

Evaluating the Quality of Educational Services of Nursing Students of Dezful University of Medical Sciences in Southwest of Iran According to SERVQUAL Model

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ABSTRACT

Introduction: Focus on the quality of educational services of the universities is one of the effective factors in their success and survival. Thus, the study examined the quality of educational services of nursing students at Dezful University of Medical Sciences in southwest of Iran according to SERVQUAL model.

Materials and Methods: The study was descriptive conducted in 2018 on 101 nursing students, of whom 39 (37.6%) were male and 62 (61.4%) were female. The data collection tool was SERVQUAL standard questionnaire. Data analysis was done in SPSS24 using descriptive statistics (mean and standard deviation) and inferential statistics (paired t-test, bivariate t-test, and one-way analysis of variance).

Results: The results showed a negative gap in all aspects of quality of educational services. Accountability (-1.60), empathy (-1.53), tangibility (-1.53), guarantee (-1.52) and reliability (-1.35) had the greatest gap, respectively. This gap states that educational services do not meet their expectations according to the students. In addition, there was no significant relationship between the demographic characteristics of students and the mean of educational services gap, but there was an inverse relationship between satisfaction with the field of study and the educational service gap.

Discussion and Conclusion: It is necessary for the university to allocate funds to the aspects with the greatest gap by planning and prioritizing. Additionally, as the gap in one aspect leads to quality reduction in other aspects, other aspects can also be improved by filling the gap in these aspects, according to the students.

Key words: Quality of educational services, SERVQUAL model, Students, Nursing, Iran

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INTRODUCTION

The individual's perception of the manner and contents of the services provided by the organization is referred to service quality. Service quality is the provision of services in a unique way to make a person feel satisfied. Service quality is one of the major factors in the success of service and training organizations. Many studies have indicated that providing services with desirable quality directly affects profitability, market share, and reduction in organization costs. In addition, the service quality can affect customer satisfaction and behaviors, like loyalty, and, by guaranteeing the continuity of the purchase, turns the customer into a good marketing agent [1]. In the universities and educational institutions, the learners or students are considered as customers. Evaluation of the quality of educational services is one of the most

important measures in improving the quality of these services. Improving the quality of educational services brings about more creativity in learners and if the quality of educational services is not considered, we will witness a marked decline in education and reduced creativity among graduates [2]. Thus, one of the main stages in improving the quality of educational programs is evaluating the service quality from the perspective of the users. Contradictory meanings of the quality of education have ended in the use of different methods for measuring quality in higher education. Some studies have focused on measuring the quality of teaching or learning experiences of students [3]. For several years, academic researchers used to measure the service quality using one-dimensional scales, whereas one-dimensional scales are not suitable to measure a multi-dimensional concept such as quality [4]. Parasuraman et al. developed SERVQUAL model in 1985. This model is a multidimensional scale that measures the gap between expectations and the education services presented in five aspects. These aspects are physical and tangible (having physical facilities of the necessary

equipment and facilities), reliability (services provided in a reliable way), accountability (helping learners to provide services as fast as possible), assurance and credibility (university ability to provide accurate and reliable services), and empathy (suitable behavior with every learner according to their mental aspects in a conceiving way). The results of a study in Singapore universities reported that the greatest gap was in the quality of educational services in assurance aspect [5,6]. Another study in China showed a gap in all aspects of service quality to determine the students' perceptions and expectations of the quality of educational services. This means that the students were dissatisfied with the quality of all aspects of the educational services provided. In addition, the greatest negative quality gap was seen in the guarantee and the lowest negative gap in the reliability [6]. In another study at Malaysian universities, there was a significant negative gap between students' perceptions and expectations in terms of assurance, accountability, guarantee, empathy and tangibility [7,8]. Now that in most countries, the expansion of the universities has been driven from a quantitative to a qualitative mode, examining and promoting the quality of the provided education is considered as a necessity of the major policies of the universities. Hence, the existence of a monitoring and evaluation system in the educational system to determine the strengths and weaknesses, promotion of the quality of education and training the human resources accountable to the needs of society are inevitable. Furthermore, given the differences in the nature of education, the variety of facilities and the different staff and faculty members in different courses and levels of education at different universities, as well as the students' different sociocultural characteristics, the perspective of service receivers will be different towards service quality. Moreover, their perceptions of the services provided will be different; so, by doing this study in any university, one can reach a model with a higher degree for that university. Thus, the study evaluates the quality of the educational service of nursing students at Dezful University of Medical Sciences in southwest of Iran according to SERVQUAL model.

MATERIALS AND METHODS

This cross-sectional study was done in 2018 among nursing students of Dezful University of Medical Sciences in southwest of Iran (with 220 people). The sample size based on similar studies in Iran was calculated as 101.

These students were selected by multi-stage random sampling among third and higher semester students. First, each semester was considered as a class, and then in each class, the classes were examined as clusters. Prior to data collection, students were given some explanations about the objectives of the study, and then oral consent and in the shape of forms were received from them and they were assured about their information being confidential according to the research ethical standards. Data collection tool was the standard SERVQUAL questionnaire, in which there was 6 questions in the demographic section and 24 pair of questions to evaluate the service quality in "assurance," "accountability," "empathy," "confidence," and "physical" aspects on a 5-option Likert scale. The validity and reliability of this tool have already been confirmed in Iran [1]. Validity and reliability of this standard questionnaire were re-evaluated by the researchers and its reliability was evaluated 82% using Cronbach's alpha. The questions on examining the desirable situation and the status quo were measured with very high, high, moderate, low and very low grades with scores from five to one. The difference in the scores related to the status quo from the desired state shows the service quality gap. If the score is positive, it shows that the quality of the provided educational services was higher than the expectations of the students. If the scores are negative, it indicates that the provided educational services did not meet the expectations of the students. SPSS24 was used to analysis data by using descriptive (mean and standard deviation) and inferential statistics (paired t-test, bivariate t-test, and ANOVA).

RESULTS

Table 1 shows the personal characteristics of 101 nursing students participated in this study. According to this table, 39 (37.6%) were male and 62 (61.4%) were female. Furthermore, 19 (18.8%) were under the age of 20, 75 (74.3%) were between 21 and 25 years and 7 (6.9%) were above 26 years old. Considering academic record, 23 (22.8%) had 1 year of education, 40 (39.6%) had 2 years and 38 (37.6%) had 3 years of education. Furthermore, in a survey, 69 (68.3%) students stated that they would be willing to re-select the same field if they were to select the course again. Furthermore, 43 (42.6%) of the students were happy with their university and 69 (68.3%) were satisfied with their field of study.

Table 1: Demographic characteristics of students

Variable	Frequency	Percentage (%)
Gender	Male	39
	Female	62
Age (years)	Under 20	19
	21-25	75
	Over 26	7

Educational background	1 year	23	22.8
	2 years	40	39.6
	3 years	38	37.6
Re-selection of the major	Yes	69	68.3
	No	32	31.7
Satisfied with the university	Yes	43	42.6
	No	58	57.4
Satisfied with the field of study	Yes	69	68.3
	No	32	31.7

Table 2 shows the mean and standard deviation of perceptions and expectations scores and the quality gap of educational services in each aspect and each of the quality points of educational services are expressed according to the students' point of view. Of the 24 terms

related to the quality of educational services, the greatest gap was in "physical exterior attraction and facilities" in tangibility aspect and the smallest gap was in "giving appropriate and relevant assignments" in empathy aspect.

Table 2: The average scores for the status quo and favorable situation in each of the items and aspects of the quality of educational services according to the student

Aspects of service	Items	Expectation	Perception	Quality gap
Tangibility	1. The exquisite and professional appearance of faculty and staff	4.31 ± 0.79	3.07 ± 1.00	-1.27 ± 1.26
	2. Physical appeal and facilities (building, class, chair, resting place, decoration and facilities, temperature, light, whiteboard)	4.35 ± 0.76	2.40 ± 1.13	-1.94 ± 1.39
	3. Efficiency of new equipment and materials like Internet, library, overhead, projector, and so on	4.27 ± 0.83	2.69 ± 1.09	-1.59 ± 1.39
	4. The apparent attractiveness of the tools which the teacher uses to teach them	4.13 ± 0.83	2.45 ± 0.97	-1.7 ± 1.31
Reliability	1. Registering and keeping the student records with no fault	4.21 ± 0.89	3.07 ± 1.07	-1.17 ± 1.33
	2. Presentation of the course contents of each session of the class in a regular and interrelated manner	4.23 ± 0.85	2.92 ± 1.11	-1.35 ± 1.32
	3. Performing activities by the professor at the time he promises	4.33 ± 0.74	3.06 ± 1.09	-1.25 ± 1.35
	4. Presentation of the course materials in an understandable way to the student	4.46 ± 0.76	2.79 ± 0.97	-1.62 ± 1.24
	5. Easy access to the available resources at the university	4.55 ± 0.64	2.87 ± 1.14	-1.67 ± 1.31
Accountability	1. Accessibility of supervisor and advisor professors (when the student needs)	4.41 ± 0.76	2.94 ± 1.23	-1.46 ± 1.52
	2. Ease of access for students to management to convey their comments and suggestions on issues	4.35 ± 0.84	2.58 ± 1.24	-1.76 ± 1.57
	3. Applying students' comments and suggestions on educational issues in educational programs	4.29 ± 0.87	2.41 ± 1.28	-1.86 ± 1.63
	4. Providing the appropriate information resources to students for further study	4.30 ± 0.77	2.89 ± 1.13	-1.4 ± 1.36
	5. Announcing the hours which the student can refer to the teacher for educational issues	4.24 ± 0.85	2.79 ± 1.18	-1.47 ± 1.42
Guarantee	1. Facilitating the discussion and exchange of views on the topic of the lesson in class by professors	4.32 ± 0.77	2.85 ± 1.16	-1.46 ± 1.42
	2. Preparing students for future jobs by providing theoretical and practical training in college	4.48 ± 0.78	2.84 ± 1.09	-1.64 ± 1.37
	3. Allocating the time from the professor to answer and explain the lessons for the student outside the class hours	4.22 ± 0.93	2.76 ± 1.14	-1.46 ± 1.37
	4. Availability of sufficient information resources to increase knowledge of the student	4.29 ± 0.82	2.81 ± 1.2	-1.48 ± 1.52
	5. The professors having sufficient specialized knowledge	4.42 ± 0.83	3.03 ± 1.09	-1.39 ± 1.37
Empathy	1. Providing relevant and related homework	3.99 ± 0.93	2.94 ± 1.05	-1.03 ± 1.5
	2. Professors' flexibility in certain conditions that may occur for each student	4.36 ± 0.78	2.58 ± 1.19	-1.76 ± 1.53
	3. Suitability of time for holding classes	4.42 ± 0.83	2.54 ± 1.13	-1.88 ± 1.46
	4. The existence of a quiet place to study inside the faculty	4.39 ± 0.80	2.93 ± 1.35	-1.46 ± 1.49

5. The suitable behavior of the training staff with the students 4.56 ± 0.67 3.12 ± 1.29 -1.44 ± 1.5

Table 3: Mean and standard deviation of perceptions and expectations and quality gaps in the five dimensions of the quality of educational services

Aspects of services	Expectations	Perception	Gap	p-value
Tangible	4.16 ± 0.83	2.63 ± 0.85	-1.53 ± 1.19	<0.001
Reliability	4.25 ± 0.70	2.90 ± 0.83	-1.35 ± 1.07	<0.001
Accountability	4.29 ± 0.70	2.69 ± 0.96	-1.60 ± 1.21	<0.001
Guarantee	4.35 ± 0.67	2.83 ± 0.93	-1.52 ± 1.19	<0.001
Empathy	4.32 ± 0.65	2.79 ± 0.85	-1.53 ± 1.07	<0.001

According to Table 3, there was a significant difference between students' expectations and perceptions about educational services (gap between the status quo and desirable situation) in all five aspects of educational

services using paired t-test ($p < 0.001$); accordingly, accountability (-1.60), empathy (-1.53), tangibility (-1.53), guarantee (-1.52) and reliability (-1.35), respectively, had the greatest gap.

Table 4: Comparing of the average gap between the status quo and the favorable situation in the five aspects of the quality of educational based on the demographic characteristics of the students

Aspects of quality of educational services		Tangible	Reliability	Accountability	Guarantee	Empathy
Variables						
Gender	Male	-1.52 (1.14)	-1.41 (0.99)	-1.59 (1.35)	-1.45 (1.19)	-1.58 (1.12)
	Female	-1.50 (1.21)	-1.30 (1.13)	-1.61 (1.15)	-1.55 (1.19)	-1.48 (1.05)
Age (year)	Under 20	0.949	0.632	0.936	0.698	0.632
	21-25	-1.16 (0.81)	-1.17 (0.81)	-1.59 (1.02)	-1.46 (1.14)	-1.29 (1.04)
	Over 26	-1.63 (1.24)	-1.39 (1.14)	-1.61 (1.29)	-1.53 (1.24)	-1.59 (1.09)
	1 year	-0.96 (1.13)	-1.00 (1.03)	-1.30 (1.08)	-1.20 (0.87)	-1.03 (0.81)
Educational background	2 years	0.175	0.559	0.842	0.8	0.311
	3 years	-1.14 (0.98)	-1.31 (1.36)	-1.51 (1.29)	-1.27 (1.35)	-1.32 (1.14)
	Male	-1.92 (1.09)	-1.60 (1.12)	-1.80 (1.11)	-1.73 (1.19)	-1.74 (1.04)
	Female	-1.38 (1.15)	-1.26 (1.01)	-1.52 (1.36)	-1.50 (1.14)	-1.47 (1.11)
Satisfied with the field of study	Sig.	0.095	0.346	0.592	0.362	0.338
	Yes	-1.02 (0.906)	-0.89 (0.814)	-1.29 (1.16)	-1.15 (1.04)	-1.21 (0.94)
	No	-1.82 (1.22)	-1.61 (1.11)	-1.79 (1.21)	-1.74 (1.21)	-1.71 (1.08)
Satisfied with the university	Sig.	0.001	<0.001	0.042	0.014	0.018
	Yes	-1.38 (1.21)	-1.22 (1.10)	-1.51 (1.31)	-1.46 (1.24)	-1.42 (1.09)
	No	-1.73 (1.05)	-1.51 (0.92)	-1.73 (0.95)	-1.55 (1.02)	-1.69 (0.92)
	Sig.	0.16	0.209	0.4	0.747	0.234

According to Table 4, the variables of gender, age, academic background, and satisfaction with the university had no significant effects on the mean of service gap in each of the five aspects of educational services. However, among the students satisfied with their selected field of study and the students who did not, the average educational service gap had significant differences in tangible ($p = 0.001$), reliability ($p < 0.001$), accountability ($p = 0.042$), guarantee ($p = 0.014$) and empathy ($p = 0.018$) aspects. In other words, there was an

inverse relationship between satisfaction with the field of study and the degree of educational service gap.

DISCUSSION AND CONCLUSION

The results of the current study showed a negative gap in all aspects of the quality of educational services and the related items, where accountability, empathy, tangibility, guarantee, and reliability, respectively, had the greatest gap. This gap means that according to the nursing students, the provision of educational services at Dezful

University of Medical Sciences in Iran has not been up to the expected standards. Other studies conducted in other Iranian medical universities have also reported a negative gap in all aspects [1,3,9-18]. Similar results have been reported in studies conducted in other countries, such as the India, Thailand and China [17-20]. In this study, the greatest gap was in accountability aspect, which was in line with the results of Aghamolaei *et al.*, Rezaian *et al.*, Misaii *et al.*, Jafari *et al.* and Khandan *et al.* in Iran [5,10,13,14,18]. The existence of a quality gap in the accountability shows that supervisors and advisors are less accessible when the students need them and the students do not have easy access to the head of the department to convey their comments and suggestions on educational issues. Student comments and suggestions on educational issues are less applied in educational programs. Suitable resources are not presented to the students for further study and referring hours to the professor are not announced to the students for study and education issues. One can state that, due to the long waiting time of the students to find answers to some questions or to transfer their views and opinions to the teaching staff as well as the high workload of the faculty members, consequently, not showing any sensitivity to the students' requests and criticisms in this regard, more gaps has been created. In the study by Jafari *et al.*, conducted among nursing and midwifery students of Guilan University of Medical Sciences in north of Iran, the greatest gap was in accountability aspect as well [14]. In addition, the study by Khandan *et al.* amongst the students of nursing and midwifery students at Kerman University of Medical Sciences in the center of Iran showed the largest gap in accountability [18]. Furthermore, in a similar study conducted by Rezaian *et al.*, among medical students at Nursing University of Mashhad in north eastern Iran, the greatest gap was in accountability [10]. Aghamolaei *et al.* conducted a study in Hormozgan University of Medical Sciences in south of Iran, where the highest quality gap was in accountability [5]. Another similar study by Misaii *et al.* [13] among the students at the Faculty of Mathematics, Statistics and Computer Science at Tehran University showed the highest quality gap in accountability aspect.

Furthermore, results of the study showed no statistically significant relationship between the gap of perceptions and expectations of students with their academic term, gender, age, academic background and satisfaction with the university. The results of Rezaian *et al.* showed no significant relationship between gender, educational level and students' status with their educational services gap [10]. Moreover, the results of the study by Ghalavandi *et al.* at Urumia University in northwest of Iran showed no significant relationship between gender and educational services quality [21], which is in line with current study. In addition, the results of the study by Rasolabad *et al.* in Kurdistan in west of Iran showed a significant statistical relationship between gender and the quality of educational services that was inconsistent with the current research [22].

The study also had other fascinating results; it showed a significant difference between the educational services gap in all five aspects between the students satisfied with their field of study and the one not. In other words, there was an inverse relationship between the satisfaction with the field of study and the educational service gap, which is in line with the results of Rezaian *et al.* [10]. Thus, considering the significance of the relationship between the field of study and the interest in the field with the quality of educational services, it looks that the interest and satisfaction of the students with the conditions creates a positive view. Moreover, even inappropriate services are sometimes disregarded and even positively evaluated, and perhaps the ones with no interest in the field would interpret and evaluate even positive aspects of the services negatively. In fact, one can state that the presence or absence of interest can greatly affect the view of students.

Given the overall results of the study and as general rule and the lack of resources as a challenge for all organizations, by prioritizing and allocating funds to the aspects with the greatest gap, one can reduce other gaps by reducing the gap in these aspects according to the students' views. This is because the gap in one aspect leads to quality drop in other aspects from the point of view of service recipients. According to the results, five aspects can be categorized into three priority groups for allocation of resources and organizational efforts to eliminate or reduce the quality gap. Thus, accountability is in the highest and the reliability is in the lowest priority. Accordingly, it is recommended that educational workshops should be organized to educate how to serve customers (students) and communicate with them; also, some workshops must be held to enhance the technical skills of university staff, especially workshops for faculty members to use advanced educational methods. Additionally, establishing a more effective suggestion system and timely and adequate informing on the activities done by the university education deputy to improve the quality of educational services greatly helps reduce the gap between the current and the desired situation.

ETHICAL CONSIDERATIONS

Ethical issues have been completely observed by the authors.

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CONFLICT OF INTEREST

The authors declare that there is no conflict of interest regarding the publication of this manuscript.

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