

## Assessment of Customer Satisfaction with Quality of Services Provided in Maternity Ward of Shahid Sayyad Shirazi Hospital in Gorgan, Iran

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### ABSTRACT

**Background and objectives:** Identifying gaps in the quality of services provided by medical centers can be useful for developing healthcare quality improvement plans. The purpose of this study was to assess satisfaction of clients with the quality of services in a maternity ward using the SERVQUAL model.

**Methods:** This descriptive-analytical study was conducted on 175 women hospitalized in the maternity ward of Shahid Sayyad Shirazi Hospital in Gorgan, Iran. Data were collected using a demographic information questionnaire and a standard SERVQUAL questionnaire comprising 22 questions on service quality in five dimensions: tangibles, reliability, responsiveness, assurance, and empathy. The questionnaire was completed at the time of admission and after receiving the services to measure expectations and perceptions, respectively. The data were analyzed with SPSS (version 16) using paired sample t-test.

**Results:** Most subjects were homemaker (92.35%) and pregnant for the first time (44.12%), and had high school diploma (43.53%). The level of expectations and perceptions in all dimensions was significantly higher than average ( $P=0.00009$ ). There were significant negative gaps between the subjects' expectations and perceptions in all dimensions of service quality ( $P=0.00009$ ).

**Conclusion:** The negative gap in the dimensions of service quality indicates the high-level expectations of clients in the maternity ward. Based on the clients' perceptions, their satisfaction was below their expectations after receiving the services, which created a negative gap. The high expectations of clients can be attributed to the raise in awareness of the community towards provision of health services and improvement of the healthcare system. Thus, the quality of the services provided and equipment used in hospitals should be high enough to meet the expectations of clients to a reasonable degree.

**KEYWORDS:** SERVQUAL model, services, customer satisfaction, teaching hospitals, Gorgan

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## INTRODUCTION

Most organizations consider customer satisfaction as a key criterion for the survival and continuity of their activities. They seek to improve customer satisfaction by assessing their service quality (1). Quality of service is essential for the growth, success, and sustainability of an organization, which is put on the management system agenda as a strategic, effective, and inclusive issue. Analyzing the gap between expectations and perceptions of individuals from the received services provides a framework for developing appropriate programs to improve the quality of services (2). Similar to other organizations, the quality of services is an important issue in the health sector (3). Service providers generally manage their activities based on the interests and needs of clients, and the clients' perception of service quality is key for their future planning (4). Most medical and health organizations consider the quality of their services from the patients' point of view. Hence, promoting quality of care is a reasonable approach to attract clients' satisfaction (5). The contemporary concept of service quality refers to the comparison of expectations and perceived performance concerning a particular service, and therefore may be considered as the difference between expectations and perceived performance (6). Quality assessment of health services is carried out using various methods and tools, one of which is the SERVQUAL model. In the early 1930s, Parasuraman et al. introduced this model for assessment of customer satisfaction with quality of services as well as the gap between customer expectations and perceptions of the services. In fact, the model provides a framework that covers all aspects of service quality (7-9). The model is based on five dimensions: tangibles, reliability, responsiveness, assurance, and empathy (10). These dimensions can be adapted to different service environments. Moreover, the tool has high reliability and validity for comparison of customer perception and expectation,

allowing analysis based on demographic, psychological, and other characteristics (11, 12). A number of studies have demonstrated the validity and reliability of the SERVQUAL model for assessing the quality of medical care services (13-17).

Patients' viewpoints and feelings toward hospital care affect the overall success of an organization. Therefore, assessing patient satisfaction is an essential part of organizational effectiveness. Determining the pattern of patient satisfaction in society can promote public health. Delivery and maternity ward services are one of the most important health care services in all communities. It is crucial to assess satisfaction or perception of the services provided to mothers in maternity ward of hospitals, which can be helpful for developing healthcare quality improvement plans. Therefore, this study aimed at using the SERVQUAL model to assess the satisfaction of clients in maternity ward of Shahid Sayyad Shirazi Hospital in Gorgan, Iran.

## MATERIAL AND METHODS

This descriptive-analytical study was performed on 170 patients referred to the Shahid Sayyad Shirazi Hospital in Gorgan, Iran. Study population comprised all women referred to the maternity ward of the hospital in 2016. Inclusion criteria included having the ability to read and write. Exclusion criteria included unwillingness to continue cooperating in the study and incomplete completion of the questionnaire. The subjects were selected via availability sampling. Data were collected using a demographic questionnaire and a standard SERVQUAL questionnaire. The SERVQUAL questionnaire included 22 questions in the following five dimensions: tangibles (four questions on physical appearance of the facility, equipment, staff, and communications equipment), responsiveness (four questions on willingness of the staff to help customers and provide immediate services), reliability (four questions on the ability to deliver promised services in a

genuine and reliable manner), assurance (five questions on knowledge and competency of the staff and their ability to inspire trust and confidence), and empathy (five questions on attention to an individual customer). The questionnaire was completed at the time of admission to assess expectations and after receiving the services to assess perceptions. The quality of services was scored based on a 5-point Liker scale. A panel of experts and university professors assessed content validity, and internal consistency was assessed by calculating Cronbach's alpha. The Cronbach's alpha coefficient was 0.82, 0.86, 0.89, 0.83, 0.86 and 0.87 in the case of quality, tangibles, reliability, responsiveness, assurance and empathy, respectively. A score of 3 was considered as average. The data were analyzed with SPSS (version 16) using paired sample t-test.

**RESULTS**

Most subjects were homemaker (92.35%) and pregnant for the first time (44.12%), and had high school diploma (43.53%). In addition, 44.12% of the subjects had one child and 90.59% were covered by health insurance. To assess expectations and perceptions of the subjects, the mean score of each dimension was compared with the average score (3). The level of expectations and perceptions of the subjects in all five dimensions was significantly higher than average (P-value=0.00009). Moreover, comparison of expectations with perceptions after receiving the services showed that the perceptions of mothers in the maternity ward were significantly lower than the initial expectations (Table 1).

**Table 1. Comparison of the perceptions and expectations of the subjects based on the SERVQUAL questionnaire**

Dimension		Mean score (standard deviation)	P-value (T-test compared with score of 3)	P-value (paired T-test)	
				T	sig
Tangibles	Expectation	4.02(0.69)	0.00009	-3.0	0.0009
	Perception	3.84 (0.65)	0.00009		
Reliability	Expectation	4.15 (0.84)	0.00009	-4.19	0.0009
	Perception	3.81 (0.85)	0.00009		
Responsiveness	Expectation	3.80 (0.83)	0.00009	-4.37	0.0009
	Perception	3.44 (0.82)	0.00009		
Assurance	Expectation	4.17 (0.79)	0.00009	-5.35	0.0009
	Perception	3.77 (0.84)	0.00009		
Empathy	Expectation	3.88 (0.89)	0.00009	-2.90	0.0009
	Perception	3.63 (0.93)	0.00009		
Satisfaction	Expectation	4.01 (0.72)	0.00009	-4.48	0.0009
	Perception	3.71 (0.73)	0.00009		

The importance of influential factors in satisfaction of the expected and received services (using the Friedman test) showed that reliability and assurance are the most

important quality dimensions in terms of expectations and perceptions, respectively (Table 2).

**Table 2. Ranking of the factors affecting the expectations and perceptions of services quality, based on the Friedman test**

Priority	Expectations		Perceptions	
	Variable	Priority mean score	Variable	Priority mean score
1	Reliability	3.05	Assurance	4.29
2	Empathy	3.03	Empathy	3.52
3	Responsiveness	2.99	Reliability	3.49
4	Assurance	2.99	Responsiveness	3.44
5	Tangibles	2.95	Tangibles	2.84

## DISCUSSION

Assessing patient satisfaction is an essential aspect of organizational effectiveness. The purpose of this study was to assess the satisfaction of patients admitted to the maternity ward of a hospital in Gorgan using the SERVQUAL model. The results of this study demonstrated a negative gap in all five dimensions of service quality, so that in all dimensions, the mean score of expectations was higher than that of perceptions. This indicates that the expectations of the patients have not been met. In a similar study on the quality of emergency medical services in Khorramabad (Iran), there was a significant difference between expectation and perception of service quality (18). In another study in Iran, the SERVQUAL model was used to assess quality of services provided to 260 patients admitted to the hospitals affiliated to the Arak University of Medical Sciences. In the mentioned study, there was a significant difference between the mean level of expectations and perceptions of patients about the quality of services. In other words, the hospitals were not been able to meet the patients' expectations in any dimensions of service quality (19).

In line with our findings, some studies in Iran and other countries also showed a gap between expectations and perceptions (20-22). However, in a study on 974 outpatients admitted to a field hospital in Zabol (Iran), the patients' expectations were higher than their perception in terms of assurance and responsiveness but lower in terms of other dimensions (such as accessibility). This

positive gap in terms of some dimensions could be due to socio-economic reasons and the free provision of services to patients referring to the field hospitals (23).

In a study by Dotchin and Oakland on health centers, based on the perception of subjects, there was no difference in the quality of services in terms of tangibles, reliability, and responsiveness. In addition, the quality of services was lowest in terms of assurance and highest in terms of empathy, which is in line with our findings. The difference between the results of our study and the mentioned study could be due to the difference in the number of clients and the nature of services provided in health centers and hospitals (24).

## CONCLUSION

The negative gap in the dimensions of service quality indicates the high-level expectations of clients in the maternity ward. Based on the clients' perceptions, their satisfaction was below their expectations after receiving the services, which created a negative gap. The high expectations of clients can be attributed to the raise in awareness of the community towards provision of health services and improvement of the healthcare system. Thus, the quality of the services provided and equipment used in hospitals should be high enough to meet the expectations of clients to a reasonable degree.

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