Analysis of Gap in Service Quality in Drug Addiction Treatment Centers of Kerman, Iran, Using SERVQUAL Model

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Original Article

Abstract

Background: Treatment of drug addicts is one of the main strategies of drug control in Iran. Client satisfaction strongly influences the success of any treatment program. This study aimed to explore the difference between customer expectations and perceptions in drug addiction treatment centers of Kerman, Iran, using SERVQUAL model.

Methods: Using a cross-sectional design 260 clients referring to drug addiction treatment centers of Kerman, Iran, were enrolled in 2012. From among 84 clinics, 20 centers were selected randomly. Based on the number of clients registered in each center, a random sample proportional to the size was selected and 290 subjects were invited for interviews. A well validated 22-item questionnaire, which measured the 5 dimensions of service quality (reliability, assurance, tangibility, empathy, and responsiveness), was completed by participants. Each item measured 2 aspects of service quality; expectations and perceptions.

Findings: Mean ± SD (Standard deviation) age of the subjects was 37.7 ± 9.4. Most of them were male (87.7%). Less than half of them had an educational level lower than diploma. The total score of clients` expectations was higher than their perceptions (P < 0.001). Considering the 5 dimensions of the SERVQUAL model, only 1 dimension (i.e., assurance) showed no difference between perceptions and expectations of the participants (P = 0.134).

Conclusion: There was a gap between the clients' expectations and what they actually perceived in the clinics. Thus, more attention should be devoted to the clients` views regarding service quality in addiction treatment clinics.

Keywords: Service quality, Patient satisfaction, Substance dependency, Treatment

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Introduction

Most organizations, with the aim of improving customer satisfaction and for their survival and durability, are interested in strategic assessment of the quality of their services, and therefore the customers as key indicators are considered in this assessment.[1] In today's competitive environment, organizations should put themselves in their customers' shoes, and establish their policies based on their viewpoint. Quality is meeting the needs and demands of the customers and it is the customers who determine quality. Decrease in customer satisfaction due to poor quality of service is of concern. Problems with quality of service are mostly observed in organizations which do not focus on identifying and meeting the needs and expectations of their customers. The lack of a direct relationship with the customer causes the decision makers and planners to fail in correctly determining their priorities. This causes the service performance to fail in meeting customer expectations. Consequently, there is a disagreement among the customers in terms of quality service.[2]

Traditional approaches to assessing quality define the product characteristics or the service as a measure of quality. However, according to new approaches, customer demands define quality. In another study, the model that is provided to improve the quality of services, has presented getting feedback from the clients as one of the basic steps.[3] The feedback obtained from clients help to prioritize areas where there is a need for continuous improvement according to the limitations in time, resources, and other factors. Moreover, there is mostly a gap between the management's understanding of the recipients' perceptions of service and their actual perceptions. This issue will damage the quality of services. Therefore, quality assessment from the perspective of the service recipient becomes necessary.[3] The satisfaction of the treated substance abuse patient has increasing clinical and research importance.[4] The World Health Organization (WHO) recommends the use of patient satisfaction programs in drug programs in order to direct efforts towards improvements.[4] Research findings show that there is a positive relationship between patient satisfaction, treatment results, and sustaining health after recovery.[4]

Today, with the growing influence of the new approach towards addiction as a disease and the addict as a patient in the society, establishing and equipping centers that can provide addicts with specialized addiction treatment services will be necessary. Since the second half of 1996, outpatient drug treatment units, with the aim to provide outpatient services, were established through the State Welfare Organization of Iran in the main cities of the provinces.

Since one of the main difficulties in addiction treatment centers is the failure to follow up with patients, identifying factors impacting the satisfaction of addicts from follow-up of the treatment process is effective.[5] It is true that the perceptions about the quality of service have multiple dimensions; however, there is no general agreement about the nature of these dimensions, and therefore, they are very difficult to assess.[6] Nevertheless, expanding the concept of customer satisfaction in the areas of health care, as in other areas of service, especially in developed countries, goes back to 1980, the beginning of the movement.[6] Parasuraman et al. define the quality of service as that which customers understand.[7] Parasuraman et al. states that the 5 dimensions of quality are as follows:

1. The ability to quickly respond to problems and customer complaints, and provide services

2. Clean and orderly appearance of the tangible components such as facilities, and staff uniforms

3. The ability to provide accurate, timely, and reliable service

4. Establishing trust and confidence in customers, and having adequate skills and professional competence

5. Consideration in behavior and respect for human values.[7]

Patients with greater satisfaction are less at risk of leaving the treatment. According to the study by Kelly et al., which was conducted on 283 patients treated with methadone, the patients satisfied of the treatment (73.0%) continued their treatment for at least 12 months.[4] The study by Kumar and Rajwal, in an addiction treatment center in the UK, reported that while the clients reported to be satisfied with the treatment and facilities, they reported long waiting periods as a problem.[8] In addition, in the study by Perez et al. of 370 patients undergoing methadone

maintenance treatment (MMT) at 20 treatment centers in Spain, 84.1% of participants were satisfied.[9] Therefore, the main aim of this study was to investigate the gap between expectations and perceptions of drug dependence patients about the quality of treatment services using SERVQUAL model in the 5 subscales of tangibles, responsiveness, assurance, reliability, and empathy.

Methods

This cross-sectional study was conducted in 2012 in Kerman, Iran. The sample size, according to the creators of the questionnaire, was 200.[10] However, given the probability of loss, the sample size was determined to be approximately 260. The target population was selected randomly from among the treated patients of 20 centers from a total of 84 drug treatment centers in Kerman. The number of samples selected from each center was proportional to the number of people covered by each center. The samples were randomly selected and questioned. Inclusion criteria included being treated for at least 6 months in those centers and willingness to participate in the study. After explaining the purpose of the study to the participants, assuring them of confidentiality, and obtaining oral informed consents from them, they entered the study. Then, the questionnaires were given to them to complete without the presence of staff. Illiterate patients were trained by the interviewer and interviewed (the questions were read by the interviewer and the responses were recorded). Finally, from among 290 patients, who were treated for at least 6 months for drug dependence and were invited for the study, 260 people attempted to complete the questionnaire (90% response).

To collect the data, the SERVQUAL service quality tool was used which was prepared by Parasuraman et al.[10] Validity and reliability of this tool had been approved by Shahverdiyani[11] and Kebriaei and Pourreza[12] in Iran. The SERVQUAL model is an outstanding approach to quantitative assessment of service quality. SERVQUAL, by using a research approach, extracts the rate of expectations and understanding of the audience in each of the 5 dimensions and their characteristics. The result is the identification of gaps between expectations and perceptions. Furthermore, by analyzing the results, the gap can

be identified, and by analyzing the gap, the guidelines to reduce the gap and enhance the quality of services can be identified.[12]

The quality of service was measured by a 22-item questionnaire, and these 22 items in the form of 5 dimensions of quality of service are designed as follows:

1. Tangibles, with 4 questions, from 1-4
2. Reliability, with 5 questions, from 5-9
3. Responsiveness, with 4 questions, from 10-13
4. Assurance, with 4 questions, from 14-17
5. Empathy, with 5 questions, from 18-22

These 22 items are answered twice. Once, they are answered in the first column according to the patient's expectations of service quality based on the 5-choice Likert scale (from very unimportant to very important). The second time, they are answered in the second column according to the patient's perception of the service quality based on the 5-choice Likert scale (from very low to very high). This questionnaire was translated in Iran, and its Farsi version is available. Only minor changes were made in the questionnaire, so that the questions were appropriate for drug dependence treatment centers.[6,12] The second part of the questionnaire included background information on the patients.

In each service dimension, the question scores were added and the total score was divided by the number of questions in that dimension. Thus, perception and expectation scores of each service dimension range from 1 to 5. In relation to the overall quality of services, the scores assigned to all the questions were added and their total was divided by 22 (number of questions). In this case, the overall quality score also ranged from 1 to 5. The difference in the quality of services was obtained by subtracting perception scores from the expectation scores. Thus, the negative result of this subtraction was a sign of having higher expectations compared to perceptions. To compare the consumers' perceptions and expectations of service in each of the dimensions of service, Wilcoxon test was used. SPSS for Windows (version 15; SPSS Inc., Chicago, IL, USA) was used for data analysis.

Results

In this study, 260 questionnaires were analyzed, and the background variables of the participants are presented in table 1. Drug related

characteristics are given in table 2. Based on table 2 the main substance used by most people was opium, syrup or burnt. The results showed that in most cases (items), the result of subtracting expectation scores from perception scores was negative. In other words, the expectation score was higher than the perception score (Table 3). Statistical comparison of the 5 quality dimensions (tangibles, reliability, responsiveness, empathy, and assurance) showed that there was a significant quality difference between all the

Table 1. Background variables of individuals referring to drug dependence treatment centers in Kerman

Variable	Number	Percentage
Age (mean ± SD)	260	37 ± 9.4
Gender		
Male	228	87.7
Female	32	12.3
Education		
Illiterate	3	1.2
Literate	26	10.0
Under diploma	87	33.5
Diploma	101	38.8
University	43	16.5
Occupation		
Private	197	75.8
Governmental	35	38.8
Unemployed	28	10.8
Marital status		
Married	186	71.5
Single	61	23.5
Divorced	12	4.6
Other	1	0.4
Total	260	100

SD: Standard deviation

Table 2. Background variables related to individuals with substance abuse referring to drug dependence treatment centers in Kerman (n = 260)

Variable	Mean ± SD
Age of onset of drug use (years)	23.7 ± 7.6
Duration of drug dependence (years)	10.5 ± 7.2
Duration of treatment (months)	16.8 ± 14.8
Number of withdrawals	1.7 ± 1.2
The main kind of substance used	N (Percentage)
Opium, molasses, burnt	218 (83.8)
Heroin, crystal, crack	31 (11.9)
Hashish, bang, marijuana	3 (1.1)
Crystal	3 (1.1)
Tramadol	1 (0.4)
Sedatives	1 (0.4)
Others	3 (1.1)

SD: Standard deviation

dimensions except the assurance dimension (Table 3). Overall, the expectation score was significantly higher than the total perception score (P < 0.001).

Discussion

This study aimed to assess the gap between perception and expectation of service quality of the drug dependence treatment centers in Kerman by using the SERVQUAL tool. This tool examined the quality of service in the 5 dimensions of tangibles, reliability, responsiveness, assurance, and empathy. In this regard, the study focused on patients as the study population. The higher the expectations of the service recipients were from their perception, the lower the quality of that service, and vice versa.

In the present study, the overall quality of services has a negative relationship with empathy, tangibles, reliability, and responsiveness dimensions. This is consistent with most of the quality assessment studies based on the SERVQUAL model.[6,12,13]

With the investigations carried out, only a limited number of studies on the quality of drug dependence treatment centers were found. The study by Parvizi et al. studied factors influencing client satisfaction of the government centers and compared them with private addiction treatment centers in Kurdistan. Based on this study, the patient satisfaction of the private centers was significantly higher than the public centers.[5]

Moreover, the study by Maleki et al. on the satisfaction of patients taking methadone in Kurdistan prisons, showed that 63.5% were satisfied with taking methadone.[14] In a study in Australia, overall satisfaction with methadone treatment was high.[15] This is not consistent with the results of the quality dimensions of the present study.

Trujols et al. investigated the relationship between participation in treatment and social functioning of 123 patients by conducting a satisfaction survey on MMT. Patients with higher satisfied had better mental health and social functioning.[16] Based on the mentioned study results, the highest quality difference was observed in the empathy dimension. This result is comparable with the following studies: the results of the study of Kebriaei and Pourreza[12] on primary

Table 3. The mean scores of perception and expectation, quality differences in each dimension, and statements related to the quality of service provided in Kerman treatment centers for substance dependence (n = 260)

Quality dimensions	Score of quality expectations (mean ± SD)	Score of quality perception (mean ± SD)	The difference between the mean score of perceptions and expectations	P
Tangibles	4.26 ± 0.55	4.15 ± 0.58	-0.11	
Staff adorned with clean and tidy appearance	4.23 ± 0.83	4.22 ± 0.78	-0.01	
Cleanliness of healthcare environment	4.46 ± 0.70	4.31 ± 0.73	-0.15	0.002
Adequate time for receiving service	4.35 ± 0.72	4.16 ± 0.75	-0.19	
The equipment are upgraded and new	4.01 ± 0.90	3.93 ± 0.86	-0.08	
Reliability	4.40 ± 0.54	4.35 ± 0.57	-0.05	
Performing duties in accordance with given commitments	4.38 ± 0.69	4.26 ± 0.77	-0.12	
Staff's interest in performance and providing services	4.37 ± 0.74	4.35 ± 0.72	-0.02	0.134
Performing services in the correct way in the first visit	4.48 ± 0.72	4.40 ± 0.78	-0.08	
Providing services at the promised time	4.40 ± 0.70	4.30 ± 0.75	-0.10	
Keeping accurate records and documents of the patients	4.39 ± 0.80	4.44 ± 0.83	0.05	
Responsiveness	4.42 ± 0.53	4.27 ± 0.60	-0.15	
Announce the exact time for providing services	4.35 ± 0.68	4.25 ± 0.75	-0.10	
Fast and promptly services	4.39 ± 0.71	4.26 ± 0.78	-0.13	< 0.001
Staff always eager to help clients	4.44 ± 0.72	4.30 ± 0.79	-0.14	
Availability of staff while needed and demanded	4.50 ± 0.69	4.29 ± 0.83	-0.21	
Assurance	4.45 ± 0.43	3.78 ± 0.53	0.67	
Patients trusting the staff	4.54 ± 0.47	3.61 ± 0.71	0.07	
Sense of security and comfort when in contact with staff	4.56 ± 0.49	3.72 ± 0.67	0.16	< 0.001
Knowledge and skills required of personnel responding to clients	4.53 ± 0.49	3.66 ± 0.69	0.13	
Polite and humble staff	4.19 ± 0.58	4.15 ± 0.52	-0.04	
Empathy	4.27 ± 0.90	4.10 ± 0.72	-0.17	
Special attention to each client	4.15 ± 0.79	4.07 ± 0.91	-0.08	
Appropriate time of referring to the center	4.30 ± 0.78	4.15 ± 0.87	-0.15	0.004
Particular attention to the values and emotions of patients	4.23 ± 0.86	4.10 ± 0.91	-0.13	
Deep interest of the staff towards the patients	4.39 ± 3.39	4.06 ± 0.89	-0.33	
Understanding the specific needs of clients by staff	4.30 ± 0.79	4.12 ± 0.95	-0.18	
Total score	4.36 ± 0.46	4.13 ± 0.50	-0.23	< 0.001

SD: Standard deviation

health care quality from the perspective of women referred to health centers of Kashan, Iran; the study of Jenaabadi et al.[6] on the gap between patients' perceptions and expectations of service quality in health centers of Zahedan, Iran; and the study of Arab et al.[17] on the evaluation of the hospital service quality from the patient's viewpoint.

The higher score of perception compared to expectation and no gap in assurance dimension indicated that according to patients the doctors and hospital staff had the knowledge needed to help patients and they had a polite and respectful approach, so that the patients had developed a sense of security and confidence. Low scores of perceptions and expectations and having a great gap in assurance dimension indicated poor communication of physicians, psychologists, nurses, and staff with patients. Attempts should be made in this area in order to improve staff communication with patients. This finding was also similar to the results of the study by Resnick and Griffiths.[18] In the present study, the empathy dimension had the lowest perception and expectation scores. This was not in accordance with the study of Resnick and Griffiths,[18] in which empathy had the highest score among the dimensions of service quality.

In addition to the empathy dimension, in dimensions of tangibles, reliability, and responsiveness, the quality difference was also

negative, meaning that the perceptions of the service recipients were higher than their expectations. Moreover, this showed poor quality and low satisfaction in these dimensions. It also showed their importance in the view of patients. It also indicated that the service providers for treating drug dependence were weak in these areas. Thus, the need exists to improve the quality of drug dependence treatment services.

By continually promoting and evaluating service quality, attempts should be made to reduce the difference in quality of services in planning. According to the observed highest difference in terms of the quality of the dimensions of tangibles, reliability, responsiveness, and empathy, the following messages for managers and planners of treatment centers for drug dependence will be useful. It is recommended that the centers be equipped with modern and efficient appliances to provide services in the promised time and in the shortest time interval, staff and service providers be available during the customers arrival to respond to the needs of the clients, and the staff be familiar with the updated knowledge and skills, and

understand the values and emotions of the patients. On the other hand, the highest observed difference was in the dimension of empathy of the service quality, and the emphasis of the Eastern culture is on the quality of communication between people, and the mentioned dimension also referred to this matter. Therefore, attention should be paid to this dimension while planning and communicating with clients during providing services, so that the clients can feel more comfortable and are satisfied.

Conclusion

To enhance the quality of services in substance abuse treatment centers, it is recommended that more attention be paid to the dimensions with the higher mean difference in quality, especially empathy and responsiveness dimensions.

Conflict of Interests

The Authors have no conflict of interest.

Acknowledgements

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تحلیل شکاف کیفیت خدمات مراکز درمان وابستگی به مواد شهر کرمان با استفاده از الگوی سروکوال

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مقاله پژوهشی

چکیده

مقدمه: درمان افراد وابسته به مواد یکی از رویکردهای اصلی کنترل مصرف مواد در کشور می‌باشد. این مطالعه با هدف، تبیین اختلاف و شکاف موجود بین انتظارات و درک افراد مراجعه کننده به مراکز درمان وابستگی به مواد با استفاده از الگوی سروکوال (SERVQUAL) صورت گرفت.

روش‌ها: در مطالعه مقطعی حاضر که طی سال ۱۳۹۱ انجام شد، دیدگاه ۲۶۰ بیمار تحت درمان مراکز درمان وابستگی به مواد شهر کرمان با استفاده از الگوی SERVQUAL مورد مطالعه قرار گرفت. محقق ضمن مراجعه به ۲۰ مرکز درمان سوء مصرف مواد (از ۸۴ درمانگاه) که به صورت تصادفی انتخاب شده بودند، از ۲۹۰ نفر جهت شرکت در مطالعه دعوت به عمل آورد. پرسش‌نامه موردنظر مؤلفه‌های کیفیت را در پنج بعد ملموس، اطمینان، پاسخگویی، تضمین و همدلی و در قالب ۲۲ گویه مورد سنجش قرار داد و انتظارات (آنچه که مورد انتظار است) و درک آنان از کیفیت (آن‌چه که بود) را در مورد هر گویه با استفاده از مقیاس پنج درجه‌ای لیکرت سنجید و مقایسه این دو مؤلفه با استفاده از آزمون Wilcoxon انجام گرفت.

یافته‌ها: میانگین و انحراف معیار سن شرکت کنندگان ۹/۴ ± ۳۷/۷ سال و بیشتر آنان مذکر بودند (۸۷/۷ درصد). کمتر از نیمی از آنان تحصیلات کمتر از دیپلم داشتند. در کل نمره انتظارات بیماران از کیفیت خدمات بیشتر از نمره درک آنان از خدمات بود (۰/۰۰۱ > P). این اختلاف به جز در یکی از ابعاد تشکیل شده مدل (بعد تضمین)، معنی‌دار بود (۰/۱۳۴ = P).

نتیجه‌گیری: بین انتظارات بیماران نسبت به کیفیت خدمات و آنچه که در واقع به آنان ارایه می‌شود، شکاف مشاهده شد. لازم است توجه بیشتری نسبت به دیدگاه بیماران در مراکز درمان اعتیاد در خصوص کیفیت خدمات داده شود.

واژگان کلیدی: کیفیت خدمات، رضایت بیمار، وابستگی به مواد، درمان

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