



## Assessment of Clinical Education Quality from Viewpoint of Midwifery Students in Tehran University of Medical Sciences in 2019

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### Abstract

**Background:** As an essential area in medical education, clinical education provides midwifery students with the foundation of their professional skills. Effective and efficient clinical education has a great role in clinical education quality.

**Objective:** This study aimed to determine the clinical education quality from the viewpoints of midwifery students of Tehran University of Medical Sciences.

**Methods:** This cross-sectional study was performed on 245 midwifery students at Tehran University of Medical Sciences in 2019. Data were collected using a demographic and educational information questionnaire and clinical education quality assessment questionnaire (SERVQUAL), comprising five domains and a self-report questionnaire. Data were analyzed using descriptive statistics (frequency and percentage of frequency for qualitative variables) and inferential statistics, including t-test, and ANOVA in SPSS18.

**Results:** A negative gap was observed between students' expectations and perceptions of the clinical education quality in all five dimensions ( $p < 0.001$ ). Empathy ( $-1.24 \pm 1.68$ ) and assurance ( $-1.30 \pm 1.04$ ) showed the largest and narrowest gaps, respectively.

**Conclusion:** Due to the negative gap in the clinical education quality, universities and educators are recommended to identify educational shortcomings and accordingly take necessary measures to make up for them.

**Keywords:** SERVQUAL questionnaire, Clinical education, Clinical education quality, Midwifery student

### 1. Introduction

As an essential element of any educational system, education is one of the essential factors in the growth and development of societies through training human resources (1). Effective education is a major concern of the educational system of the country and the most important learning factor (2). Therefore, education plays a pivotal role in societal and organizational advancement. Nowadays, community health improvement is a key factor in economic and social development (3). Despite the increased quantity of Iran's higher education, parallel with the tendency of young people towards academic education in the last two decades, it suffers from neglected quality. How much quantitative and qualitative growth complement each other depends on the implementation of the mission of education (4). As a part of higher education systems, medical science education deals with human life theoretically and clinically (5, 6). Midwifery care knowledge is not the only factor for providing good and proper care at the patient's bedside (5). Clinical education is an area of medical education programs.

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Training efficient students while clinical education is neglected would be very difficult or impossible (7, 8). Clinical learning is focused on real issues in a professional work context where learners are motivated through active participation (8). Clinical education can be defined as a learning facilitator in a clinical environment, where the clinical educator and the student are equally participating to enable students to perform clinical activities (9-11). To achieve quality, it is needed to be evaluated first before trying to improve it (12). Clinical education enhancement requires continuous checking of the current situation, identification of strengths and weaknesses, and correction (13, 14). Audience opinion and the function of observer opinion are, respectively, central to the definition of quality and quality itself (15). Identifying the expectations and perceptions of service recipients is the first essential step in quality improvement plans (16). Service quality gap identification is a good start for planning, prioritizing, and deciding on resource allocation (17). Among various clients of universities, students get the most attention as they can influence other clients, including their families, educators, and managers of the student recruitment company (18). Therefore, students' views of educational services can indicate the education quality (19).

According to numerous studies in various medical departments, including nursing and midwifery, there is a negative gap in clinical education quality (6, 20-26). In addition, concerning the researcher experience of clinical education at Tehran University of Medical Sciences, the problems perceived by midwifery students, the lack of research devoted to the status of clinical midwifery education, and internship plays an essential role in the basic skills and professional competence of midwifery students and accounts for about 50% of the training program in this field (27), this study focused on the assessment of clinical education quality to eliminate the shortcomings of clinical education in Tehran University of Medical Sciences. As a branch of medicine, midwifery deals with caring for the mother, before, during, and after childbirth and is engaged with all physiology, pathologic, psychology, and social factors that affect the quality and quantity of new generations. It is essential to enable students to provide such services at the end of the term time (28, 29). In other words, the lack of adequate clinical skills in these students can be due to educational system weaknesses (9).

## **2. Material and Methods**

### **2.1. Study Population**

The statistical population of this cross-sectional study included 245 graduate and postgraduate students of Tehran University of Medical Sciences, Shahid Beheshti University of Medical Sciences, and Iran University of Medical Sciences in 2019. The inclusion criteria were graduate midwifery students who passed five academic terms and postgraduate midwifery students at the first term. The students who were not willing to participate in the study were excluded from the study.

### **2.2. Sampling**

This study used the census approach. In this study, the sample size was 240 people. Due to the possible sample loss, the ultimate number of eligible samples was decided to be 245.

### **2.3. Measurement**

Data collection was done using a questionnaire. The first part of the questionnaire was comprised of 11 items on personal and educational information. The second part of the SERVQUAL questionnaire was designed in 1983 by Parasuraman (30). In this study, the original questionnaire, designed by Yazdi- Feyzabadi et al., was employed (24). A study was conducted in 2015 to assess the quality of clinical education in all five dimensions, namely tangibles (4 items), reliability (6 items), responsiveness (5 items), assurance (5 items), and empathy (6 items), and determine the difference between the perceptions and expectations of students. It was a 7-point Likert scale questionnaire, anchored by 1 "strongly disagree," 2 "disagree," 3 "neutral," 4 "agree," and 5 "strongly agree." Since quality can be negative or positive, using a Likert scale with odd points, 3 or 7, is more suitable for its measurement. Therefore, since a 7-point Likert has a higher degree of validity and reliability, a 7-point Likert was used in this study. The questionnaire was completed by students in two stages. The first step included questions about the student's expectations of what to be offered and the second step included questions about the student's perception of what is offered. It measures the gap between the student's expectations and perceptions based on these five dimensions, where the difference or negative gap indicates the lack of satisfaction from clinical education, which did not meet their expectations. On the other hand, the positive gap indicates students' satisfaction with education quality. This questionnaire has been used in many studies. In this study, the reliability of the questionnaire was confirmed using Cronbach's alpha (0.91). The reliability of the instrument was also confirmed by the midwifery and nursing lecturers.

### 2.4. Analysis

Data were collected using descriptive and inferential statistics, including t-test and ANOVA, in SPSS18.

### 2.5. Ethical Considerations

This study was conducted based on ethical norms by obtaining permission from the Ethics Committee of Tehran University of Medical Sciences (IR.TUMS.FNM.REC.1397.170). Moreover, the required permission to distribute the questionnaire among undergraduate students of the Midwifery and Nursing Department of Shahid Beheshti University of Medical Sciences was obtained three months before implementing the study.

### 3. Results

The majority of the participants were in the age range of 20-24 years (46.1%) and non-practitioner midwifery students (62%), 59.6% of them were single, and more than half of them did not stay in dormitory (53.5%). In total 34.7%, 33.1%, and 32.1% of the participants were from the Tehran University of Medical Sciences, Shahid Beheshti University of Medical Sciences, and Iran University of Medical Sciences, respectively. The majority of participants were master's degree students (62%). The majority of the participants in this study were graduate students participated (26.9%). Most of the students were in groups of 4-5 (66.1%). According to the results, 72.2% of the participants were interested in their discipline, and 69% had selected midwifery themselves. The results revealed a negative gap in five dimensions between the students' expectations and perceptions of the quality of clinical education services. The highest gap was observed in the empathy dimension (-1.24±1.86) and the narrowest gap was observed in the assurance dimension (-1.30±1.04) (Table 1). In the area of guarantee, the lowest gap was for the "Facilitating discussion and interaction about case seminars in hospital" (-0.84) (Table 2).

**Table 1.** Numerical Indicators of Gap Between Expectations and Perceptions of SERVQUAL Questionnaire – 2019

Dimensions	Expectations				perceptions				Gap			
	Min	Max	Average	SD	Min	Max	Average	SD	Min	Max	Average	SD
Assurance	4	7	6.71	0.49	1.6	7	5.41	1	-5.40	1.60	-1.30	1.04
Responsiveness	4	7	6.75	0.51	2	7	5.01	1.19	-4.80	2	-1.73	1.21
Empathy	3	7	6.74	0.59	1.67	7	4.87	1.2	-5	0.83	-1.86	1.24
Reliability	3	7	6.8	0.47	2	7	5.01	1.22	-4.67	1.50	-1.78	1.20
Tangibles	2.5	7	6.75	0.6	1	7	5.03	1.26	-6	1	-1.72	1.26
Total	90	182	175.69	12.16	64	182	131.68	27.21	-23.37	3.5	-8.41	5.21

**Table 2.** Numerical Indicators of Gap Between Expectations and Perceptions from the Viewpoints of Midwifery Students in Tehran University of Medical Sciences by Questions -2019

Dimensions	Items in the modified questionnaire	Min	Max	Average	SD
Assurance	Facilitating discussion and interaction about case seminars in hospital	-6	6	-0.84	1.33
	Qualifying students for future jobs by attaining skills and practices	-6	2	-1.39	1.33
	Accessibility of faculty members outside of case seminars to answer students' questions	-6	2	-1.41	1.37
	Accessibility of adequate references to increase students' professional knowledge	-6	2	-1.50	1.38
	Adequacy of faculty members' professional knowledge and skills	-5	1	-1.36	1.16
Responsiveness	Introducing suitable references to students for reading	-6	2	-1.47	1.34
	Supervisors' accessibility when students need them	-6	1	-1.54	1.32
	Easy accessibility of administrators for students to express views about the curriculum	-6	4	-1.91	1.55
	Considering students' views and suggestions in the curriculum	-6	6	-1.81	1.56
	Declaring hours that students can refer to faculty members to talk about educational problems	-6	2	-1.92	1.46
Empathy	Assigning suitable and relevant homework	-6	2	-1.82	1.48
	Faculty members' flexibility when considering the specific conditions of each student	-6	2	-1.64	1.42
	Convenience of class hours	-6	2	-2.58	2.07
	Existence of silent and convenient place in school for reading	-6	3	-2.40	1.86
	Respectful treatment of students by the hospital Staff	-6	4	-1.44	1.58
	Respectful treatment of students by the faculty Members	-6	2	-1.29	1.28

Reliability	Easy accessibility of available references in the hospital	-6	2	-1.72	1.51
	Presenting relevant educational content regularly	-6	2	-1.63	1.38
	Informing students concerning the results of examinations	-6	1	-1.82	1.47
	Faculty members and staff fulfilling their responsibilities in the promised time	-6	6	-1.89	1.61
	Understandable presentations of materials and content	-6	4	-1.95	1.63
Tangibles	Gaining higher scores if students attempt more	-6	1	-1.94	1.59
	Physical facilities that are visually appealing and comfortable	-6	2	-1.65	1.44
	Up-to-date materials and educational equipment in the hospital	-6	4	-1.54	1.57
	Neat and professional appearance of faculty members and staff	-6	1	-1.74	1.45

#### 4. Discussion

This study aimed to evaluate the quality of educational services offered to midwifery students of Tehran University of Medical Sciences. The results can be used to improve the conditions and achieve the goals of this department. The results showed a negative gap in all dimensions of the quality of educational services, namely tangibles, reliability, responsiveness, assurance, and empathy. This negative gap suggests that the expectations of the participants of education quality were higher than their perceptions of the current education conditions. Therefore, it seems that the clinical midwifery education offered in the universities under investigation is needed to be revised in all dimensions. This result is consistent with the findings of studies performed by Tawfiqi et al., Yarmohammadian et al., Yazdi, Jafari Asl, and Rasoulabadi et al (6, 24, 26, 31, 32). This issue is because the educational expectations of students in different fields at medical universities in Iran are neglected. Students' dissatisfaction with the quality of educational services can negatively affect their academic achievement. Students with a high level of satisfaction of education quality showed greater academic achievement than dissatisfied students (32). In the area of sympathy, the highest mean quality gap was for "Uncomfortable in the clinical environment" (-5.58). The highest negative quality gap in the empathy dimension suggests the lack of a special education program that involves students in the program, the inflexibility of faculty members towards a student-centered approach, and the lack of a suitable place to study hospital examples.

The results of the present study in terms of the maximum and minimum mean gap in the dimensions of the quality of clinical education services are consistent with the studies of Tawfiqi, Yarmohammadian, and Jafari-Asl (6, 26, 31). In a study in Kurdistan, Rasoulabadi reported the greatest negative gap in empathy (25). Chova (Chua) observed a negative gap in the quality of all service dimensions. The highest and lowest negative quality gap was observed in the assurance and responsiveness, respectively (33). In the US, Richard et al. found a negative gap in the dimensions of assurance and reliability (34). Enayati et al. showed that the assurance of the services received met the level of expectations (35). It is recommended to study differences between the minimum and maximum gaps in different universities based on fields of study, degrees, number of students, expectations, physical space, educational space, and manpower. It is necessary to identify the weaknesses of different universities. Farzianpour et al. reported the narrowest quality gap in the assurance and the highest quality gap in the response (36).

The results showed a significant relationship between the degree and the quality gap of clinical education; in addition, the results of the two-way double test showed that dissatisfaction with clinical education was higher among master students ( $p=0.001$ ). Findings showed is a significant relationship between clinical education, semesters ( $p = 0.01$ ). The Scheffe test showed that second-semester master's students were more dissatisfied with the quality of clinical education than other students. The ANOVA results showed a significant relationship between the number of internship students and different factors of clinical education quality ( $p = 0.04$ ). A two-week Scheffe-based study showed a direct relationship between the number of internship students and the educational quality gap, leading to greater dissatisfaction with clinical training. These results were consistent with the findings of Rasoulabadi and Rezaei and inconsistent with the findings of Pournamdar and Fotokian (14, 25, 37, 38). The level of satisfaction in big cities of Iran, such as Tehran was higher than the small cities, indicating that there are fewer educational facilities in clinical environments of the small cities (6, 24). According to the results, the clinical education quality can be improved by designing and implementing simple approaches. The results also showed that the quality of clinical education is affected by issues, such as inconvenient clinical environment, lack of a suitable place to study hospital samples, not rewarding more efficient students, lack of students' opportunity to open up academic problems with faculty members, and difficulty in access to university principals.

## 5. Study Limitations

Among the study limitations were the limited sample size (midwifery students) in Tehran and the reluctance of some students to participate in the study. The SERVQUAL addresses only five factors of services provided in universities while the scope of educational services is much wider. For example, the quality of other university services, such as information technology and the library, has not been addressed.

## 6. Conclusions

There is a negative gap between students' expectations and perceptions of the quality of clinical education services in all five dimensions. Improving the clinical education quality requires continuous review of the current situation, identification of strengths, and correction of weaknesses. Taking required measures to compensate for these shortcomings can enhance the quality of clinical education and practical skills of midwifery students which, in turn, affect the health of women and children. The officials of medical universities, midwifery schools, and midwifery education departments are recommended to define the negative factors affecting the quality of clinical education as "education problems" and accordingly identify solutions. Future studies are recommended to conduct supplementary research on the qualitative evaluation of clinical education provided to midwifery students.

## Conflict of Interest:

There is no conflict of interest to be declared.

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## Authors' contributions:

All authors contributed to this project and article equally. All authors read and approved the final manuscript.

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