



Training Professionalism Using Hidden Curriculum in an Internship Course: Account of Experiences of Undergraduate Students of Surgical Technology

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Abstract

Background: Medical students are in direct contact with patients due to their clinical situation, and one of the important goals of medical education is professional development of these students.

Objectives: The purpose of this study was to explain students' experiences regarding professionalism training using hidden curriculum.

Methods: This study was carried out through content analysis, and data were collected through semi-structured interviews with 6th and 8th semester undergraduate students of surgical technology. The participants were entered into the study using the purposive sampling method and each individual interview lasted for about 35 - 45 minutes. Semi-structured questions were used to conduct the interviews and then follow-up and exploratory questions were used to clarify the concept and to deepen the interview process.

Results: Overall, 358 primary codes and the two main themes of observing patient rights and professional accountability were extracted. The theme of observing patient rights includes three sub-themes, including observing patient privacy, respect for patient's dignity and patient safety, and the theme of professional accountability comprised the three sub-themes of compliance with professional standards, professional communication and instructor as ethics teacher.

Conclusions: Professors' familiarity with the training and development of professionalism among medical students, and attention to the role of hidden curriculum in the formulation of values, norms and behaviors regarding professionalism is suggested.

Keywords: Professionalism, Hidden Curriculum, Explanation, Student

1. Background

Professionalism is defined as the constant and informed use of communication, knowledge, technical skills, clinical reasoning, emotions, values, and reflections in daily performance for personal and social interests (1). It includes a set of views and behaviors that require medical students, physicians and health professionals give priority to patients' interest rather than their own personal benefits. In fact, professionalism can be viewed from the two perspectives of professionalism advantages and the requirements and responsibilities associated with it (2, 3).

Since medical students are directly involved with patients due to their clinical situation, and patients' human

and personal territory is at risk as a result of diagnostic, therapeutic, and medical care activities, it can be stated that one of the important goals of medical education is the development of professionalism among students (4). Universities all over the world, with an emphasis on professionalism education and its important role in shaping professional personality and the related behaviors, consider professionalism training as one of the most challenging issues in medical education (5-8).

Students, in addition to acquiring knowledge and practical skills, need to learn professional attitudes in the formal curriculum (9). In contrast, learning in medical education mostly occurs outside the formal and predeter-

mined curriculum, which is known as hidden curriculum (10). The first description of the term "hidden curriculum" was first used in the 1960s and it has been commonly used in medical sciences education since 1994 (11).

Hafferty and Franks stated that this type of training is a process of transferring ethical culture, norms and principles related to the emotions and behaviors of medical students in the clinical setting. Also, it was acknowledged that only part of this culture is formally transferred to students in curriculum hours, but acceptable values, beliefs and behaviors in medical education are more likely to be established through the hidden curriculum (12). The results of previous studies showed that the hidden curriculum is one of the most important factors influencing the process of teaching and learning in the clinical environment as "the transfer of implicit beliefs, attitudes and unfulfilled behaviors" This curriculum has a great influence on students' professional development (13). In other words, the hidden curriculum is a non-documented and unwritten medical education where professional performance is dictated by the powerful and enduring social and cultural forces that govern the clinical environment (14).

Several researchers have emphasized the importance of hidden curriculum for the professionalism of students, and some even consider it to be stronger than the formal curriculum (9-11, 14), because the hidden curriculum is a powerful tool that can even change confident individuals (15). Some studies have shown that students have identified examples of ethical challenges in clinical settings, and their results indicated the contradiction between what is learned through the formal curriculum and experiences in the clinical setting. In addition, the ethical effects of the hidden curriculum can hinder students from having the right choice in different situations (16, 17).

Results of a qualitative study aimed at using the hidden curriculum for professionalism training among medical students showed that the hidden curriculum is highly powerful in the professional formation and development of students. Students believed that by looking at the unethical and non-professional behavior of faculty members in the clinical setting, they would generally develop a negative attitude toward professors, and in some cases, fundamental changes would occur in their attitude (13). In another research, students considered the hidden curriculum to be as professional and unprofessional behaviors of faculty members (18).

The hidden curriculum causes the formation of professionalism among medical students in clinical situations. Medical students' understanding can reflect the question that: "Is the current teaching and learning process improving their professional behaviors and values?" (19).

The comprehensive program of higher education in

Iranian health system for actualizing the goals of the Health System Development Plan is a strategic document based on which upstream documents such as the 1404 Perspective document, mapping of scientific communities, the Health System Development Plan and the Comprehensive Scientific Health Plan have been developed. One of the major policies outlined in this program is institutionalization of professional ethics in medical education with a focus on developing and implementing a comprehensive hidden curriculum management program to instill professional ethics and professionalism in higher education institutions (20).

In this regard, it can be admitted that students taking clinical and internship courses understand the effects of this phenomenon on their personal and professional development. Due to the different dimensions of the hidden curriculum and its broad role in the development of students' ethical, social and professional personality, it is not possible to use quantitative methods to deeply explore students' living experiences. Undergraduate students in the field of surgical technology are no exception in this regard. According to the curriculum, these students should complete 34 units of internship credit during the undergraduate course, which indicates the extensive presence of these students in clinical situations and the formation of their professionalism in the clinical setting.

2. Objectives

Therefore, the present study aimed to delve into undergraduate surgical technology students' experiences of professionalism training through the hidden curriculum in internship courses.

3. Methods

This study, using the content analysis method, delineates the experiences of undergraduate students of surgical technology of professionalism training through the hidden curriculum in the clinical setting during the academic year of 2011 - 2012. Qualitative content analysis can be considered as a method of subjective contextual interpretation of textual data through systematized and codified processes, thematization, or designing known patterns. This method allows researchers to interpret the originality and truth of the data subjectively, but scientifically (21).

Semi-structured interviews were used to collect the data. The samples were sixth and eighth semester undergraduate students of School of Paramedicine, Golestan University of Medical Sciences, who had history of at least

one internship course in the operating room environment. The samples were selected through the purposive sampling method followed by theoretical sampling. We tried to include those with different experiences and have maximum diversity of data. Sampling was continued until reaching data saturation, meaning that interviews continued until no new data were extracted. Therefore, interviews were conducted with 17 informants and each interview lasted between 35 and 45 minutes. Semi-structured interviews were used to conduct the interviews.

At the beginning of the interviews, the purpose of the study was explained so that the interviewees felt comfortable. Then, the main question was asked. The interviews were held in classrooms and during the students' break time so that the participants would participate more easily and actively. Examples of the questions are as follows: "What do you think of when I say professionalism training or clinical professionalism?", "Have you experienced any professional behaviors in clinical education?", "Who provided these trainings (instructor, staff, surgeon)?", and "Has the hospital's condition affected your professional training? How? Please give me an example?" The rest were follow-up and exploratory questions asked based on the data provided by the participant to clarify the concept and gain a deeper understanding in the interview process.

With coordination and permission of the participants, the entire interview was recorded by a digital voice recorder, and immediately after the completion of the interviews, they were transcribed verbatim. After each interview and before the next interview, the researcher analyzed the data several times. Data analysis was performed using the Graneheim and Lundman method (22). The steps involved in data analysis were as follows. At first, the researcher converted interviews into textual content and read them several times from beginning to end in order to gain recognition of the general flow of knowledge.

Then, all the interviews were considered as the unit of analysis that was to be considered and coded. In the following step, words, sentences and paragraphs were considered as semantic units. Semantic units are a set of words and sentences that are related to each other in terms of content. These units were arranged according to their content. Then, the semantic units reached the level of abstraction and conceptualization according to their latent meaning and were codified. Afterwards, the codes were compared with each other in terms of their similarities and differences and classified under more abstract categories with a specific label. Finally, the categories were compared and contemplated and the latent contents contained in the data were introduced as the main themes.

To ensure the reliability and validity of the data, the proposed criteria of Guba and Lincoln were used (23). The

researcher tried to establish credibility with prolonged engagement and sufficient interaction with the participants as well as verification of the gathered information with them. Dependability was achieved through performing step-by-step replication, collecting and analyzing data, reviewing by the supervising professor and consulting with experts. Confirmability was attained through obtaining the approval of faculty members and using their complementary opinions. Thick description was employed to ensure transferability of the data, that is, their applicability in other areas, and to understand the experiences of students of surgical technology regarding professionalism training using the hidden curriculum in the clinical environment. For this purpose, quotations of the participants are presented as they were expressed.

The present study was conducted during two consecutive educational semesters at Golestan University of Medical Sciences among surgical technology students. After gaining approval from the respective educational department and deputy of research, informed oral consent was obtained from the participants to observe ethical considerations and protect the rights of the participants. Before the interviews were initiated, the students were assured of the confidentiality of the data. The interviews were conducted face-to-face at the students' classrooms at a predetermined time. At the beginning of the study, the participants' demographics were recorded.

4. Results

The participants comprised 17 students of surgical technology, nine of whom had enrolled in the sixth semester and eight in the eighth semester. The mean age of the participants was 21.07 years. After identifying the concepts, 358 primary codes were extracted from the interviews and after several reviews, summaries were categorized based on similarities and proportions. Then, with further reviews and comparison of categories, their latent meaning was identified as the primary theme, and these themes were also named conceptually.

Based on data analysis, the two main themes of observing patient rights and professional accountability were extracted. Observing patient rights contained three sub-themes, namely observing patient privacy, observing patient's dignity and protecting patient safety, and the professional accountability theme had the following sub-themes: Compliance with professional standards, professional communication and instructor as the ethics teacher. It should be noted that some of the basic concepts extracted from different categories overlapped; thus, the authors classified them into some themes according to their greater impact (Table 1).

Table 1. Primary Codes, Subclasses and Main Themes Obtained From Interviews with the Participants

Main Theme	Sub-Themes	Primary Concepts
Professionalism training using the hidden curriculum		
Observing patient rights	Respect patient's privacy, respect for human dignity, and protect patient safety	Maintaining patient coverage, observing gender matching, obtaining informed consent, confidentiality, minimizing errors, ignoring race and ethnicity of patients, accepting patients with any socioeconomic level, observing sterility, preventing the patient from falling, leaving the patient after surgery, observing the standard principles in the use of equipment, having sufficient and updated knowledge
Professional accountability	Compliance with professional standards, professional communication and instructor as an ethics teacher	Having proper appearance in the workplace, observing sterility of the surgical field, being honest in performance, reducing patients' anxiety before surgery, having effective communication, making jokes and a lot of noise when having a patient with local anesthesia, judging patients, joking and using inappropriate words at patients' bedside, instructor's attitude toward patients, giving confidence to students by the instructor in stressful situations, the supportive role of instructor for the patient, the observance of justice by the instructor in caring for patients, decisiveness in cases of error, having a sense of compassion towards the patient, health recommendations of instructors on occupational hazards, familiarity with professional principles of the operating room, having moral literacy

4.1. Respecting Patient Rights

This theme included three sub-themes, namely observing patient privacy, respecting patient's dignity and respecting patient safety, which were derived from students' experiences of professionalism training using the hidden curriculum. Behaviors such as informed consent, confidentiality of patient information, maintaining with patient coverage, compliance with gender-matching in the operating room, and heedfulness while doing procedures to minimize errors in operating room setting. Students considered these factors as their responsibilities and believed that providing these cares can bring patients peace and support.

4.2. Observing Patient Privacy

Students considered one of the components of professional development in the clinic to be patient's privacy observance by the treatment staff in the operating room. Most of the participants knew that protecting patient privacy was important to maintain and build trust and to reduce anxiety and stress among patients before, during and after the operation because of specific patient coverage in the operating room. The solution proposed for this case was the general effort of the operating room personnel, so that the patient also understands compliance with this issue by the treatment staff. One of the participants said, "When a female patient is in the operating room and she is religious, the presence of male personnel can make her anxious as she is naked. The staff try to ensure gender-matching between the patient and the staff in the operating room. In fact, this is a professional behavior and as students, we learn this positive behavior." (participant No. 7, 21-year-old girl).

Some students reported lack of confidentiality in some staff, which is a breach of patient rights and professionalism. A participant stated: "They brought a woman to the cesarean section, she was scared and crying and trembling. The circulating nurse of the room asked her the reason, the patient said that I am afraid of the operation, and I was the second wife and I'm divorcing my husband... The circulating nurse began blaming the patient and said irrelevant stuff to her. Then, she spread the word to everyone, and unfortunately, people went to see who this person was ..." (Participant No. 10, 23-year-old girl).

4.3. Observing Patient's Dignity

Most students found that the consequence of good manners and peaceful communication, regardless of race, religion, age, gender or socioeconomic status, may in some way be a manifestation of reverence for human dignity at the clinical setting. Also, with respectful attitudes and respect for human dignity, satisfaction is seen in the eyes and faces of patients. One of the participants in this regard said: "I do not live in Golestan province, I'm a student here. There are different races and religions in Golestan province (Turkmen, Fars, Kazakhs, Kurds, Sunnis and Shiites, Sistani and Baluch). It's very inspiring when we see that in the operating room none of these are taken into consideration and everyone is the same. Early on, it was very difficult for me, I was a bit racist, but now I see myself the same as others, and none of these factors affect my patient care in the operating room." (Participant No. 2, 23-year-old girl).

Another participant said: "When I talk with my patient respectfully or calmly, or even move him to his bed slowly and carefully, I see satisfaction from his look and smile." (Participant No. 15, 22-year-old boy).

4.4. Preserving Patient Safety

Observing patient safety in the operating room environment in a variety of ways, including sterilization, unconscious patient care, and use of advanced equipment, is of utmost importance. The studied students were in direct contact with these complicated situations. They considered observing patient safety standards among the factors affecting quality of care in the operating room, which benefit patients and prevent harm. By carefully observing the proper functioning of each other, while preserving patient safety, professionalism is mastered in a hidden way. One of the participants in this regard stated: "I'm always very careful about gauze count and appliances. The instructor always emphasizes that a professional technologist should be fully conscious of gauze count and equipment in any circumstances. If the personnel forget to do so, I would remind them of that. Under no circumstances will I leave the patient alone until the time of delivery to the recovery room, because the chance of patient fall in the operating room is too high." (Participant No. 1, 22-year-old girl).

Students had experiences at patient's bedside that were indicative of maintenance of patient safety and learning of professionalism. They pointed out that working according to scientific principles and having sufficient knowledge about anatomy, surgical equipment and patient safety are important to become a professional. A participant added: "Work must be accompanied with sufficient knowledge and expertise. Based on books and references ... sterilization, mastery of anatomy, knowledge of surgical instruments and patient safety tips are very important in the operating room ... It is possible, for example, not knowing the correct positioning of the patient and protecting the patient's nerves in different positions, an irreversible event happens for the patient. When we see a surgeon, for example, is sensitive to supporting the patient's organs in laminectomy, it creates a sort of sensitivity in us and it's a form of learning." (Participant No. 8, 23-year-old girl).

4.5. Professional Accountability

This theme consists of three sub-themes of compliance with professional standards, professional communication and instructor as ethics teacher, which includes students' professional training experiences using the hidden curriculum in the clinic. They acknowledged that in addition to acquiring knowledge and learning specific skills, they should learn the attitudes and values of their field of study. Also, they believed that in response to community and accountability, their performance should be based on standards and professional principles, which can be actualized

through conducting themselves towards respect for professional promotion. A participant mentioned: "The factors that make up professional behaviors and create professional status in the community are first of all, appearance that is very important in the operating room environment and then meeting the standards of the profession. As a result, others see that we behave and act in a professional manner." (Participant 12, 23-year-old girl).

4.6. Compliance with Professional Standards

Most students have stated that one of the important issues in maintaining professional standards in the operating room environment is sterilization in the operating room environment and during surgery. According to the students' views, this concept is closely linked to one of the areas of professional ethics and students' professionalism known as honesty in performance. They stated that honesty plays a significant role in maintaining professional standards. A student stated: "Once, one of the circulatory staff unsterilized the surgical field, although I saw it and told her, she pretended she didn't hear me and continued, but I told the instructor, or once again, a surgeon's glove was torn and nobody had noticed, I informed him and he was so pleased. Sterility is a very important matter and must be respected." (Participant 12, 23-year-old girl).

Another participant stated: "I think we should be careful about keeping the environment sterilized and complying with professional standards. Sometimes, students do not announce it when they unsterilized the field or do something substandard because of fear, but anyone who unsterilized the field must declare even if it results in bad behaviors or punishments because not declaring it is so unprofessional." (Participant No. 1, 22-year-old girl). Another student added: "Surgeons and other members of the health care team should take care of their gowns, sometimes their gowns touch the ground while they are trying to wear them, but they don't care... or they wear nail polish in the operating room ... surely, the patient and the responsibility they have are not important to them." (Participant No. 5, 23-year-old boy).

4.7. Establishing Professional Communication

Many students considered the ability to communicate properly and to establish interpersonal communication among the responsibilities of operating room staff. They acknowledged that effective communication between staff, surgeons, patients, students, or even instructors could have a profound effect on the quality of care due to the existence of a complex group work in the pursuit of patient's therapeutic goals, and it reflects professionalism in the clinical setting. A participant stated: "When

we accept a responsibility, we must consider all its consequences and take into account all aspects of professionalism. Being professional is defined in ethics and proper behaviors with classmates, personnel, and patients." (Participant 12, 23-year-old girl). "Unfortunately, in the operating room there is a lot of unprofessional communication that has an adverse effect on our profession, and I do not like it at all, but I see a lot of students do the same thing. For example, a surgeon shouts at the staff or students for any reason, or when the patient is conscious, the surgical team joke and have unprofessional conversations. In all of this, effective communication between the surgical team is undermined, and ultimately, the quality of care and our profession are degraded." (Participant No. 6, 24-year-old boy).

Most participants believed that proper treatment, empathy with patients, and creating mental relaxation in patients had a profound effect on professionalism. "Proper behavior with patients, such as kindness and compassion, is one of the key principles of professional ethics and professionalism. I always try to accompany the patient to the operating room bed and try to give her peace of mind and lower her anxiety." (Participant No. 17, 22-year-old girl).

4.8. Instructor as Ethics Teacher

Students' experiences in this field indicate that the instructor in the clinical setting plays an important role as an ethics teacher. The relationship between the instructor and his/her students and the health care team as well as his/her professional performance have been introduced as an ethics model. Instructors teach ethics and professionalism directly and, in some cases, indirectly and unwittingly. "I think the instructor can be very good at teaching ethics and professionalism with his behaviors and performance, which makes me able to reinforce this behavior in myself, for example, when the instructor acts very calmly and decisively in cases of unsterilization, it's very important to me." (Participant No. 7, 21-year-old girl). "Instructors are like our models. One of the instructors taught us about professionalism and truly acted upon it." (Participant No. 14, 22-year-old girl).

"A patient had cesarean section and was stressed. Our instructor took her hand and talked to her and gave her a massage for a bit. At last, the patient became very relaxed and prayed for her." (Participant 11, 21-year-old boy).

5. Discussion

In the present study, we investigated students' experiences of professionalism training in clinical settings with respect to the role of hidden curriculum in the professionalization process. The results of the experiences of surgi-

cal technology students regarding professionalism training using the hidden curriculum while passing the internship course consisted of two main themes: Respecting patient rights and professional accountability. The theme of patient rights was composed of three sub-themes including patient privacy, respect for human dignity, and patient safety.

One of the findings of this study was learning the principles of respecting patient rights in the clinic, such as confidentiality and respecting patient's privacy. The first condition for observing patient rights is to have sufficient knowledge of patient rights in the operating room. The results of many studies show that students of various fields of medical sciences often witness unethical conduct by health providers during their studies and are placed in positions where they are forced to have an unethical action. Therefore, students' awareness of the patient rights is very important in the clinical setting (24-26).

In the study of Karimyar Jahromi et al. 60% of students considered professors as the source of their knowledge of patient rights (27). Heshmati and Darvispour concluded in their research that the causes of non-observance of patient rights and dignity in medical centers were personnel's unawareness (28). Mirmoghtadaie et al. also ascribed that, based on the viewpoint of students and professors in the clinical setting, continuous education and updating of the target group in this regard could boost ethical decision-making and sustained practice could enhance professionalism (29). What is important is that learning ethical principles is not enough for medical students, but adherence to these principles is also of paramount importance as it can be effective in promoting community health and quality of patient care.

Another notable concept extracted from the interviews is the concept of patient privacy in the operating room. In general, respect for privacy is one of the fundamental rights of every human being. Attention is paid to the dignity and privacy of patients in all religions and cultures, and even in countries where the issue of hijab does not exist, observance of patient privacy in their therapeutic systems is very much considered (30).

In this regard, the United Kingdom's national health service regarding patient rights states that women should always have access to a female care taker and have a companion of their own gender. Personnel examining a patient should be of the same gender or a companion of the same gender should be present there (31). In the study of Dehghani et al., the level of respect for patient privacy was moderate. They stated that in order to increase patients' trust and satisfaction and improve the services provided, the observance of patient privacy should be emphasized by the clinical staff (32).

By conducting a study on patient-centered human care, Jouzi et al. referred to the theme of having a human look to patients. Participants based on their experiences expressed that a competent student is one who is able to communicate with the patient appropriately and, after gaining trust and while respecting patient's privacy, use care programs according to requirements and needs (33).

In the present study, the results of the analysis of students' experiences showed that compliance with gender matching and patient privacy in the operating room environment are very important because of the special coverage of the patient, which can cause anxiety in patients, especially among women. Also, it seems that the need to generalize and extend the range of gender matching is felt more in the operating room environment because patient's coverage is lower due to treatment needs.

Mostaghimi et al. reported that the perception of patient privacy, patient information confidentiality, and mandatory constraints regarding the use of social media in the clinical setting as acceptable behaviors is influenced by a variety of factors. Modifying behaviors of undergraduate students requires a cultural change toward continued medical education in this area and frequent reminders for faculty members, students and clinical staff. Students who see unprofessional behaviors are more likely to engage in these kinds of behaviors (34).

Since the operating room is the heart of every hospital, observance of safety precautions to prevent the consequences of medical errors has always been considered (35). Although many interventions have been undertaken in recent years to reduce medical errors and improve patient safety, the organizational culture governing the healthcare environment remains one of the major barriers to patient safety culture. The patient safety culture is a set of individual values and beliefs about patient safety rooted in the culture of that organization. In the literature concerning observing patient safety and having patient safety culture, education has been emphasized (36).

One of the ways to improve patient safety and promote culture is to change the educational preparation of medical sciences students. Medical education included patient safety in its agenda through changing the curriculum and emphasizing patient safety. The students also acknowledged that one of professionalism principles in the clinical setting is to maintain patient safety. The results of studies conducted in this area indicated that students are constantly focused on proper procedures and routine responsibilities and are less concerned with dealing with patients' needs and concerns, which are part of the patient safety concept (37). A possible reason is that less clinical education focuses on patient-centered care values and provides

inadequate training on person-centered skills (32).

Another theme in the present study was professional accountability with the three sub-themes of compliance with professional standards, professional communication and instructor as ethics teacher. The students' experiences while learning professionalism showed that the instructor as an ethics teacher can play a significant role in training professionalism in the clinical setting through formal and hidden training. In a research accounting professionalism in medical students, in the main theme of cultural factors, the subthemes of clinical modeling (factors associated with the professor), students' intrinsic and acquired factors, environmental conditions, and human factors were introduced. Clinical experiences, modeling behaviors of faculty members and medical staff, and formal lectures on professional ethics were all the basis for individual development in the field of professional ethics, and clinical experiences and modeling were considered as more important roles (29).

Haider et al. also stated that professionalism and professional communication are shaped by proper education, creation of an environment for the facilitation of learning by the teacher, patient care and pursuit of professional growth (38). As a result, teacher-student interaction, especially at the patient's bedside and the educational clinic, plays an important role in shaping the student's personality and creating self-confidence, which indirectly affects the way in which he / she behaves with the patient (39). Mossallanejad and Morshed Behbahani also emphasized the importance and impact of the professional attributes of professors on learners and stated that they are very effective in creating educational motivation, ethical and human attitudes, and human skills (40). This dimension was also emphasized in areas where professors are considered as a model and the impact of different dimensions of morality and personality are highlighted.

Each member of the medical staff is responsible for the community and for ensuring that his performance is in accordance with the standards and professional principles. Today, one of the most important indicators of hospitals' superiority is their level of accountability and responsiveness of their employees (25).

Students in this study considered themselves accountable and responsible for the community, and one of the educational concepts learned in the clinical environment was responsibility. Factors such as listening to the patient, observing politeness, respect and kindness, gaining patient's trust with honesty, confidentiality, empathy and accessibility, being purposeful in providing care, maintaining patient-centeredness, and using simple and concise sentences and not complex medical terms can contribute to accountability and effective communication in a thera-

peutic and professional relationship (26, 27). This was in agreement with the results of the present study, and these are the factors students learn in clinical education and on the route to professional development.

Finally, it can be admitted that the hidden curriculum makes medical education instructors believe that medical education institutions have a cultural identity and as a kind of ethical society define "good" and "bad" concepts in medicine for students. Most importantly, the concept of hidden curriculum makes medical educators see it as a cultural process that is permanently influenced by external forces and internal problems and factors. Therefore, the main challenge for medical education professionals is to perceive what messages are transmitted by the structures they create or develop, and what effects they can have, especially in terms of professionalism (39). Considering that most surgical technology students, like other medical sciences students, learn educational concepts in clinical settings, their observations and experiences in this environment can affect their attitudes toward their field of study, future occupation and their professionalism process.

Given the qualitative nature of the present research, there was the possibility of forgetting some experiences or unwillingness of students to express their real experiences and emotions that could be considered as a limitation of the research. Also, considering that the study was performed at one faculty only, we suggest performing this study in other faculties and regions to facilitate more comprehensive planning and provide a more favorable environment for learning professionalism using the hidden curriculum.

5.1. Conclusions

The participants presented two main themes and six sub-themes as concepts learned in clinical education. These lessons are more in the form of hidden curriculum and reflect the importance of the hidden curriculum and the tacit transfer of professionalism characteristics. In this context, positive and negative experiences in professional learning have been reported in clinical education. Negative experiences can lead to unprofessional and unethical behaviors and have a negative educational effect on the formation of professional behaviors. Therefore, it is necessary to accurately and continuously identify the hidden curriculum, and in addition to direct teaching of professionalism, solutions should be put forward to counteract the negative consequences and strengthen the positive outcomes of the hidden curriculum. Targeted clinical education in line with professionalism education, further familiarity of professors with professionalism and the role of the hidden curriculum in this regard, attention to emulation of values, norms and attitudes by students, integra-

tion of professional criteria in evaluation forms, systemic monitoring of students and professors' performance and performing interventional studies are suggested.

Supplementary Material

Supplementary material(s) is available [here](#) [To read supplementary materials, please refer to the journal website and open PDF/HTML].

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Footnotes

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