

Observer or Doer – Nursing Students’ Experiences of Different Roles in Simulation

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- Received Date: 08 Dec 2024
- Accepted Date: 15 Dec 2024
- Publication Date: 18 Dec 2024

Keywords

doer; nursing education; observer; simulation

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Abstract

Introduction: Although simulation has been much researched, there is less information on the role of observers. Therefore, the purpose of this study was to find out, how healthcare students experience the roles of observer and doer during the simulation.

Methods: Nursing students in the final stages of their studies participated in several different simulations both as observers and doers. Following the simulation, they answered in a questionnaire, the result of which were used to analyze their experiences in different roles.

Results: The students’ experience on their own learning is similar regardless of their role. As a doer, the students bring out concrete doing whereas in the role of observer they highlight the observing of the general view.

Conclusion: Simulation consisting of observers and doers is a worthy teaching method as it enables greater amount of participant with good learning outcome. Acting in different roles gives the students various perspectives during the learning process.

Introduction

In the field of healthcare, practical doing and gaining experience is crucial. In theory, the student can list the symptoms of a heart attack or, on paper, possess good crisis resource management (CRM) skills, yet be at a loss in an emergency [1]. Therefore, it is imperative that the students have an opportunity to test their skills with the help of various simulations [2]. In the healthcare, simulations are widely used teaching method as it allows the student to practice both technical and non-technical skills in a controlled environment without endangering the patient safety [3,4].

Simulations can be conducted in many ways. One of the methods of implementation is a simulation that consists of doers and observers [5]. During the scenario, the doers work in their own healthcare roles whereas the observers are focused on observing the situation. In the end, both doers and observers participate in a shared debriefing, where the simulation situation is reviewed, usually always under the guidance of the teacher. The feedback given in the debriefing should help the student in reflecting the simulation and their own skill and to promote learning [6].

Previous studies have shown that simulation is an effective teaching method regarding the improvement of communication, interprofessional co-operation and critical thinking [e.g. 7, 8]. Although there is less research on the role of observers [9]. Thus, in this study, we wanted to find out the students’

experience of studying and learning during simulation exercises, both through the roles of observer and doer.

Methods

Purpose

In this study, the goal was to find out how acting in different roles affects students’ experience and views on simulation and learning. The study also sought to find out what students thought are the benefits and drawbacks of the different roles.

Methods

The settings for this study were a University of Applied Sciences in Tampere, Finland. The studies of the last year of nursing education include a course, Supervised Clinical Training, Simulation (2 ECTS credits). This course contains both pediatric and adult patients in the acute simulation situations. The scenarios for pediatric patients were sepsis in newborn, foreign object in respiratory tracts, and intoxication of adolescent. The adult patients, on the other hand, had shortness of breath and chest pain, pulmonary embolism, COPD, and massive bleeding. As there were multiple simulations, everyone had a change to function as both an observer and a doer.

Participants and data collection

All the final year students (n = 132) who participated for the simulation course in the spring 2020 were approached to take part the study. After the participation in all the simulations, the students got the link to the

Citation: Tervajärvi L, Tervajärvi S, Himanen S. Observer or Doer – Nursing Students’ Experiences of Different Roles in Simulation. Med Clin Sci. 6(6):031.

questionnaire by e-mail. The questionnaire was answered by 67 nursing students (a response rate of 51 %).

The questionnaire consisted of 29 Likert scale questions were used to map how the students experienced the simulations as a learning situation and eight open-ended questions that allowed students to share their thoughts in more depth. The statements given in the Likert scale questions were answered on a seven-point scale where the number 1 meant “not at all” and number 7 “very much”.

Data analysis

For the open-ended questions, the answers were analyzed using a qualitative research method: data-driven content analysis. According to the data-driven content analysis, the data was first processed in a reduction way, then by grouping, and finally by forming the general concepts [10]. Data were analyzed using an inductive content analysis process, including open coding, coding sheets, grouping, categorization, and abstraction.

The Likert scale questions were analyzed quantitatively, the mean and the median, were found out. The focus on the analysis of the Likert scale questions was on whether the numeric answers given by the students aligned with the concepts discovered in the open-ended questions.

Ethical consideration

The Ethical board of University of Applied Sciences was consulted prior to research work. According to the consultation, this study did not require separate Ethical approval. The permission to conduct the study was given by director of the degree program of University of Applied Sciences.

All participants received oral and written information about the study. After the simulation course, the students were given a link to the questionnaire and a cover letter, which explained the research and the effort to develop simulation teaching.

Participation in this study was voluntary, informed, and anonymized. Participants were free to withdraw from the study at any point in time or could deny the use of their data without negative consequences. For this research personally identifiable data was not collected.

Results

Based on the responses, we initially set out to find out what kind of differences the students highlight in the roles of the observer and doer. Following the analyzing, we formed three concepts that were recurring in the students' answers. These concepts were learning, psyche, and reflection.

Learning

In the role of the doer, the students emphasized concrete learning. They point out that as a doer, one can practice manual skills and test better their own responsiveness under pressure. Some thought that this type of work helps them to learn better because mistakes made by oneself, and concreteness sticks in the mind better than the ones made by someone else. Others thought that the role of observer is better when it comes to learning as an observer one can observe the overall situation without stress or performance pressure. As seeing from the numerical mean, the students felt that they learn almost as well in both roles (Table 1).

“I think that I learnt a lot and in a versatile way in both roles. However, in the role of the doer, one also learned about their own reactions in a changing and acute situation, and therefore one can be better prepared and calm themselves down in a real situation”.

Table 1. The means of the answers (n= 67) in the Likert scale questions.

| Statement | mean |
|--|------|
| The exercises were important for the development of my skills | 6,0 |
| The exercises strengthened the development of the skill I need in working life | 6,0 |
| The exercises strengthened my confidence in my own abilities | 5,3 |
| Being a doer in the simulation exercises strengthened my skills | 5,7 |
| Being an observer in the simulation exercises strengthened my skills | 5,4 |
| The debriefings following the simulation exercises strengthened my skills | 5,9 |

Psyche

The second concept that emerges from the answers in psyche, which is strongly connected to the experience of learning. When it comes to the doer, stress is emphasized in the concept of the psyche, which some find that belongs to the simulation experience in small doses. On the other hand, some even find acting as the doer oppressive. These students state that it is usually due to previous negative experiences in simulations, having little experience in simulations, or the situation itself. The answers show that some find simulation with observers oppressive since observers see and “criticize” all the shortcomings and mistakes of the doers. Contrastingly, none of the students mention in their answer that they feel acting as the observer and observing others as oppressive. The answers do not show that in the role of observer, the students think they are “criticizing” each other’s actions or mistakes – the answers emphasize pure observation and how they are thinking about their own actions in a similar situation.

“On the other hand, I feel that I learn more in the role of an observer, because then one can follow the care given by multiple nurses and follow how the situation progresses. As someone who gets nervous, the care situations themselves pass by a bit and I can’t necessarily think clear enough in order to learn more that way.”

Reflection. The students mention that in the role of the doer, efficient reflection is harder than as an observer. They depict that in the center of the action the understanding of the big picture can be hard and following the actions of others difficult. As observer the students emphasize that observing the entire perspective from the outside helps them to reflect their own skills and challenges them to think how they would act in a corresponding situation. Regarding the reflection, the students point out the importance of the teacher. When it comes to learning, they stress the teacher’s expertise and role in the debriefing following the simulation.

“As an observer, it is easy to notice, that you would have known something or that you wouldn’t have known something. As on doer, it is difficult to grasp the overall situation in the situation itself.”

We also studied the reflection of one’s own learning in the simulation from the student’s point of view. The students were asked to evaluate the simulation both in written form and numerically with the help of multiple different questions. Figure

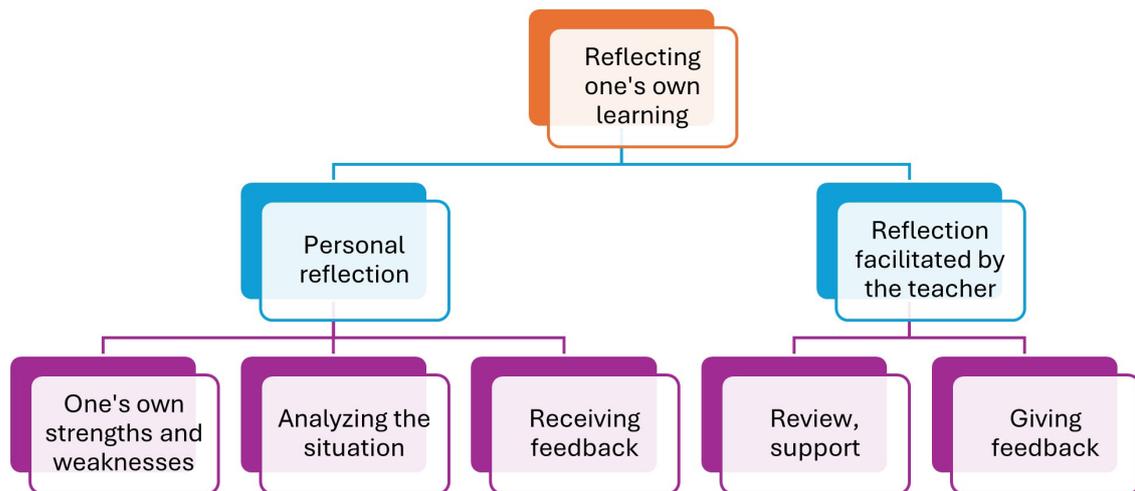


Figure 1. Reflection on one's learning from the students' point of view.

1 shows the students' view on reflection one's learning has been formed based on these answers. In the results of the reflection, the impact of the different roles wasn't considered.

Reflecting one's own learning has been divided to personal reflection and reflection facilitated by the teacher. In the personal reflection, the students point out recognizing one's own strengths and weaknesses and analyzing the situation through success and failure. Receiving feedback, which the students mention, is also important. Simulation with its debriefings is an interactive event where one must give space for remarks and opinion of others. If, when reflecting on the events, the participant feels that the problems are always caused by external factors, one has rarely been able to analyze one's own action critically in reflection.

"During the simulation situation one lives in a bit of a haze and the head feels empty after the situation. Debriefing situations help to figure out, what one has done and what observations others have gotten from the case."

In the reflection facilitated by the teacher, the students bring up the recap, support and feedback given by the teacher. The teacher challenges the students to ponder their actions deeper, to ensure the understanding of the causality and when needed, to review things. For the students, giving feedback means that the teacher keeps the atmosphere of the debriefing constructive. The debriefing should be positive in nature even if the mistakes during the simulation need to be corrected.

"Reflecting the learning with the teacher was important after every patient case in the simulation. Therefore, no misunderstanding remained on whether one had done the right or the wrong thing in the situations. At the same time, it was reviewed how in each situation/operation is orthodoxly done."

Discussion

The purpose of this study was to discover what experiences the nursing students in their last stages of studying have as being a doer and an observer during simulation. Both students and educators may have a detrimental misconception that simulation learning is only efficient when one is in the role of doer. As this study shows, even if the student verbally value learning in one of the roles more, numerical values show that there isn't much difference in learning when it comes to different roles (Table 1). A similar result has been reached, for example, by Zweifel et al. [9].

It is important that no student may be assigned as an observer without proper instructions. For example, Tutticci et al. [5] point out that being the observer requires that the instructor of the simulation has given clear instructions for the students on their role. With the help of the instructions the students can be guided to give constructive feedback on the situation [11]. In the simulation, the role of the observer gives an opportunity to observe the overall situation in a way that the doers don't have. As an observant the students describe their actions very neutrally through the overall situation without anyone focusing on criticizing any specific student's action in their answers. In this study, each student acted in both roles which is reflected on the students' answers. This has certainly contributed to the results, because, for example, only experiencing the role of an observer, the students might have felt differently about their own learning. That's why it's interesting that some of the students feel that being a doer in the simulation is oppressive due to the observants.

Debriefing gives the student the chance to share their learning experience and to reflect their own skills leaving aside their role. Based on our results, the students understand the meaning of debriefing as a part of the reflection well. They value the opportunity to go through the situation and participate in the conversation under the guidance of the teacher. Reflection in simulation is crucial. According to Mettiäinen and Vähämaa [12] reflective thinking is a process which interacts with learning and can lead to more critical consciousness which help the students to become aware of their own knowledge and challenge their own assumptions. Simulation is based Kolb's theory on experiential learning cycle where learning is perceived as a continuous process [13]. In the simulations, the debriefing has a notable role [6]. According to Decker et al. [14] the purpose of debriefing is to promote reflection and performing in the future in addition to transferring previously learned theory into practice.

Even though nowadays there is a need to cut costs in education, based on the results of this study, simulations strengthen the learning of both doers and observers and therefore it is good to keep them in teaching. As this study shows, some might feel negatively about the simulations, such as anxious. Yu et al. [2] observes that even if the students have negative preconceptions about simulations, doing them is still important. They highlight that regular participation in simulation helps to get used to

the simulation situation, lessens the anxiety and gives self-confidence in clinical situations [2]. Doing simulation with doers and observers allows larger participant groups yet gives a learning opportunity for all regardless of their role.

It is important to consider that individual's knowledge of their own experiences is unique but always evolving [15]. Every experience is bound to each person that undergoes it; everyone has their own history which reflects in their experiences [16]. When students describe their learning in this study, the responses reflect their experiences in these simulations. Some of them enjoyed the role of a doer when some would much prefer to be an observer. Himanen and Salin [15] remind that experiences are not the objective truth and that should be considered when examining the results. The limitation of this study was that it did not objectively measure the students' learning but described the students' own experience of their learning. Since everyone has their own experiences, it would be possible to get different results if this study were to be repeated. Another limitation was that the number of respondents was small compared to the number of participants.

Conclusion

The results of this study align with other research done on simulation; simulation is efficient teaching method where learning happens both in the role of the doer and the observer. As a doer, the students especially value the concrete doing. In the role of the observer, they like the opportunity of observing the situation comprehensively and to ponder their own actions without the stress of being criticized by others.

Both as observers and doers, the students bring up the importance of reflection. The most important thing regarding reflection is thought to be the debriefings where, with the help of the educator, the successes and the challenges are gone through. In the debriefing, it is important to activate all of the participants, as it is a learning experience irrespective of the roles.

Although according to this study, there are no significant differences between the roles when it comes to the learning outcomes, more research conducted on acting as an observer is needed. Hopefully this research encourages the educators to actively utilize the role of the observer in their simulations.

Conflicts of Interest

All authors declare that they have no conflicts of interest.

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