



## Quality of Services in Substance Abuse Treatment Centers in Shahroud, Iran

Raheleh Rafeiee<sup>1</sup>, Mohammad Reza Naqavi<sup>2</sup>, Leila Rezaiean<sup>1</sup>, Marzieh Moammeri<sup>3</sup>, Mohammad Hassan Emamian<sup>4\*</sup>

<sup>1</sup> Student Research Committee, School of Medicine, Shahroud University of Medical Sciences, Shahroud, Iran.

<sup>2</sup> Research Center for Health Services Management, Kerman University of Medical Sciences, Kerman, Iran.

<sup>3</sup> Dept. of Statistics, School of Sciences, Golestan University, Gorgan, Iran.

<sup>4</sup> Center for Health Related Social and Behavioral Sciences Research, Shahroud University of Medical Sciences, Shahroud, Iran.

Received: 4 April 2015

Accepted: 6 May 2015

### Abstract

**Background:** Standard cares in Substance Abuse Treatment Centers (SATC) have an important role in treatment success achievement. Patients' views will provide valuable information to improve the performance of these centers. The purpose of current study was to determine patients' comments on quality of addiction treatment at SATCs.

**Methods:** This cross-sectional study was conducted in 2013. The study population consisted of addicted patients receiving methadone maintenance treatment (MMT) in SATCs of Shahroud. Using stratified sampling method, a total of 250 individuals were randomly selected from the SATCs. The SERVQUAL service quality model was used to measure service quality in five dimensions of tangibles, reliability, responsiveness, assurance, and empathy. Using paired samples t-test the gap between patients' expectations of a service offering and the patients' perceptions of the service received was analyzed by 5-dimensional structure of service quality.

**Results:** Overall, the score of patients' expectations of service quality ( $4.45 \pm 0.67$ ) was higher than that of their perceptions ( $4.24 \pm 0.076$ ). For the dimensions of tangibles, reliability, responsiveness, assurance, and empathy, the mean difference between patients' perceptions and expectations of the quality of addiction treatment services was  $-0.34$ ,  $-0.17$ ,  $-0.19$ ,  $-0.14$ , and  $-0.24$  respectively. All differences were statistically significant.

**Conclusion:** Although the mean score of patients' perceptions was good, the patients were not satisfied with the quality of addiction treatment services in the SATCs at Shahroud. The results showed that there is a gap between the current state and the desired state in terms of service quality in SATCs and this gap can be reduced by proper planning, management and training.

**Keywords:** Health services, Patient satisfaction, Perceptions, Methadone, Iran.

**Corresponding to:** MH. Emamian, Email: emamian@shmu.ac.ir

**Please cite this paper as:** Rafeiee R, Naqavi MR, Rezaiean L, Moammeri M, Emamian MH. Quality of services in substance abuse treatment centers in Shahroud, Iran. Int J Health Stud 2015;1(1):8-11.

## Introduction

Most organizations are interested in the assessment of their service quality strategies to improve customer satisfaction and consequently their own survival. That is why in such assessments, customers are considered as a key indicator.<sup>1</sup> In today's competitive environment, a service organization must put itself in customers' shoes and make policies based on their view. Quality means meeting customer needs and demands, which is defined by customers themselves. Any decrease in customer satisfaction due to poor service quality would raise concern. Service quality problems are mostly observed in organizations with lack of concentration on recognizing and meeting customer needs

and demands. Lack of direct contact with customers disables decision-makers and planners to appropriately prioritize issues, and service performance cannot meet customer expectations. Consequently, it might lead to disagreement among customers concerning the quality of services.<sup>2</sup>

To assess quality, traditional approaches defined the characteristics of goods or services as the quality criteria; however, new approaches and methods define quality as customer demands. Parasuraman defines service quality as what customers have perceived.<sup>3</sup> In another study, the pattern offered for the improvement of service quality is obtaining feedback from customers as an important step.<sup>4</sup> The obtained customer feedback help prioritize the areas needing continuous improvements according to time and resource constraints. Moreover, since there is often no proportionality between managers' recognition of service recipients' perceptions and their real perceptions-which damages the service quality-quality assessment by a service recipient becomes necessary.<sup>4</sup> Satisfaction of the patients under substance abuse treatment is increasingly important in terms of clinical and research significance.<sup>5</sup> As the World Health Organization recommends, using patient satisfaction survey in drug programs will lead the efforts towards recovery.<sup>5</sup> Research findings show that there is a positive correlation between patient satisfaction, treatment results, and maintaining recovery.<sup>5</sup>

Today, given the growing influence of the new approach towards addiction as a disease and addicts as patients, establishing and equipping centers that can provide the addict with specialized addiction treatment services seems necessary. Outpatient addiction treatment units were established for the volunteer addicts in Iran in 1996, aiming to provide outpatient treatment services. One of the major problems addiction treatment centers faced with is lack of follow-up by patients; therefore, identification of the factors involved is quite effective in patient satisfaction for follow-up processes.<sup>6</sup>

Although perceptions of service quality are multi-dimensional; yet, there is no general consensus about the nature of these dimensions, which makes it extremely difficult and complicated to assess.<sup>7</sup> However, the expansion of the concept of customer satisfaction in the area of health care dates back to the beginning of the scientific movement in 1980.<sup>7</sup> Sasser et al. identify three dimensions of service quality as material, facilities and personnel. Parasuraman identifies five dimensions of service quality including: 1) ability to respond quickly to customer issues and complaints and speed of offering services; 2) clean and orderly appearance of tangible

components such as facilities and personnel's uniform; 3) ability to provide accurate, timely and reliable services; 4) establishment of trust and confidence in customers and having sufficient professional competence and skill; 5) behaving considerably and attentively human dignity.<sup>8</sup>

Previous studies show that patients with higher levels of satisfaction have less risk of abandoning treatment.<sup>5,9,10</sup> The present study aims to investigate the patient expectations and perceptions of the quality of Substance Abuse Treatment Centers (SATC) using the SERVQUAL model in five subscales, including tangibles, responsiveness, reliability, assurance, and empathy. The SERVQUAL model is a prominent approach for quantitatively assessing service quality. Using a research approach, the SERVQUAL model extracts the statistics of audience expectations and perceptions about each of the five dimensions and their characteristics, which results in the identification of the gap between expectations and perceptions.

## Materials and Methods

This cross-sectional study was conducted in 2013 in Shahroud, north eastern Iran. According to the inventors of the SERVQUAL questionnaire, a sample size of 200 is sufficient.<sup>3</sup> However, given the possible attrition, the sample size was considered as 250. The study population was randomly selected from among the patients under treatment in 27 SATS. The sample size was proportional to the number of patients covered by each center. The patients who were under treatment for at least 2 months were included in the study. After the aims of the study were explained to them, the patients were assured that their confidentiality would be maintained; hence, they were included in the study with their full consent. Then in the absence of the SATS personnel, they were given a questionnaire to complete. The illiterate patients were also trained and interviewed by an interviewer. Finally, 242 patients out of 250, who were invited to the study and were under treatment for at least 2 months, completed the questionnaire (98% response rate).

The SERVQUAL instrument was developed by Parasuraman et al was used for data collection. In Iran, the validity and reliability of this instrument has been approved.<sup>11,12</sup>

A 22-item questionnaire is used to assess service quality. The items have been designed in 5 service quality dimensions as follows: (i) The tangibles dimension, including 4 questions from 1 to 4; (ii) The reliability dimension, including 5 questions from 5 to 9; (iii) The responsiveness dimension, including 4 questions from 10 to 13; (iv) The assurance dimension, including 4 questions from 14 to 17; and (v) The empathy dimension, including 5 questions from 18 to 22.

In this 22-item section, each question was answered twice, once in the first column according to patient expectations of service quality dimension based on a Likert-type scale with 5 choices (from very unimportant to very important), and once more in the second column according to patient perceptions of service quality dimension based on the same scale (from very low to very high). Some minor changes were made to the

questionnaire content so as to tailor the questions to treatment centers. The second part of the questionnaire included patient background information.

For each dimension, the scores of questions were added together and the total scores were divided by the number of questions. Therefore, the perception and expectation score in each service quality dimension would range from 1 to 5. About the overall service quality, the scores allocated to all questions were added together and the total scores were divided by 22 (number of questions in the questionnaire). Therefore, the overall service quality score would range from 1 to 5. The difference between the quality of services provided as well as the difference between perceived and expected service scores were obtained. The paired t-test was used to compare the perceptions and expectations of service recipients in each service dimension and in total.

## Results

From among 250 questionnaires, 242 were fully completed, among which 98.3% were male, 87.2% were native, 89.3% were self-employed, and 89.7% were being treated in the private sector. The mean age of the patients was  $39.62 \pm 10.80$ .

The most commonly abused drug was opioid (86.4%). Other demographic characteristics and background variables associated with drug abuse are presented in Tables 1.

Table 2 shows the average scores of perceptions of the status quo, expectations of a favorable condition, and quality difference in the five service quality dimensions. There is a negative quality difference in all the expressions associated with service quality. In the tangibles dimension, expression 1 (well-dressed personnel with neat appearances) had the lowest average of quality difference (-0.23), and expression 4 (how up-to-date the equipment and facilities of the center are) had the highest average (-0.4). In the reliability dimension, expression 9 (maintaining patients' records and documents accurately) had the lowest average of quality difference (-0.06) and it was statistically not significant. Expression 5 (getting things done according to the commitments) had the highest average. In the responsiveness dimension, expression 12 (personnel's constant enthusiasm to help clients) had the lowest average of quality difference (-0.14), and expression 11 (providing the services quickly) had the highest average (-0.24). In the service assurance dimension, expression 17 (personnel's courtesy and humility) had the lowest average of quality difference (-0.06) and it was not statistically significant.

In this dimension expression 14 and 16 (clients' trust in personnel and personnel's knowledge and skill in meeting clients' needs) had the highest average (-0.2). In the empathy dimension, expression 18 (special attention to each client) had the lowest average of quality difference (-0.12), and expression 19 (appropriate time of referring to the center) had the highest average (-0.34), which is shown in Table 2.

The results showed that there is a significant correlation between patients' overall satisfaction, length of stay for treatment, and frequency of addiction relapse ( $P < 0.001$ ).

However, no significant correlation was observed in patients' ethnicity, education level, and occupation.

**Table 1. Background variables and disease history of patients in substance abuse treatment centers**

Demographic Variables	No (%)
Gender	
Male	238 (98.3)
Female	4 (1.7)
Marital Status	
Married	210 (86.8)
Single	20 (8.3)
Divorced	8 (3.3)
Widow	4 (1.7)
Ethnicity	
Native	211 (87.2)
Expatriates	31 (12.8)
Education Status	
Illiterate	5 (2.1)
Elementary	38 (15.7)
Secondary	99 (40.9)
Diploma	79 (32.6)
Academic	21 (8.7)
Job	
Private	216 (89.3)
Governmental	22 (9.1)
Unemployed	4 (1.7)
Disease history	Mean $\pm$ SD
Age of onset of drug use (years)	7.44 $\pm$ 23.07
Duration of dependence (years)	8.82 $\pm$ 14.03
Duration of treatment (Months)	17.46 $\pm$ 21.04
Number of relapses	0.72 $\pm$ 1.29

## Discussion

Our findings showed that there is a negative gap in all quality dimensions of addiction treatment services and the expressions associated with them. This negative gap indicates that the provision of treatment services has not fulfilled the patients' expectations. Finding of this study is consistent with most quality assessment studies performed in Iran by SERVQUAL model.<sup>7,12,13</sup> Except in a few cases, no similar studies on the service quality of SATC have been conducted. According to the study of Parvizi et al. client satisfaction of addiction treatment in private sector has been significantly higher than that of governmental centers in Kurdistan, Iran.<sup>6</sup> Moreover, according to the study of Maleki et al. 63.5% of the prisoners in Kurdistan were satisfied with methadone consumption.<sup>14</sup> In a study in Australia, there was a high overall satisfaction with methadone treatment, which is inconsistent with the results of most of the quality dimensions in the present study.<sup>15</sup>

In a study conducted in 2012, patients with greater satisfaction enjoyed better mental health and social functioning<sup>16</sup> and the highest average of quality difference was observed in the empathy dimension. This finding is comparable with the findings of other studies on the quality of primary health care services from the perspective of the women referring to the health care centers in Kashan<sup>12</sup>, quality of health care centers in Zahedan<sup>6</sup>, and quality of hospital services from patients' perspectives.<sup>17</sup>

**Table 2. Average perceptions and expectations scores in the five service quality dimensions in substance abuse treatment centers**

Components of Each Dimension	Perception	Expectation	Mean	P.Value
	Mean $\pm$ SD	Mean $\pm$ SD	Differences	
TANGIBILITY	4.09 $\pm$ 0.81	4.43 $\pm$ 0.66	-0.34	<0.001
Well-dressed personnel with neat appearances	4.26 $\pm$ 0.69	4.49 $\pm$ 0.56	-0.23	<0.001
Cleanliness of healthcare environment	4.15 $\pm$ 0.78	4.51 $\pm$ 0.64	-0.36	<0.001
Adequate time for service	4.07 $\pm$ 0.90	4.44 $\pm$ 0.71	-0.37	<0.001
How up-to-date the equipment and facilities of the center are	3.89 $\pm$ 0.90	4.29 $\pm$ 0.76	-0.40	<0.001
RELIABILITY	4.34 $\pm$ 0.71	4.51 $\pm$ 0.63	-0.17	<0.001
Getting things done according to the commitments	4.26 $\pm$ 0.77	4.52 $\pm$ 0.61	-0.26	<0.001
Employee's competence and ability to solve patients' problems	4.32 $\pm$ 0.71	4.44 $\pm$ 0.68	-0.12	0.007
Fulfilling and doing the tasks and services at the first time meeting	4.31 $\pm$ 0.79	4.54 $\pm$ 0.62	-0.23	<0.001
Providing the services at the predetermined time	4.33 $\pm$ 0.72	4.51 $\pm$ 0.57	-0.18	<0.001
Maintaining patients' records and documents accurately	4.51 $\pm$ 0.56	4.57 $\pm$ 0.70	-0.06	0.206
RESPONSIVENESS	4.29 $\pm$ 0.76	4.48 $\pm$ 0.67	-0.19	<0.001
Informing the patients about the time of receiving the services	4.29 $\pm$ 0.74	4.46 $\pm$ 0.65	-0.17	<0.001
Providing the services quickly	4.32 $\pm$ 0.76	4.56 $\pm$ 0.64	-0.24	<0.001
Personnel's constant enthusiasm to help client	4.31 $\pm$ 0.74	4.45 $\pm$ 0.70	-0.14	0.015
Having access to the employee to respond to patients' need	4.23 $\pm$ 0.83	4.45 $\pm$ 0.70	-0.22	<0.001
ASSURANCE	4.40 $\pm$ 0.67	4.54 $\pm$ 0.64	-0.14	<0.001
Clients' trust in personnel	4.41 $\pm$ 0.67	4.61 $\pm$ 0.62	-0.20	<0.001
Feeling secure and relaxed when interacting with employees	4.36 $\pm$ 0.65	4.49 $\pm$ 0.63	-0.13	0.002
Personnel's knowledge and skill in meeting clients' needs	4.30 $\pm$ 0.73	4.50 $\pm$ 0.70	-0.20	<0.001
Personnel's courtesy and humility	4.57 $\pm$ 0.62	4.57 $\pm$ 0.62	-0.06	0.180
EMPATHY	4.09 $\pm$ 0.85	4.33 $\pm$ 0.75	-0.24	<0.001
Special attention to each client	4.23 $\pm$ 0.74	4.35 $\pm$ 0.72	-0.12	0.012
Appropriate time of referring to the center	4.15 $\pm$ 0.95	4.49 $\pm$ 0.70	-0.34	<0.001
Particular attention to the values and emotions of clients	4.09 $\pm$ 0.83	4.36 $\pm$ 0.72	-0.27	<0.001
Employees' real interest in students' success and achievements	3.90 $\pm$ 0.94	4.14 $\pm$ 0.88	-0.24	<0.001
Employees' understanding of the students' particular needs	4.10 $\pm$ 0.83	4.34 $\pm$ 0.76	-0.24	<0.001
ALL QUALITATIVE DIMENSIONS	4.24 $\pm$ 0.76	4.45 $\pm$ 0.67	-0.21	<0.001

Our findings showed that tangibles dimension had the biggest gap between patient perceptions and expectations of quality of health care services. In other words, tangibility was the most important dimension according to the clients. Therefore, physical aspects of each center such as facilities, lighting, good ventilation, cleanliness, and personnel's appearance need to be improved.

The gap in the empathy dimension also indicates poor communication between doctors, psychologists, nurses, and other personnel with patients, which means that this area also requires efforts to improve personnel's behavior and communication with patients. This finding is consistent with the study of Hwang et al, in which the empathy dimension had the lowest perception and expectation score. However, it is inconsistent with the study of Jabnon & Shaker, in which the empathy dimension had the highest score among other service quality dimensions.<sup>18</sup>

In the responsiveness dimension, the difference between perceptions and expectations score is also negative. Availability of medical personnel is one of the aspects of responsiveness. If health care workers do not keep patients waiting and give them their medications in a timely manner, patients will feel that medical staff is available. Time is also another important factor in the responsiveness dimension. Patients will be more satisfied with the centers that adjust therapy sessions based on patients' jobs, quickly admit patients, define time and duration of treatment for patients, and pay attention to patients' comments about the number of weekly sessions and time and duration of treatment.<sup>7</sup> However, considering the negative gap in other service quality dimensions, it can be said that personnel of SATCs show little enthusiasm for doing tasks and providing services. Consequently, services are provided with delay. The smallest negative gap in the assurance dimension indicates that in patients' view, physicians and medical staff were knowledgeable enough to help them. Compared to other dimensions, this dimension obtained higher scores, resulting in more satisfaction.

With the continuous improvement and assessment of service quality, making efforts to reduce service quality difference in planning must be taken into consideration. Given the quality difference observed in the expressions related to tangibles, empathy, responsiveness, reliability, and assurance dimensions, the following operational message will be useful for both managers and planners in SATCs. Centers should be provided with efficient and new equipment; services should be provided to clients as promised, within the shortest time interval; personnel and service providers should be available when clients need them; personnel and service providers should update their knowledge and skills; and personnel and service providers should understand clients' values and emotions to make patients more comfortable and satisfied.

For this purpose, holding customer service training courses for personnel, holding communication skill workshops for personnel, especially psychologists, and a time considered appropriate by clients for service provision can be used as helpful strategies. Another significant point is that a bad quality in one dimension has exacerbating effect on the other dimensions. Therefore, it is recommended that more serious

attention is given to the dimensions with higher average of quality difference, especially empathy and responsiveness.

## Acknowledgement

This study, No. 9213, was an approved proposal in Shahroud University of Medical Sciences and was conducted under the financial support of the Center for Health Related Social and Behavioral Sciences Research.

## Conflict of interest

The authors declare that they have no conflict of interest.

## References

1. Brady MK, Cronin Jr JJ. Some new thoughts on conceptualizing perceived service quality: a hierarchical approach. *The Journal of Marketing* 2001;65:34-49.
2. Ghobadian A, Speller S, Jones M. Service quality: concepts and models. *International Journal of Quality & Reliability Management* 1994;11:43-66.
3. Parasuraman A, Zeithaml VA, Berry LL. SERVQUAL: A multiple-item scale for measuring consumer perceptions of service quality. *Journal of Retailing* 1988;64:12-40.
4. Donnelly M, Wisniewski M, Dalrymple JF, Curry AC. Measuring service quality in local government: the SERVQUAL approach. *International Journal of Public Sector Management* 1995;8:15-20.
5. Kelly SM, O'Grady KE, Brown BS, Mitche IG, Schwartz RP. The role of patient satisfaction in methadone treatment. *Am J Drug Alcohol Abuse* 2010;36:150-4.
6. Parvizi D, Rahgozar M, Vameghi R, Forughan M. Influencing factors on client satisfaction in governmental addiction treatment centers and comparison with private centers in Kordestan province in year 1383 (2004). *Hakim Health Sys Res* 2008;11:48-53.
7. Jenaabadi H, Abili K, Nastiezia N, Yaghubi NM. The gap between perception and expectations of patients of quality of treatment centers in Zahedan by using the Servqual model. *Payesh* 2011;10:449-57.
8. Parasuraman A, Zeithaml VA, Berry LL. A conceptual model of service quality and its implications for future research. *The Journal of Marketing* 1985;49:41-50.
9. Pérez de los Cobos J, Fidel G, Escuder G, Haro G, Sánchez N, Pascual C, et al. A satisfaction survey of opioid-dependent clients at methadone treatment centres in Spain. *Drug and Alcohol Dependence* 2004;73:307-13.
10. Raj Kumar M, Rajwal M. Survey of client satisfaction with methadone maintenance programmes. *Psychiatric Bulletin* 2006;30:16-18.
11. Shahverdiani S. Developing a tool for assessment of quality of research services based on SURVQUAL mode. *Journal of Accounting and Management* 2010;3:87-95.
12. Kebriaei A, Akbari F, Hosseini M, Eftekhari Ardabili H, Pourreza A. Survey on quality gap in primary health care in Kashan health centers. *The Journal of Qazvin University of Medical Sciences* 2004;8:82-7.
13. Sharifrad G, Shamsi M, Pirzadeh A, Daneshvar Farzanegan P. Quality gap in primary health care services in Isfahan: women's perspective. *Journal of Health Systems Research* 2011;1:95-105.
14. Maleki K, Parvin P, Zarlanceri M. Assay of consumer satisfaction with methadone addiction and its consequences. *Eslah va Tarbiat* 2007;71:45-9.
15. Madden A, Lea T, Bath N, Winstock AR. Satisfaction guaranteed? What clients on methadone and buprenorphine think about their treatment. *Drug and Alcohol Review* 2008;27:671-8.
16. Trujols J, Garizo I, Sinol N, del Pozo J, Portella MJ, Perez de los Cobos J. Patient satisfaction with methadone maintenance treatment: The relevance of participation in treatment and social functioning. *Drug Alcohol Depend* 2012;123:41-7.
17. Arab M, Tabatabaei S, Rashidian A, Forushani AR, Zarei E. The effect of service quality on patient loyalty: a study of private hospitals in Tehran, Iran. *Iran J Public Health* 2012;41:71-7.
18. Kebriaei A, Roudbari M, Rakhshani nejad M, Mirlotfi P. Assessing quality of educational services at Zahedan university of medical sciences. *Zahedan Journal of Research in Medical Sciences* 2005;7:139-46.