

Surgical Technologists' Live Experiences of Professionalization: A Phenomenological Study

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Abstract

Background: The rapid advancement of science and new technologies has brought wide-range changes in all professions, leading to the emergence of new concepts, including professionalism. This study aimed to explain the concept of professionalism from the perspective of surgical technologists.

Methods: The present study was a qualitative one with conventional content analysis. A total of 11 surgical technologists were selected using purposive sampling method based on data saturation. Data were then collected using in-depth interviews. Data analysis was performed using Graneheim and Lundman's approach.

Results: In data analysis, three main themes including professional attitude, professional mastery, and holistic professional care as well as seven subthemes were extracted from the data.

Conclusion: According to the findings, professionalism indicates the type of attitude of the operating room nurses towards the profession as well as the degree of their mastery in providing professional care to patients.

Keywords: Professionalism, Operating room nursing, Qualitative research

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Introduction

The operating room is one of the most complex work environments in the health care system. This complexity is evident in patient issues and treatment protocols, as well as the use of high technology in the operating room (1). The operating room staff work in a complex environment where technology and performance are constantly changing; thus, they need more competencies to provide quality care to clients (2).

Surgical technologists, as a part of the surgical team, play an important role in patient care. Some of the postoperative problems that patients may encounter are caused by the inexperienced operating room staff. Despite their small number, these problems may lead to patient's death (3). The performance of surgical technologists mostly depends on their scientific and clinical skills. Therefore, it is necessary to enhance the knowledge and skills of nurses in the operating room environment (1). The operating room environment requires those nurses who can independently work with high qualifications and professionalism. Working in the operating room is a professional activity due to the multiplicity and complexity of roles, which requires senses of responsibility, accuracy, and vigilance (4). Moreover, shortcomings in the training of this group will consequently affect the quality and

quantity of health services and might ultimately lead to people's health (5). According to what has been previously stated, training professional staff prior to working in the operating room is one of the important responsibilities of the health care system (6). Professionalism is especially important in creating standards of nursing care and providing quality services. Nurses who follow the principles of professionalism show more adherence to clinical standards and have higher technical competence (7). Since the status of professionalism in nursing has been recently developed, and given that professionalism in different wards of each hospital can have different meanings and concepts, it is essential to analyze the concept of professionalism first. Although various studies have been conducted on professionalism in nursing, to the best of the researchers' knowledge, no study has investigated professionalism in the operating room. Therefore, it is necessary to conduct studies in this field to clarify the concept of professionalism in the operating room and use the results to train professional staff prior to working in the operating room so as to provide better services to patients.

Methods

In this study, the experiences of 11 Surgical technologists



working in the hospitals affiliated with Hamadan University of Medical Sciences were investigated using conventional content analysis. Participants were selected using purposive sampling with maximum diversity in terms of work experience, field of work, and gender. The characteristics of the participants are presented in Table 1. The inclusion criteria were having a bachelor's or a master's degree in the fields related to surgery, having at least one year of experience in the operating room, and willingness to participate in the study. Semi-structured interviews were used to collect the required data. The interviews were conducted individually, each lasting between 45 and 90 minutes, and at the time and place convenient for the participants, from July to November 2016. The interviews started by asking some questions such as "what does it mean to you to become a professional person in a clinical setting?", "What comes to your mind when you hear the word professional?", "Can you share your experiences of becoming a professional person and professional performance in your workplace?" Additionally, several probing questions were asked such as "what do you mean?" The interviews were then transcribed verbatim in Microsoft Word and prepared for analysis. In this study, data analysis was performed using Graneheim and Lundman's approach. This approach includes five steps for analyzing the content of qualitative data: 1. Transcribing the entire interview immediately after each interview, 2. Reading the entire text several times to get an overall understanding of its content, 3. Determining semantic units and basic codes, 4. Classifying primary codes in more comprehensive categories, and 5. Determining the main theme of the categories (8). After transcribing, the text of each interview was read several times to get a general understanding of its content. Then, the semantic units were identified according to the study objectives and primary codes were extracted from them. The codes were categorized in terms of similarities and differences, forming main categories and subcategories, and this process continued until the main categories were extracted.

Four criteria of credibility, confirmability, dependability, and transferability were used to increase rigor of the study (9). To ensure credibility, the researcher was continuously involved with the data and the participants for a long time. Therefore, the review technique by the participants was used. Furthermore, peer review method was used for confirmability. In this way, after initial coding and class formation, the researcher provided the initial codes and the analyzed data to his teammates for evaluation and correction. To ensure dependability, the researcher checked the findings by observers and participants. Then, some parts of the interview text were sent to participants and emerging classes were provided to several observers to review the analysis and comment on its accuracy. Sampling with maximum variability was used to provide transferability. Besides, written informed consent was obtained from the participants to participate in the study.

Results

In the present study, after interviewing 11 participants (7 men and 4 women), data were saturated. The analysis of the data revealed three main themes and seven subthemes (Table 2). Each subtheme is elaborated with an example of the participants' statements as follows:

Professional attitude

Attitude is a state of mental and psychological preparation organized through experience and has a direct and dynamic effect on an individual's reaction to all issues and situations related to his/her attitude. Professionalism is a set of attitudes that demonstrate the recognition of and commitment to a particular job. In this study, professional attitude was divided into two subthemes including work engagement and professional insight.

Work engagement

work engagement was one of the subthemes of the professional attitude towards the concept of professionalism, and surgical technologists included

Table 1. The characteristics of the study participants

Participant No.	Gender	Education level	Age (year)	Work Experience (year)	Ward
P1	Female	Master's degree	32	10	Obstetrics
P2	Male	Bachelor's degree	42	18	Plastic surgery
P3	Male	Master's degree	28	5	Orthopedics
P4	Male	Master's degree	42	18	Urology
P5	Male	Bachelor's degree	39	18	Neurosurgery
P6	Male	Bachelor's degree	43	21	Eye surgery
P7	Female	Bachelor's degree	36	13	Heart surgery
P8	Male	Bachelor's degree	34	10	Heart surgery
P9	Male	Bachelor's degree	43	22	Heart surgery
P10	Female	Master's degree	48	24	Obstetrics
P11	Female	Bachelor's degree	50	27	Eye surgery

Table 2. Professionalism themes and subthemes as experienced by surgical technologists

Main themes	Sub themes
Professional attitude	Work engagement
	Professional insight
Professional mastery	Professional knowledge
	Professional performance
Holistic professional care	Professional care
	Evidence-based care
	Spiritual care

in this study considered it as the first important factor effective in becoming a professional. From the participants' point of view, motivation is created by having an interest in the job; thus, a person tries to become a professional and achieve the goals of the organization. Interest leads to flexibility in work time and insistence on doing works. In this regard, a participant stated,

"... We have a colleague working with a lot of love and affection. A few days ago, we had a surgery that lasted until 5 pm. Our colleague finished his shift at 2 o'clock, but stayed until the end of the operation. It has happened many times; when he sees the team needs help, he always helps..." (Participant 6).

Professional insight

Insight means having awareness and a correct understanding of one's self and surroundings. The participants stated that recognizing their abilities is important, because people must be aware of their physical and mental conditions. Moreover, working in the operating room is difficult and people must see in themselves the ability to perform tasks and responsibilities in this environment. For example, one of the participants stated,

"...Once, while giving an injection to a patient, I got a needlestick and my glove was punctured. Well, no one saw this, but I thought to myself that maybe this would cause the patient to become infected. Then, my conscience did not allow me to be indifferent and I told my colleague, 'My gloves are not sterile, bring me another one'..." (Participant 11).

Professional mastery

Professional mastery requires a comprehensive knowledge of the profession, complemented by a known ability of using that knowledge to achieve the desired goals. In fact, professional mastery is essentially personal and consists of two interconnected elements as knowledge and experience. To achieve professional mastery, the right balance must be struck between acquiring knowledge and applying that knowledge in practice. In the present study, professional mastery was categorized into two subthemes of professional knowledge and professional performance.

Professional knowledge

Today, knowledge is the most important strategic resource of medical centers. Due to the specific nature of the services provided to patients in different wards of the hospital, the professional knowledge required in each field plays an important role in the quality of the provided care. In this study, the participants believed that in order to do a job in the best way possible, one must learn the theoretical knowledge at first. Everyone stressed that learning the basic sciences of surgical technology is essential for surgical technologists. In this regard, one of the participants stated,

"... We have a colleague who knows a lot, knows the anatomy of the body very well, and knows where each single nerve or artery exactly goes. He always explains to the rest of his colleagues where these nerves come from and where they go..." (Participant 5).

Professional performance

Professional performance is a combination of the characteristics of a professional job, describing the values that a profession upholds. To provide quality care to patients who are candidates for surgery, surgical technologists must have a sound scientific background and be able to apply this knowledge in the clinical setting. In this regard, one of the participants stated,

"... When I read a new subject in a book, I try to use that new thing. Of course, I am careful that it would not be dangerous. For example, once I read that it is better to use plastic suture instead of simple suture for cholecystectomy, then I told the doctor and he accepted. We care a lot for appearance, especially for women..." (Participant 2).

Holistic professional care

Holistic care integrates all the physical, mental, and emotional needs of a patient. Holistic professional care leads to obtaining a better understanding of patient's problems and the provision of specialized and comprehensive patient care. In the present study, holistic professional care was subdivided into three subthemes including professional care, evidence-based care, and spiritual care.

Professional care

Professional care means providing specialized care to patients based on the scientific principles. Accordingly, providing proper care to patients to maintain their safety in the operating room is considered the main task of surgical technologists. The participants stated that patient care in the operating room can be categorized into preoperative, intraoperative, and postoperative care. In regard with preoperative care, one of the participants said,

"... I always go to the station before the operation and read the patient's file to see exactly what problems each

patient has and on which side the surgery must be done. Sometimes, some points in the file lead the plan to change. For example, once it was written in a patient's file that his right foot had a problem, I was careful to put the electrocautery plate on his left foot ..." (Participant 5).

Evidence-based care

In evidence-based care, the individual makes the right decision and provides the right care based on the results of clinical research, his/her clinical skills, and the patient's condition. The processes of systematic diagnosis and accurate evaluation are followed by the dissemination of the use of research findings to affect clinical activities. Its persistence is shaped by the changes in care standards, which ultimately has positive effects on clinical interventions. In this regard, one of the participants stated, *"...Sometimes, we talk about scientific things during performing surgery. Anyone who reads something, talks about it there, and sometimes we criticize it. For example, a few days ago, a colleague said that he read something in an article. Although I cannot remember what it was, the doctor said this is not possible at all or this does not work in our hospitals ..."* (Participant 9).

Spiritual care

In spiritual care, the emotional and spiritual needs of patients are considered. Some people try to create a peaceful environment by remembering God and the prophets, praying, and creating a spiritual atmosphere in the operating room. Surgical technologists believe that if the work environment is affected by some positive waves such as paying attention to spiritual issues like praying and having trust in God, things will be done in the best way. In this regard, a participant stated,

"...Once one of our patients was a child and his parents were very worried. I told them to trust in God and leave their children to Him. Well, to be honest, I was also stressed because when the patient is a child, the sensitivity of the operation is higher. So, I prayed myself. Thank God, the surgery was done very well..." (Participant 6).

Discussion

This study aimed to explore the surgical technologists' experiences of becoming a professional person. Some of the findings of this study can be combined with the findings of other studies performed in this field to obtain a better understanding of the concept of professionalism. Moreover, the concept of professionalism includes the main themes of professional attitude, professional mastery, and holistic professional care.

Professional attitude consists of two subthemes including work engagement and professional insight. Technologists considered work engagement an important factor in becoming a professional person, and being

interested in the job was considered the main factor in motivating people to move towards professionalism. In this regard, in a study on nurses' attitude towards professionalization and its influential factors, Shohani and Zamanzadeh concluded that students' personal interest and motivation can have significant impacts on professionalism (10). Moreover, Jalil et al, in a qualitative study on young physicians' perspectives about professionalization, stated that people who are interested in their profession, perform better at work and provide quality care to patients (11). Therefore, having interest in work can increase people's efficiency in the clinical environment and also facilitate their movement towards professionalism. Moreover, professional insight was found as one of the subthemes of becoming a professional person. In this regard, surgical technologists believed that with self-awareness, professional insight could be created. In fact, by knowing one's self and abilities, people can adapt to their profession. In a similar vein, the study by Charania et al indicated that self-awareness and self-assessment lead to the recognition of strengths, weaknesses, and shortcomings of learning process. In fact, a person realistically examines his/her weaknesses and then tries to eliminate them, which is known as an important step effective in increasing self-confidence and professionalism (12). Respect of medical staff for their profession consequently affects their caring behaviors and leads them to provide quality care to patients (13). It was also shown that interest in the profession makes one try to compensate for the lack of science, skills, and equipment. According to the attitude theory, people who have a positive attitude towards their jobs and organizations are motivated to stay in their jobs and work better (14).

In this study, professional mastery consisted of two subthemes including professional knowledge and professional practice. Surgical technologists believed that scientific knowledge and literacy are essential to provide proper patient care. In a study on analyzing the concept of professionalism in nursing, Lee and Kim showed that nursing knowledge is the first factor needed in nurses' professionalization (15). Similarly, Kamali et al showed professional knowledge is a subtheme of professional evidence observed in the performance of professional people (16). In fact, health care providers choose the best treatment for the patient based on up-to-date knowledge and science. Therefore, receiving professional knowledge is known as a prerequisite for people to have professional performance. Applying theoretical knowledge in the clinical environment leads to an appropriate and effective performance (13). Since professional practice can bring some positive consequences for patients, it has become a key issue in health care system (17). Alexis et al indicated that mortality rate is lower in hospitals with good professional performance (18). In addition, Merlo et al, in a study on a professional curriculum

to strengthen the formation of professional identity, showed that the development of clinical skills and gaining experience in this regard can have a significant impact on professionalization (19). Furthermore, Kamali et al concluded that being aware of job description and proper performance of duties and responsibilities are important factors effective in developing professional performance in nurses (16).

In this study, holistic professional care was divided into three subthemes including professional care, evidence-based care, and spiritual care. Surgical technologists considered providing comprehensive patient care as well as maintaining patient safety in the operating room as their main tasks. Surgical technologists at all stages of surgery should monitor the patient's condition and accordingly take the best care of the patient. Fatemi et al., in their qualitative study, mentioned quality improvement and adherence to patient care standards as the main themes of professionalism in nursing (20). Lee and Kim also pointed to the abilities of solving problems and providing appropriate solutions to patients' problems as the characteristics of professionals in the operating room (15). Surgical technologists have previously described critical thinking in the team as well as the use of new scientific findings and their application during surgery as important steps effective in improving the quality of patient care. Huynh and Chung concluded that providing evidence-based care to patients who are candidates for surgery can lead to better results for patients (21). In this study, the participants believed that professionals also considered paying attention to the mental needs of patients as their duty. In this regard, Kim and Sim in a study showed that professional nurses communicate with patients before surgery and reduce their stress (22). Besides, paying attention to God can reduce patients' stress and create peace (23).

This study was conducted with some limitations. First, qualitative research is highly dependent on the researcher's observations, and as numerical data are rarely used, the validity of the researcher's conclusions cannot be controlled. Moreover, since only one situation was observed, it is not possible to generalize the results.

Conclusion

Based on the findings of the present study, it can be concluded that having a positive attitude towards a profession can be considered an important motivation for people to become professional. If people are interested in their work, they will acquire the desired knowledge in that field and by presenting this knowledge and increasing their clinical skills, they will consequently provide comprehensive care to patients.

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Conflict of Interests

There is no conflict of interest in this study.

Ethical Issues

This study was approved by the ethics committee of Hamadan University of Medical Sciences (IR.UMSHA.REC.1398.844).

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