. who conducted a research in Imam Khomeini Hospital in Tehran [15]. In order to comply with ethical considerations, the necessary permission was obtained from the hospital officials to conduct the study. The research objective was explained to the patients and they were assured that their information would remain confidential. To collect the information, a questionnaire was given to each patient to fill in, and if a patient was not literate enough to fill it in, the questions were asked orally and the questionnaire was completed by the researcher. The collected data were entered into the SPSS software and analyzed using descriptive statistics. The independent t-test was also used to examine the correlation between demographic characteristics and the quality dimensions.

RESULTS

A total of 100 people participated in this study, of whom 60 were male and 40 were female. The mean age of the subjects was about 47 years. Of all the participants in this study, 70% had a high school diploma or a lower degree. In addition, 74% had basic insurance and 26% had supplementary insurance. The mean hospital stay was 4.5 days, with a minimum length of 2 days and a maximum of 13 days. There was a significant relationship between demographic variables and SERVQUAL dimensions using the independent t-test. The independent t-test also showed a significant relationship between empathy ($p = 0.05$) and the number of referrals (Table 1). The highest and the lowest mean scores in the perceptions section were those of responsiveness (19.2) and tangibility (14.5) dimensions, respectively. In the expectations section, reliability and tangibility obtained the highest (20.2) and the lowest (16.8) mean scores, respectively (Table 2).

Table 1. Determining the relationship between patients' demographic variables and SERVQUAL dimensions

Variables	Test	tangibility	Reliability	Responsiveness	Assurance	empathy	total
Gender	Independent t test	0/114	0/129	0/348	0/699	0/248	0/341
Having basic insurance	Independent t test	0/690	0/168	0/480	0/325	0/720	0/791
Having supplementary insurance	Independent t test	0/590	0/730	0/298	0/740	0/120	0/890
Age	Pearson correlation test	0/320	0/480	0/360	0/810	0/080	0/921
education	Independent t test	0/740	0/780	0/490	0/901	0/650	0/342
Number of referrals	Independent t test	0/810	0/530	0/380	0/720	0/05	0/351
marital status	Independent t test	0/062	0/820	0/325	0/841	0/782	0/342

Table 2. Mean scores of perceptions, expectations, and service quality gap from patients' perspectives

Variable	Perceptions		expectations		Gap
	mean	Standard Deviation	mean	Standard Deviation	
Tangibility	14/5	3/8	16/8	1/6	-2/3
Reliability	17/4	3/6	20/2	2/1	-2/8
responsiveness	19/2	4/2	18/5	2/4	+0/7
Assurance	14/6	3/3	17/3	1/8	-2/7
Empathy	18/1	3/1	17/5	3/1	+0/6

After calculating the difference between perceptions and expectations, the service gap was found to be negative in terms of tangibility, reliability, and assurance of the services, and positive in terms of responsiveness and empathy.

DISCUSSION AND CONCLUSION

The most effective way to improve the quality of services is to identify the strengths and weaknesses of the service providing system. The main method for measuring the quality of hospital services is to measure it from the patients' point of view, because the most important goal of any hospital is to provide high quality services to the patients. Therefore, the present study aimed to find out the gap in service quality, promote the strengths, and eliminate the shortcomings in service quality in order to obtain patient satisfaction.

In this study, the service quality gap was positive in responsiveness and empathy dimensions, and negative in the others. A positive gap meant that the patients thought the quality of the services provided to them was higher than their expectations. The results of this research are inconsistent with other studies on the quality gap. Due to the lack of facilities and the hard conditions of Covid-19 patients and the patients' awareness of such problems, the type of services provided by this center led to such results.

In their study, Rigara Martinez et al. showed that the difference between expectations and perceptions of the patients admitted to the intensive care unit was positive [16]. Considering that in the present study, the difference was positive in both responsiveness and empathy dimensions, it is consistent with Martinez's research. A study conducted by Gorji et al. at Imam Khomeini Hospital showed that the smallest gap was related to assurance and the largest difference was related to the access dimension [15]. A study by Booth et al. in Malaysia found that there was a negative gap in all dimensions. Another study conducted by Zarei et al. suggested that the largest and the smallest quality gaps were related to tangibility and empathy, respectively [17]. This is consistent with the results of the present study.

The results of this study indicated that the hospital appeared to perform beyond the expectations of the patients in terms of both responsiveness and empathy. One of the main reasons why these dimensions were positive could probably be the high understanding of the patients about the Covid-19 status and the lack of facilities in the country. Therefore, the patients in coronavirus wards had lowered their expectations. Despite the positive quality gap in responsiveness and empathy dimensions, the gap was negative in other areas. Thus, hospital officials must plan to reduce the gap and improve the quality of services and attract patient satisfaction.

Such studies are conducted so that their results could be used to solve the problems of care departments and further improve the quality of patient care. The results of these studies make decision makers in the care sector have a more comprehensive view of the weaknesses of the sector and take actions to reduce the quality gap and improve service quality [18].

SUGGESTIONS

It is suggested to frequently conduct similar studies with larger sample sizes and use different quality assessment tools to get plenty of feedback from service recipients in different hospitals.

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CONFLICT OF INTEREST

The authors declared no conflict of interest.

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