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Factors of increasing learner motivation in simulation-based education in continuing education for nurses

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Abstract

Background: Continuing education affects nursing skills and care specific to nurses, as well as learning attitudes, including learner autonomy. Simulation-based education is reported to create motivation for learners.

Purpose: This study aims to determine the factors that motivated participants in a continuing education program for nurses to learn through the program.

Methods: This study used a qualitative design. Participants were 10 graduates who had participated in a continuing education program. Data collection used a focus interview, with the content categorized based on similarities.

Results: The results of this study identified two categories: Factors Related to Educational Design and Factors related to the learning environment.

Conclusion: In continuing education for nurses, the study suggested that relating the simulation theme to daily nursing practices influences the motivation to learn. Another strength of the continuing education for nurses is as the facilitators are familiar faculty members, which creates an enjoyable learning atmosphere.

Keywords: Continuing education for nurses; Learner motivation; Simulation-based education; Nursing education

1. Introduction

Due to the increasing sophistication of medical care and the shortening of hospital stays, clinical nurses are required to possess well developed clinical judgment and practical nursing skills. Continuing education is important for nurses to improve the quality and develop their skills as nurses also after graduation from nursing school. In Japan, the Japanese Nursing Association provides standards for continuing education and many medical institutions and nursing schools provide such programs [1]. Simulation-based education is often adopted in education.

Simulation-based education is a pedagogical approach to provide students with the opportunity to practice learned skills in real-life situations [2]. Unlike classroom lectures, in which students listen to lectures given by instructors, learners obtain information, assess situations, and practice medical treatment and care by themselves in a setting that replicates actual clinical situations. They then reflect on their experiences, discuss with other learners, and consider optimal care approaches.

There are many reports of continuing education for nurses that incorporate Simulation-based education. Improved peripheral IV knowledge and skills [3], improved knowledge of cardiac arrest reactions and confidence in

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communication and assessment skills [4], self-efficacy and self-awareness related to responding in a rapidly changing situation in the NICU and leadership qualities [5] have been reported. Competency-based continuing education programs are based on principles of adult learning and contribute to a culture of autonomy and empowerment [6]. Simulation-based education in continuing education both improves knowledge, skills, and problem-solving abilities useful in clinical practice, and also has many other benefits, including for communication, leadership, and other non-technical skills, as well as it affects the sense of self-efficacy and autonomy of nurses. It is a meaningful learning method for the continuing development of nurses who are active in clinical practice.

Learning motivation is important to achieve learning goals in education, and in nursing various educational methods are used to motivate students to learn. The CBL (Case-Based Learning) method applied through multi-episode cases is an effective approach to improve the perceived problem-solving ability and learning motivation of nursing students [7]. The TBL (Team-Based Learning) is an effective method for fostering student motivation and independence in learning [8]. Compared with traditional flipped classrooms, gamified flipped classrooms improve nursing student motivation, intensity of preparation, skills knowledge, and self-confidence during laboratory clinical practice [9].

Additionally, Simulation-based education is reported to create motivation for learners as it is an active learning experience [10, 11]. Further, because simulation-based education stresses reflection on the learner experience, the learner initiative is central, and the active involvement of the learner in the learning process depends on willingness to learn. In summary, motivating learners to learn is important for the achievement of learning goals.

The institution the authors belong to organizes continuing education utilizing simulation-based education for the purpose of career development of graduates. Identifying the factors that motivate participating learners to learn here will provide clues for implementing more effective continuing education programs for learners. From the above, it is important to focus on the factors that motivate learners to learn in continuing education programs. This study aims to determine the factors that motivated participants in a continuing education program for nurses to learn through the program.

2. Methods

2.1. Participants

The recruitment period for this study was from April 16 of 2018 to December 20 of 2019. Study participants were 10 graduates who had participated in a continuing education program offered by the institution the authors belong to.

2.2. Data collection

The data collection period was from May 21 of 2018 to January 31 of 2020,the method consisted of two focus group interviews with six and four participants. During the interviews, the participants were asked to discuss their learning situation and their motivation to learn throughout the training. The focus group interviews were semi-structured and took about 90 minutes to conduct. Next, an additional 30-minute interview was conducted on the content that needed further elaboration.

2.3. Outline of continuing education programs

The simulation-based Education here was designed with reference to the Standards of Best Practice by the International Nursing Association of Clinical and Simulation Learning [12].

2.4. Practicum

The Participants were grouped (4 to 5 participants per group) with one participant as leading the group and participating in the simulation session, and the others observed the simulation session and participated in the debriefing. The second simulation session was conducted by another participant. The researcher was involved in the program as a facilitator. The topics were either “Care for Patients with Heart Disease” or “Care for Patients with Respiratory Failure.” The topics were either “Care of the Cardiac Patient” or “Care of the Patient with Respiratory Failure,” and were defined as dealing with patients whose condition was not changing rapidly, but who were showing signs of deterioration.

2.5. Learning goals

For all programs, the following two learning goals were established. Each group will be able to create a care plan for patients. To conduct simulation-based on the care plan created on the first time, and to evaluate and modify the plan through debriefing.

2.6. Simulated patient

We used a high-fidelity simulator that reproduced postoperative physical conditions. The facilitator played the role of the voice of the patient through a speaker.

2.7. Outline

Each session was comprised of the following activities: briefing to confirm the learning goals and simulation themes (15 minutes), strategy meeting to discuss care plans by sharing patient understanding (60 minutes), first simulation-based on the participants care plans (10 minutes), debriefing to discuss whether the plan and simulation were appropriate (30 minutes), second simulation by another participants (10 minutes), and debriefing to reflect the second simulation (30 minutes).

2.8. Data analysis

The interview was transcribed verbatim and repeatedly perused as requested by the researchers. The content was then analyzed from the perspective of motivation to learn, and categorized based on similarities.

2.9. Ethics considerations

After obtaining approval from the Ethics Review Committee (Approval Number: 13-2), the purpose, methods, anonymity, and cooperation being voluntary were fully explained orally and in writing, and written consent was obtained before the study was conducted

3. Results

Study participants were 9 women and 1 man with 1-5 years of clinical experience (Table1). The participants belonged to various wards, including intensive care units, surgical wards, and medical wards. The number of times they had participated in continuing education was one or two times. The analysis identified five subcategories and two categories in the data (Table 2).

Table 1 Characteristics of Study Participants (n = 10)

Participant	Sex	Assigned place of work	Number of participations	Years of experience as a nurse
A	Female	Intensive Care Unit	1	2
B	Female	Emergency Ward	1	3
C	Female	General Surgical Ward	1	1
D	Female	Intensive Care Unit	1	1
E	Female	Operation Room	2	5
F	Female	Internal Medicine Ward	1	4
G	Female	Internal Medicine Ward	1	4
H	Female,	General Surgical Ward	1	4
I	Female	Internal Medicine Ward	1	4
J	Male	Intensive Care Unit	2	5

Table 2 Factors that Motivate Participants to Learn

Category	Subcategory	Code
Factors Related to Educational Design	Interest in the educational program	The theme is attractive
		Easy participation in training without prior tasks
		Interesting simulators
		The handouts are motivating.
	Matching needs	The content of the learning is highly necessary for the clinical work
		Learning content that can be used immediately on the job
		Learning the skills participants want to acquire
		Commonly occurring and realistic situation settings
	Strategies to deepen learning	Participants need not hurry
		Learning content appropriate for readiness
Factors Related to Learning Environment	Creating a fun learning atmosphere	Facilitator makes learning fun
		Atmosphere where participants can ask anything
	Facilitator explanations are basic and detailed	The facilitator's detailed guidance
		Facilitator explains the basics.
		The facilitator convinces me.

3.1. Factors related to the educational design

This category included the subcategories: "Interest in the educational program," "Matching Needs," and "Strategies to deepen learning." Participant statements: "The setting was realistic and immersive," and "I felt it would be useful in a clinical setting."

3.2. Factors related to the learning environment

This category included the subcategories of: "Creating a fun learning atmosphere" and "Facilitator's explanations are basic and detailed." Participant statements: "The facilitator taught me the basics that I could not ask to be repeated," "I felt at home with the familiar school buildings and faculty," and "I enjoyed the atmosphere where I could ask about anything."

4. Discussion

4.1. Motivating learners with engaging simulation designs that they can immediately apply in clinical practice

Learners who participate in continuing education are characterized by the fact that they are developing their nursing skills in clinical practice on a daily basis. Kourkouta et al. (2021) stated that nurses participate in continuing education because of their desire to improve the services they provide by acquiring and applying knowledge and skills [13]. The results of this study showed that the participant needs were met. The results of this study indicate that the need to meet the needs of the participants, especially considering the ability to be able to immediately apply what they learn, motivates them to learn. To motivate learners to participate in continuing education, it is important to consider inclusion of learning content that improves the quality of nursing care and is immediately useful. We also considered the learning perspective of the simulation education.

In simulation education design, it is important to interest learners in the simulation theme. In the simulation-based education for nursing students just prior to practical training, there is a report that setting the timing and learning content that students can relate to leads to a sustained high level of proactive learning attitudes [14]. The simulation setting for this study was a response to a subject (case) showing signs of worsening respiratory or cardiac failure. This is a worrying situation that nurses in their first to fifth year after graduation may encounter in clinical practice, and although not as serious as the cases in the BLS course, it can lead to life-threatening situations for patients. This is why

it is so appealing for the participating learners to be able to try the tasks over and over again in a safe and protected environment. The results of the current study suggest that selecting and designing material that is of interest to the learner, is important for clinical nurses to increase motivation to learn.

4.2. The effect of rapport and psychological safety on the motivation to learn in a learning environment

Simulation education allows learners to test their own abilities in an unlimited reproduction of a clinical situation, and to prepare for and reflect on the experience and derive ways to improve. In a simulation setting, learners are allowed to make mistakes that would not be tolerated in a clinical setting. Rather, they look back on the mistakes they experience there as a valuable learning opportunity, and discuss and verify their actions and ideas, which leads to the integration of professional knowledge, skills, and attitudes. Particularly in Japan, learners tend to be afraid to ask questions or give their opinions, and tend to avoid conflict within the group and to be in superficial agreement. In order to achieve learning goals, it is necessary to create an environment in which learners themselves can come as close as possible to their true selves and frankly ask questions and express their opinions.

One of the characteristics of this training is that the learners participated in the continuing education training held at their home school and is facilitated by a former faculty member. Therefore, it is possible that a rapport already exists between the learner and the facilitator as student and teacher. Rapport creates a “bridge” and refers to the relationship of trust between a counselor and a client in psychology. In educational settings, it also refers primarily to the relationship of mutual trust between two parties. In research on instructor-student relationships, student-student relationships and learning effectiveness. Perceived rapport with instructors and classmates is related to perceptions of classroom connectedness. Instructor rapport, student rapport, and classroom connectedness enhanced student participation [15]. The rapport that existed between the facilitators, who were teachers, and the learners, who were their students, may have contributed to the participants' relaxed and uncomplicated participation in this training. Further, the results of “creating an enjoyable learning environment,” such as “facilitators making the learning fun” and “an atmosphere where participants can ask anything,” suggest that this training was a place for learning in an environment of psychological safety for the participants. Psychological safety is a concept that is gaining attention in the field of organizational development. The existence of team psychological safety was conceptualized as a shared belief about the consequences of interpersonal risk-taking [16]. An atmosphere in which people feel free to speak up about relevant ideas and feelings [17]. A psychologically safe environment enables openness about divergent thinking, creativity, and risk taking and motivates engagement in exploratory learning, thereby promoting team performance [17]. In simulation-based education, if learners are afraid of failure in the simulation or are timid during briefing and debriefing, wondering if they will be considered ignorant by asking such questions or if some idea is wrong, they may miss out on a learning opportunity. For learning to be effective, learners need a learning environment in which they can work independently and as comfortable as possible without fear of failure. The learning environment is important for learners. The main demotivating element was an uncomfortable environment. The key recommendations for increasing motivation were the style of the facilitation and the careful planning of the sessions [18]. It was suggested that simulation-based education held at the learner's home school as a form of continuing education would provide a psychologically safe environment for the learner and enhance motivation to learn

5. Conclusion

In the continuing education for nurses in this study, it is suggested that relating a simulation theme to daily nursing practice influences the motivation to learn. Another strength of continuing education for nurses is that the facilitators are familiar faculty members, which creates an enjoyable learning atmosphere. Simulation-based education in continuing education for nurses is usually held by the medical institution to which the clinical nurse who is the learner belongs, or by a company or other organization outside the facility, but there are very few such efforts by educational institutions. However, based on the results of this study, it is hoped that educational institutions will take advantage of the rapport that was once established between faculty and students and actively provide opportunities for confidence in the learning in psychological safety. It is recommended that the content of the course be realistic and appealing to students who may be in clinical nurse practice, so that they can immediately apply the content to their clinical work.

Compliance with ethical standards

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Disclosure of conflict of interest

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Statement of informed consent

The authors have no conflicts of interest associated with this study.

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