

Practicum Experience of Nursing Students in a Skill Laboratory: A Qualitative Study

Pramita Iriana^{a*}, Ratna Sitorus^b, Agung Waluyo^c, Sutanto Priyo Hastono^d, ^{a,b,c}Faculty of Nursing, Universitas Indonesia, Indonesia, ^dFaculty of Public Health, Universitas Indonesia, Indonesia, Email: ^{a*}ratnasit@hotmail.com

Introduction: Problems regarding the low level of nursing students' abilities in nursing skills have been perceived globally. If the problem is deeply rooted, the graduates will not be ready to work and will not be competent enough to apply their nursing skills in the clinic; this will lead to a decrease in the quality of services and patient safety. **Method:** This research is a qualitative study using a descriptive phenomenology method, involving 16 participants, the second and the third-grade students of Nursing Diploma III. The analysis and processing of this qualitative data used NVivo software, version 12 plus. **Result:** Results of this study are categorized into five themes: an affectionate lecturer improves the effectiveness of the learning process; the importance of physical and psychological readiness; the comprehensive management of learning in the laboratory; the need of sufficient facilities and infrastructure in the laboratory; and the skill performance of students. **Conclusion:** Skill performances of students in the nursing laboratory are the core of students' accomplishments in laboratories. This would be accomplished by creating a conducive academic atmosphere. The integration between the practical phase and academic atmosphere can be developed later as an effective learning model in laboratory.

Key words: *Academic atmosphere, nursing laboratory, nursing skills, practicum.*



Introduction

Problems regarding the low ability levels of nursing students in performing nursing skills have been perceived globally. In 2005, Sharif and Masoumi conducted qualitative research on 90 nursing faculty students of Shiraz University and reported that nursing students expressed dissatisfaction with the components of practice in their educational institutions, because they still felt incompetent and had not mastered the nursing skills needed in the actual clinical setting. This study is relevant to Aniroh's (2000) study that identified a problem frequently encountered in the clinical field. Students of the Ngudi Waluyo Nursing Academy in Semarang had not acquired the skills necessary for the clinical field during their education. Other barriers that are often found in the process of mastering nursing skills are the lack of motivation, student activities in learning, and ineffective classroom management.

Those unsolved problems can affect nursing graduates, so that they will not be ready to work and are not competent enough to apply their nursing skills in the clinical settings. The result is a decrease in the quality of services and patient safety (Stayt & Merriman, 2013). Therefore, efforts are needed to improve the quality of learning in the laboratory so that students can acquire a learning experience similar to the clinic. Barcelo (2016) believed that students who have studied in a laboratory are better prepared when studying in a clinical setting.

Learning laboratory practices is an important part of a complex educational process and must be integrated with the whole educational program; this involves the curriculum, especially the competencies achievement for students. Laboratory practice is a learning strategy used to enhance psychomotor abilities (skills), knowledge, and effectiveness (attitude) while simultaneously using laboratory facilities (Zainuddin, 2001). When learning at laboratory, the nursing educator transfers the theory into practice with controlled real simulations. Appropriate laboratory practicum learning strategies facilitate the improvement of practical skills and student confidence levels. Students gain direct and visual learning experiences through preclinical experiences in the laboratory. Strand, Naden, and Slettebo's research (2009) suggests that learning in a laboratory enables reflective practices and discussions between instructors and students, improves critical thinking skills, and helps students become more proficient.

The limited research focused on improving the ability of nursing students makes the writer interested in conducting research about the teaching and learning processes within laboratories.

Method

This study used qualitative research with a descriptive phenomenology method that aims to obtain an overview of the practical learning experience in the nursing laboratory. The study was conducted at two Diploma III Nursing Education Institutions in Jakarta and Bogor. The research sample consisted of 16 participants, the second and third-level students who had undergone laboratory practices at their educational institutions and were obtained through purposive sampling techniques until sufficient information was obtained. The inclusion criteria for respondents used included: third year students who had attended laboratory training, were willing and able to share their practice experiences in the laboratory, and were able to speak Indonesian well.

Results

Characteristics of participants

In this study, there were 16 participants, second and third-grade students who had undergone laboratory training in their educational institutions. Participants consisted of 14 women and two (2) men. The age range of the participants was 18-21 years. Eight (8) participants were third-level students and the other eight participants were second-level students.

The theme found in this study

The results of this study consisted of five themes, proving that an affectionate lecturer improves the effectiveness of learning process; the importance of physical and psychological readiness; the comprehensive management of learning in the laboratory; the need of sufficient facilities and infrastructure in the laboratory; and the skill performance of students.

An affectionate lecturer improves the effectiveness of learning process

The roles and characteristics of the instructors in this study are classified into two categories, namely the roles and characteristics of the instructors that are expected and not expected. Participants conveyed the expected roles and characteristics of the instructor as the following:

".... Like Mrs. N, ma'am. the one who embraces (a student) like that. She who, like that, taught us, so "let's study first before the test" with my group like that ... keep on being looked at by her, then later if there is something wrong later she teaches again what is really like that. So later on, we will not have a different understanding of the exam, Ma'am" (P5)

"Hmm....., for example nebulizer practice, the instructor demonstrates it first, then the students will perform it, one by one." (P8)

The results also found a category of instructors that were not expected by students, as illustrated in the following statement:

"... But if there are no lecturers, for example, lecturers are like... busy with their own work, like, hmm, we are grouped, for example and we have to master the skill ..." (P6)

"..... for example, at that time, it was not explained by the lecturer. The procedure was included into the exam, ..." (P1)

"The thing is that he gets angry until one student cried right there" (P3)

Physical and psychological readiness

All participants stated that they needed preparation before they began practicing skills in the laboratory. Based on participant's statements, those preparations really affect physical and psychological readiness.

"For example, tomorrow is about hmm... RJP or study beforehand, prepare the materials including the tools." (P1, P9, P11, P12, P13, P16)

"What is certain is that we must first memorize the procedure, and the equipment we must be able to prepare ourselves." (P2, P9, P11, P15)

"... certainly, we must memorize beforehand, we must know the procedure, then we must also be able to prepare the equipment ourselves" (P2)

Mental readiness delivered by participants is related to the motivation and interest in learning in the laboratory, self-confidence, and the effect of physical health.

"And I also like it, Maam went to the lab ... Like. for example, from the class to the lab just happy because I'm more, more comfortable for digesting it," (P5)

"... as well as being prepared so that I don't get panic, so that I can't do this, what can I do, doing this can be more like that" (P3)

Comprehensive management of learning in the laboratory

The experience of students related to laboratory management was identified in this study that the Laboratory Person in Charge (PIC) had a role in laboratory learning, as stated below:

"Previous practice means one has to contact the laboratory PIC." (P5, P9, P10, P11)

The evaluation process carried out in laboratory learning was also identified in this study. How the test is conducted and what was tested recounted by the participants as the following:

"There is a standard procedure." (P3, P14)

"The examination is made from the assessment documented in the practical examination" (P7)

The need of sufficient facilities and infrastructure in the laboratory

Facilities and infrastructure are supporting factors for learning in the laboratory and all participants agreed upon this fact. This is the explanation about the facilities and infrastructure in the laboratory:

"The tools ... are enough, just if the expired ones are replaced" (P2),

"Hmm... that, ma'am, the tools are minimal because in our lab, ma'am, yes, for taking blood specimens like infusion and vein, it is normal at the hospital, but here, there is a phantom for taking the venous blood, but it also has leaked, ma'am so in my opinion it is not effective too "(P4),

Six participants expressed expectations and environmental conditions during the learning process in the laboratory, as stated below:

"For the room, in my opinion, it's already good, but sometimes there are sound clashes, for example, on the 5th floor, it's big right, ma'am, but there are, for example, 3 lecturers, their voices clash" (P4)

These four themes deeply affected the learning process, thus we referred to them as an "academic atmosphere".

Skill performance of students in the nursing laboratory

Skill performance of students is the fifth theme found in this study. The phases of practice carried out by students consisted of students' abilities to: master the learning materials and the sequences of nursing procedures, undergo procedures and follow instructions exactly in accordance with standard operational procedures (SOPs), conduct procedures because of repetitive training/practice, integrate nursing procedures and patient's condition or environment, and demonstrate care towards patients such as protecting patients' privacies and making patients comfortable.

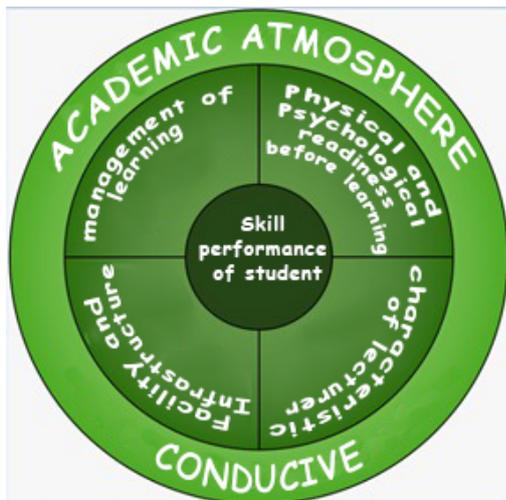
These statements illustrate the practical phase in the laboratory:

"... I believe so, I can do that because ... I have practiced many times." (P1)

"For example, inhalation ... we have to introduce ourselves first, ma'am ... our goal is inhalation, what are you going to do ... continue if for example the patient agrees then we put the patient on the semi-fowler first ... after that I usually put it on the underpad, what it is the name.... baraskot" (P4)

"..... keep protecting the patient's privacy ... must be friendly, don't be rude" (P5)

Based on the elaboration of the themes above, we could conclude that these five themes affected the performance of students in the laboratory, as depicted in this model:



Discussion

Participants were second and third-grade students who had undergone laboratory training multiple times. During the learning process, students stated that the expected character and attitude of the instructor, including the ability to give examples of the correct procedures according to the SOPs or modules, was able to motivate students and explain the materials clearly. This is in line with the 2013 Balarama and Rev study on nursing students' satisfaction with the learning process. This research found that teaching methods, the relationship between students and lecturers, timelines, and the presence of lecturers in the class affected the level of satisfaction of nursing students towards the learning process. In Klimkewic's (2012) research, nursing students perceived that objective behaviour and giving evaluations to students are teaching practices that make learning effective.

Kurniawan's (2013) study evaluated the concept of an academic atmosphere. He found that, in achieving a conducive academic atmosphere, the lecturer needed to have a scientific personal character, including responsibility, honesty, critical, determination, curiosity, caring, and a good interaction with students, both in regards to quantity and quality. In addition, the affectionate lecturer as first theme can improve the learning process for students well.

The precondition process before getting laboratory learning is also important to be prepared. Most participants stated that tools, mental, and physical preparation must be done beforehand. This is related to a research by Banneheke et al (2017) which implies that self-motivation, including self-readiness and professionalism, are important components that need to be owned by students who will run clinical practices. To support this second theme, other research relating to this topic is the Porter's study (2013) which found that students who prepare themselves before entering the realm of practice were better prepared or confident.

To increase the physical and psychological readiness, the students need to cope with supporting and inhibiting factors of laboratory learning. Participants have assessed that the internal support factors of laboratory learning process were motivated from within. The research also stated that student's own initiative is very important as a learning resource (Strand, Naden, & Slettebe, 2009). External supporting factors are teachers who care for the students and are able to motivate students, as well as a comfortable place for the learning process.

The internal inhibiting factor, according to the participants, is the lack of mental readiness. Mental readiness becomes an important component for students before laboratory training. Handayani's research (2016) revealed that there was a correlation between the level of anxiety and the compliance of nursing students in carrying out the first infusion according to the SOP.

Meanwhile, the external inhibiting factors stated include teachers who were often absent or not guiding. Schoener's (2001) research indicates that students need lecturers to become role models that they can learn from. These are supposed to be applied in a variety of nursing settings.

Next, the third theme describes the importance of laboratory management. An implementation of laboratory practice learning shows that the instructor has carried out his role in learning systematically and accordingly to the designed plans. The instructor starts the lesson by explaining the objectives and briefing what kind of materials will be delivered. The purpose is that students are focused and know what the goal is. Starting a lesson like that is a

step needed so that mental readiness and focus of the learning experience are present, thereby making it easier to achieve the expected competence (Sanjaya, 2005).

After the instructor's demonstration, the students were asked to go ahead and re-demonstrate in turn, each consisting of two students until the learning time was complete. According to the results of Weinstein, Madan, Sumeracki (2018), if not all students are told to try to repeat what has been taught, then learning will not be effective. In addition, the instructor also provides follow-ups by encouraging students to continue practicing skills that have been taught outside of class hours, independently. According to researchers, instructors should give assignments both in writing and orally to students because repeating the material that has been taught will make it easier for students to remember (Weinstein, Madan, & Sumeracki, 2018).

The implementation of laboratory practice learning can also run effectively if the students are divided into groups to learn skills. For example, one group consists of 10 to 12 students (Nurini, 2002). Then, according to the researchers, the skills lab equipment should be prepared, not as just one set of equipment. For example, 55 students are divided into five groups, then the skills lab equipment is prepared five or six sets of equipment. So, each group of students can re-demonstrate, in turn, for each group member simultaneously.

The fourth theme, participants expressed the lack of facilities and infrastructure in the laboratory which made the learning situation not optimal. It means that they need sufficient facilities and infrastructure in the laboratory. All participants stated that the equipment in the laboratory was incomplete and the rooms were often used by several groups at the same time so that the learning environment was not conducive. This finding is relevant with Simanjuntak, Rohiat, and Elvinawati (2017) study that concluded laboratory facilities and infrastructure have a positive correlation with the student's improvement, meaning that the availability of qualified laboratory facilities will support the improvement of student skills.

A non-conducive environment complained by the participants is one of the concerns. In the learning process, environmental conditions need to be situated as optimal as possible so that the environment becomes conducive to the learning process and the optimal learning outcomes will be achieved (Hechinger, 1985; Rochmana, 2010). Therefore, the act of preparing and using the available and adequate space requires an effort including the classroom management related to the creation and maintenance of the optimal learning conditions (Hasibuan & Moedjiono, 2009).

Another study also stated that a conducive academic environment offers a unique opportunity to cultivate values such as cooperation, volunteerism, service to those in need and more. Furthermore, to achieve a conducive academic environment, the curriculum must be

delivered in an innovative manner, including different methods to suit students with different learning styles and capacities (Divaris et al., 2007).

The fifth theme is the skill performance of students in the nursing laboratory. This theme involves Bjork's theory that proved the new clinical nurse could not be done naturally but need some process (Bjork & Kirkevold, 1999). One of these processes is called accuracy. In this part, most of the participants stated that they had performed procedures according to the SOP. This statement is reinforced by Susanti's study (2010) which concluded that SOPs are needed by students so that they can understand the procedures and sequence of the procedures in advance.

All participants also agreed that a caring attitude needs to be applied in the laboratory. The act of caring, according to the participants, includes good communication, performing procedures without disturbing patient comfort, and paying attention to the patient responses during communication and action. Gatti-Petito (2011) concluded that caring practices applied in high fidelity simulations can improve psychosocial and technical aspects when applying caring behaviours. Littlewood et al (2005) implied that preclinical students experience stress caused by fear, time management, feeling insecure, instructors, and also the learning process. Teachers are expected to mediate or reduce stress with caring behaviours.

All themes identified participant's experiences in learning at laboratory, namely; academic atmosphere, practices undertaken by students, factors that influence learning in the laboratory, and student expectations in the laboratory learning. The results of the thematic analysis are integrated with the practical learning model in the nursing education laboratory shown in the following scheme:

The model which will be developed involves five themes of learning nursing practice in the laboratory to achieve an effective conducive atmosphere. Effective nursing education is able to improve student's behaviour and self-efficacy. These themes include (1) characteristic of lecturer; (2) physical and psychological readiness before learning; (3) management of learning; (4) facility and infrastructure; also (5) skill performance of student. The researcher was developing this conducive academic atmosphere model based on two theories, Bjork (1999) and Bandura (1977), for optimising the quality of nursing students in laboratory.

Conclusion

Skill performance of students in the nursing laboratory was the core of students' accomplishments in the laboratory. This is accomplished by creating a conducive academic atmosphere. The integration between the practical phase and academic atmosphere can be developed later as an effective learning model for laboratory training.



Conflict of Interest

No conflict has been declared.

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