

Teacher-student communication

in medical sciences: a qualitative study in Iran

Comunicación profesor-alumno en ciencias médicas: un estudio cualitativo en Irán

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Abstract

Introduction: The existence of an effective relationship between teachers and students plays a pivotal role in the improvement of the education process, learning, and students' growth.

Objectives: The present study aimed to determine the experiences of students and professors of medical sciences from the effective factors in the student-teacher relationship.

Methods: This qualitative study was conducted on 10 professors and 10 students. The study data were collected using Individual in-depth interviews, focus group interviews, and observation. The study data were analyzed using conventional content analysis proposed by Granheim and Landman.

Results: The results revealed 16 subcategories and 4 main categories. The main categories included "adherence to moral values", "professor's professional competence", "sociocultural factors", and "clinical communication".

Conclusions: The present findings helped to identify a wide range of the dimensions and various factors affecting the student-teacher relationship in medical universities. Educational Managers and decision-makers can use the results of the study to determine the problems of the relationship process between the Professor and the student and to decide on the appropriate action to develop this important process.

Keywords: Qualitative study, Communication, Student, Teacher, Iran.

Resumen

Introducción: La existencia de una relación efectiva entre profesores y estudiantes juega un papel fundamental en la mejora del proceso educativo, el aprendizaje y el crecimiento de los estudiantes.

Objetivos: El presente estudio tuvo como objetivo determinar las experiencias de estudiantes y profesores de ciencias médicas a partir de los factores efectivos en la relación alumno-maestro.

Métodos: Este estudio cualitativo se realizó con 10 profesores y 10 estudiantes. Los datos del estudio se recopilaron mediante entrevistas individuales en profundidad, entrevistas de grupos focales y observación. Los datos del estudio se analizaron mediante el análisis de contenido convencional propuesto por Granheim y Landman.

Resultados: Los resultados revelaron 16 subcategorías y 4 categorías principales. Las categorías principales incluyeron "adherencia a los valores morales", "competencia profesional del profesor", "factores socioculturales" y "comunicación clínica".

Conclusiones: Los hallazgos ayudaron a identificar una amplia gama de dimensiones y diversos factores que afectan la relación alumno-maestro en las universidades médicas. Los Gerentes Educativos y los tomadores de decisiones pueden utilizar los resultados del estudio para determinar los problemas del proceso de relación entre el profesor y el alumno y decidir la acción adecuada para desarrollar este importante proceso.

Palabras clave: Estudio cualitativo, Comunicación, Estudiante, Docente, Irán.

The relationship is of particular importance in human life, such a way that some experts believe that human growth, individual damages, and human developments depend on interactions¹⁻³. Universities and educational institutes are among the places where relationship plays a significant role. In universities, teaching-learning is considered to be the main process, which can be regarded as an interpersonal interaction⁴. In fact, interactions between two individuals, i.e., a student and a professor, comprise the main basis of education⁵.

Medical universities are responsible for nurturing individuals with the necessary professional competencies who can satisfy the healthcare needs of society. Acquiring the required professional competence especially in the cardiovascular area depends on the quality of socialization and professionalization in the education process⁶. In fact, medical students gain their feelings of professionalization and socialization in cardiovascular departments through their relationships with others. The feeling of belonging is among the basic factors in the formation of the feeling of professionalization, which is created within interactions⁷. Up to now, numerous studies have emphasized the importance and effects of constructive relationships between medical professors and students in cardiovascular departments. These studies have proved that a constructive educational relationship can promote learners' growth and evolution, create a better learning atmosphere⁸, create a more positive academic attitude among students, cause higher satisfaction⁹, reduce disciplinary challenges¹⁰, lead to effective feedbacks¹¹, cause higher concentration on learning, improve clinical judgment, promote organizational capabilities and interactions, resulting in the utilization of the theoretical knowledge, promote professional identity, and facilitate learning management¹². On the other hand, lack of a constructive relationship can keep hidden benefits out of reach and endanger individuals' satisfaction, persistence, and usefulness^{13,14}. From a more comprehensive view, it can also increase the risk of disorders in the teaching-learning process¹⁵.

Medical majors especially cardiovascular departments have particular conditions. One of the most important factors that have caused such particular conditions in medical sciences is the existence of clinical education alongside theoretical education^{16,17}. Clinical education, especially in cardiovascular departments, is very complicated and is affected by various factors¹⁸. For instance, the clinical education environment is quite unstable and uncontrollable due to cardiovascular disease¹⁹ and is different from the classical environment of theoretical classes²⁰. This type of education is intertwined with theoretical education in medical majors, causing them to have particular conditions compared to other majors²¹. Consequently, a specific purposed relationship exists between medical professors and students, which is different from general interactions in other social relations²². Thus, the strategies originating from general experiences obtained through social interactions cannot be applied for the management of interactions and development of relationships between students and professors in medical education in cardiovascular departments²³. Furthermore, medical sciences are encoun-

tered with a lack of knowledge concerning the teacher-student relationship²⁴. This has been confirmed by the distance between the graduates' competence level and the expected competence level, especially in the cardiovascular field. Evidence has also proved the lack of knowledge in this field. In fact, the lack of scientific research and evidence regarding student-teacher relationships and interactions is quite apparent in most medical majors, especially the cardiovascular field. Yet, this issue has been neglected due to various reasons²⁵. Despite the emphasis on the importance of relationships, less attention has been paid to its assessment among professors and students²⁶. Nonetheless, this issue is quite necessary for medical sciences due to the unique nature of education in medical sciences, the sensitivity of the student-teacher relationship in the professionalization and socialization process, and their relationship with people's health²⁷.

A comprehensive investigation of the effective factors in student-teacher relationships appropriated to the society's cultural context requires the utilization of qualitative data collection methods, which help reveal the dimensions of the phenomenon properly²⁸. Since quantitative research techniques alone cannot explore the complexities of educational system elements, qualitative methods have been recommended to be applied²⁹. Evidence has indicated that qualitative techniques could help perceive and explain social and behavioral phenomena more efficiently³⁰. Therefore, student-teacher relationships and interactions must be clearly defined in the society's cultural, educational, and social contexts from the viewpoint of stakeholders.

As mentioned above, qualitative research techniques can help perceive and explain social and behavioral phenomena more efficiently. Up to now, no qualitative studies in Iran have investigated the dimensions of student-teacher relationships from the viewpoints of both professors and students, in cardiovascular departments.

The present study aimed to determine the experiences of students and professors of medical sciences from the student-teacher relationship.

Materials and methods

Participants

This qualitative study was conducted on 10 professors and 10 students. It was attempted to select a wide variety of professors (regarding age, sex, job tenure, and college) and students (concerning age, sex, education level, and college) with rich information from the colleges affiliated to Shiraz University of Medical Sciences. The participants were selected via purposive sampling from May 2019 until February 2020. Two focus groups were conducted with two, six- and eight-member groups of students in the cardiac care unit. The inclusion criteria of the study for professors included having at least one year of job tenure in Shiraz University of Medical Sciences. The inclusion criteria for students also included having spent at least one semester at Shiraz University of

Medical Sciences and is willing to express their emotions and experiences.

Data collection

The study data were collected using interviews, focus groups, and observation. In doing so, 20 semi-structured and in-depth face-to-face interviews were done with 10 professors and 10 students. Each interview was conducted over one or two sessions and lasted for 45-60 minutes. Additionally, two focus groups were conducted with two six- and eight-member groups of students. Each focus group lasted for 60 minutes. During the focus groups, the researcher was the director and a researcher's assistant played the role of the note taker. It should be noted that the place and time of the interviews were fixed with the participants' agreement. Interviews were followed until deep data was obtained and the participant's selection process continued until data saturation.

The interviews were begun with general questions and were followed with probing questions, such as 'how did you feel in that case', 'please explain more', and 'could you provide an example'. The used questions were as follows: 'talk about your experience about your relationship with the professors/students', 'how your relationship has been with students/professors', 'based on your experiences, what are the effective factors in a student-teacher relationship', 'what factors have caused you as a professor to have a good relationship with students', and 'please mention the factors that have promoted your relationships as a student/professor'. According to the responses to these questions, the following questions were then asked: 'what does student-teacher relationship mean to you', 'give an example of your relationship with your students inside or outside the class' and give an example of your relationship with professors inside or outside the class'.

Another data collection method used in this study was an observation. In doing so, the researcher referred to the clinical wards of hospitals and various colleges of the university for 20 hours and took notes about student-teacher relationships and the participants' response manners, appearances, face statuses, sitting manners, silence, laughs, and other points revealing their moods.

Data Analysis

The study data were analyzed using conventional content analysis proposed by Granheim and Landman (2004)³¹. At first, the entire interview was transcribed. For immersion in the data and to achieve a sense of totality, the interview was read repeatedly and words, sentences, and paragraphs containing important hints about the effective factors in student-teacher relationships were considered as meaning units. The similar codes were categorized into more comprehensive categories based on similarities and differences and the development of categories was continued. To make sure about the strength of the code, the categories were reviewed and constant comparison to the data was carried out. Afterward, the main categories forming the concept of the student-teacher relationship were extracted by deep and accurate contemplation. The data were simultaneously analyzed using MAXQDA 10 software.

In order to ascertain the trustworthiness of data, the criteria proposed by Guba and Lincoln (1985) were employed³². Considering credibility, use was made of prolonged engagement with the subject matter, member check, and peer debriefing. Dependability and confirmability were ascertained through triangulation methods (semi-structured interview, focus group, and observation), data source triangulation (gathering data from the professors and students at various colleges), and audit trial (including correct interview methods and pay close attention in notetaking and analysis). Considering transferability, a complete and accurate description of the participants' characteristics, data collection methods, analysis techniques, and written examples of the participants' expressions was provided.

Results

The study included 20 participants, 10 university students, and 10 professors. 20 interviews were conducted, resulting in saturation of the codes. Two focus groups were also conducted with the students. Additionally, three professors and two students were interviewed for the second time.

Among the study professors' participants, 50% were male and 50% were female. The mean ages of the professors and students were 47.2±9.2 and 22.3±5.4 years, respectively (Table 1).

Table 1. The participants' demographic characteristics (N=20)

Variables	N (%)
Professors	10 (50)
Age (Mean ± SD)	47.2±9
Sex	
male	5 (50)
female	5 (50)
Scientific level	
Professor	1 (10)
Associate professor	1 (10)
Assistant professor	5 (50)
Instructor	3 (30)
Job tenure (Mean ± SD)	16.1±6
Students	10 (50)
Age (Mean ± SD)	22.3±5.4
Sex	
Male	6 (60)
Female	4 (40)
Education level	
BSc	6 (60)
MSc	2 (20)
PhD	2 (20)

The results revealed 1251 codes, 16 subcategories, and four main categories. The main categories included “adherence to moral values”, “professor’s professional competence”, “sociocultural factors”, and “clinical communication” (Table 2).

Table 2. Categories and subcategories extracted from the content analysis

Categories	Subcategories
Adherence to moral values	Mutual respect
	Humility
	Fair judgment
	Honesty
	Working conscience
	Compassionate attitude
	Patience
Professor’s professional competence	Scientific proficiency
	Assistance in nurturing students
	Teaching skills
Sociocultural factors	Cultural features
	Family’s impact
	Media and the virtual space
Clinical communication	Mutual communication
	Close relationship
	Client-centered

Adherence to moral values

Adherence to moral values was one of the main categories extracted from the interviews with the professors and students. Most of the participants talked about the professors’ and students’ adherence to desirable ethical features and admirable behavioral characteristics, such as patience, mutual respect, and fair judgment towards each other, for having an effective relationship. This category included humility, fair judgment about each other, honesty in words and behaviors, commitment to keeping one’s promises, working conscience, compassionate attitude, and patience.

One of the participants maintained: “... A professor is insulted by a student’s behavior but acts patiently. Another professor may get angry soon. Reactions are different... We should overtake students in this area so that they can learn from us... For example, we can be the first ones to say hello; what is the problem? This helps us create a better relationship and gain the students’ trust; the students will tell us their problems and we will help them... Professors should keep their students’ secrets...” (Participant 8, professor).

Professor’s professional competence

Professor’s professional competence was another main category extracted from the interviews conducted with the participants regarding the effective factors in the student-teacher relationship. Most of the participants believed that professors must possess the necessary competencies to build an effective relationship with the students. In this way, students consider their professors as their role models, trust them, and rely on them both scientifically and morally. This category included professor’s scientific proficiency, assistance in nurturing students, and professor’s managerial skills.

One of the participants stated: “In my opinion, professors who manage their classes more efficiently have better relationships with students... Professor’s flexibility is also important in the class; it is important for the class not to be very serious or very funny; these all affect the student-teacher relationship... The professor should also be up-to-date and be able to answer the students’ questions... In this way, the students respect their professors, feel that their professors are knowledgeable, honor their professors, and create better relationships with them...” (Participant 1, student).

Sociocultural factors

Sociocultural factors were among the effective factors in the student-teacher relationship. The present study participants pointed to a wide variety of sociocultural factors, including speaking the same language, different ethnicities, different generations, student’s family and social backgrounds, and education in different environments (sometimes in two different countries), which could affect the student-teacher relationship. This category consisted of the society’s cultural features, family’s impact on a student’s behaviors, students’ various cultural backgrounds, and effects of media and the virtual space on students’ and professors’ behaviors.

One of the participants mentioned: “Adherence to the society’s cultural principles is of particular importance... We say dress code, but the professor does not obey and does not even believe in it; this is the problem... The same is true about students. I had a student 15 years ago. She had a date with a man in the park. She asked me to go and watch them. She was concerned about not following society’s cultural principles... Today, you will laugh if you hear such a story... Nowadays, students do not refer to us for their lessons let alone for family and personal problems...” (Participant 6, professor).

Clinical communication

Clinical communication is another factor influencing the relationship between professor and student, especially in medical universities. According to the participants’ experiences, this relationship is a close and intimate one, and of course in a stressful environment where the teacher and the student have face-to-face and client-centered communication, in cardiovascular departments. This professional communication is more about the patient’s problems and makes the teacher and the student have a more friendly relationship.

One of the participants stated: “Communication in basic science courses has been very one-way and most of the speech is from the teacher, that is, the teacher is the only speaker, but little by little, in the clinic, this relationship becomes two-way, and a closer relationship occurs between the professor and the student. Of course, we must not forget that clinical environments are very stressful...” (Participant 4, student).

Discussion

The study results indicated that adherence to moral values, professor's professional competence, sociocultural factors, and organizational factors were the most important effective factors in the student-teacher relationship.

Based on the current study findings, professors' and students' adherence to moral values was among the effective factors in the student-teacher relationship. Accordingly, adherence to fair judgment, honesty in words and behaviors, and patience could lead to an effective, constructive, and satisfactory relationship. In the same line, Salami et al. disclosed that a professor's adherence to some moral features, such as fair behavior and intimacy with students, could result in better and more stable relationships³³. McLaughlin et al., also reported that the students loved the professors who befriended them, respected them, and empowered their self-confidence³⁴. Similarly, Ghadami et al. (2007) demonstrated that professors' and students' mutual respect, professors' intimate behaviors towards students, and professors' and students' receptiveness were effective in the creation of student-teacher relationships³⁵. Overall, the relationship between professors and students is highly affected by their moral characteristics. Torabizadeh, et al. (2018) stated that professors' and students' interest in each other, professors' intimacy with students, and professors' appropriate reactions to students' questions were among the key indices in the student-teacher relationship³⁶. Based on the above-mentioned findings, the student-teacher relationship does not solely involve knowledge transfer. In addition to scientific issues, students consider their professor's personality as their role model. Thus, students can also learn non-scientific lessons from their professors³⁷.

Professor's competence was another effective factor in the student-teacher relationship. Professors assist students' learning by using their knowledge, texts, and teaching skills as well as by creating an appropriate atmosphere. The professors' characteristics can compensate for the shortages of educational facilities to a great extent. On the other hand, their inability to create proper relationships may change the best teaching opportunities into an inactive and unattractive atmosphere³⁸. A prior investigation revealed that from the students' perspective, the professors' educational and moral characteristics such as rhetoric, teaching skills, scientific level, experience, morality, and respectfulness were the most important factors affecting the creation of relationships, while personal features, appearance, and type of lesson were not effective in this regard³⁹. The present study participants also emphasize the professors' scientific features, such as being up-to-date and proficient, as well as professional features, such as class management and assistance with students' ethical and cultural growth. They believed that these features were effective in student-teacher relationships. According to Hake et al. (2005), out-of-class interactions provided the professors with the opportunity to talk to students about materials or class management techniques and to make students more puissant personally and professionally⁴⁰. Consistently, Gillespie et al. (2002) argued that professors needed to be professional, kind, trustable, and committed to being able

to build proper relationships. Students' characteristics were also quite important in this area. Overall, it was concluded that the professors had to support students to create effective relationships⁴¹. In the current research, the participants mentioned that the professors' competence and communication skills played key roles in the achievement of educational goals. They maintained that professors as influential elements could help students learn via the application of their knowledge and teaching skills as well as the creation of an appropriate atmosphere.

Sociocultural factors were found to be effective in a student-teacher relationship in the present investigation. Accordingly, society's cultural values, individuals' family backgrounds, and religious beliefs, and media factors were highly effective in student-teacher relationships. Ofoghi et al. (2016) reported that students' and professors' social interactions were quite effective in the students' success⁴². Moreover, Mullen et al. (2003) indicated that various factors, including family background, interest in one is major of study, socioeconomic status, race, ethnicity, family's social capital, self-control, family's support, and parents' education levels, could influence students' educational success⁴³. The current study participants also believed that various sociocultural factors, such as parents' education levels, cultural features of an individual's living place, and movies and materials produced and broadcasted in different media, could affect the student-teacher relationships in academic settings. In this regard, Walker et al. (2003) demonstrated that the students who had higher moral literacy and sociocultural richness could gain more knowledge and information from their professors⁴⁴. Another study revealed the effectiveness of students' demographic and personality factors in the improvement of student-teacher relationships⁴⁵.

Conclusion

The present study findings revealed that various factors were effective in a student-teacher relationship in medical sciences. Addressing these factors can help improve student-teacher relationships, which helps students' holistic and scientific growth, eventually satisfying both students and professors. Since the relationship is the basis and core of learning, addressing the aforementioned factors by authorities and educational managers can promote the quantity and quality of student-teacher relationships, lead to students' holistic growth, and satisfy both students and professors.

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Study Limitations: The study also had several limitations. First, the study results may not be generalizable to other teachers and students or other parts of Iran. Second, due to a lack of sufficient research, our methodology was limited to content analysis approaches and qualitative methods. Further studies, with a more representative number of teachers

and students, are suggested. In addition, perhaps combining quantitative and qualitative research methods will contribute to the richness of the work in this field.

Footnotes: Authors' Contribution: L.Z., C.T., and S.E., A.E and S.H participated in study design, data collection, and data analysis. All participated in initial study design, data collection, and data analysis. All authors read and approved the final manuscript.

Conflict of Interests: The authors declare no conflict of interest.

Ethical Approval: This article was extracted from a Ph.D. dissertation in Nursing Education approved by Shiraz University of Medical Sciences (proposal No. 97-01-08-18798). The participants were provided with information about the study objectives, voluntary nature of the research, data collection methods, reasons for recording the data, the roles of the researcher and the participants, the confidentiality of the information, and anonymity before the interviews.

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