

Effect of Clinical Practice Examination (CPX) on Nursing Students

MuyeongSeak Yang¹,

¹*Jesus university, An associate Professor, Korea*

Abstract

The purpose of the study was to describe the evaluation of the Clinical Practice Examination. A convenience sample was selected from 8 students of the senior students. Ages of the subjects were between 23 ~ 29 years old. Individual interview was utilized. To collect the materials of the research, in-depth interview and observation were utilized. They participated in the research through written consent. The materials were collected for four weeks when materials were saturated. The interview was conducted for one to two hours per person. The collected materials were analyzed using Spradley's analysis method. The research results were summarized as follows.

Keywords: Clinical practice examination evaluation, Ethnography

1. Introduction

1.1 The Need for Research

As the rapidly changing medical environment and the growing demand of the subjects to provide quality nursing services are also emphasized, professional and independent nursing practices by nurses are being emphasized. In response to these demands of the times, there is growing interest in nurturing nursing college students as nurses with clinical performance ability to solve various health problems at clinical sites and ability to perform quality nursing. The goal of nursing education is for nursing students to acquire theories and skills so that they can fully carry out their role as nurses after completing the curriculum. Therefore, in order to adapt well to any nursing situation, it is necessary for nursing students to master methods and techniques to interconnect theory and practice. However, due to the rising demand for patient rights and safety, the number of new nursing and nursing students, and the lack of clinical practice places, nursing college students tend to fail to practice actual nursing practices, mainly observation-oriented clinical practices.

The Korean Accreditation Board of Nursing Education [KABONE] addresses the improvement of clinical performance of nursing college students through qualitative changes in clinical practice education, including critical thinking skills and core basic nursing skills, in order to ensure adaptation at the clinical site and professional nurses. Practical education in nursing education can be said to nurture students' problem solving skills in clinical practice situations, develop skills necessary in actual nursing, and cultivate decision making and attitude necessary as a nurse. However, despite the fact that the health needs and expectations of nursing care recipients are gradually increasing, the practical situation of students in the clinical field does not give them the opportunity to directly provide services to

patients, and the practice requirements to meet the needs of the patients are becoming increasingly difficult. Due to the facts that clinical practice is subject to human beings and that the clinical practice environment has become more demanding than in the past, clinical practice education is putting a heavy burden on both teachers and students. In addition, clinical practice evaluation requires a comprehensive evaluation of the degree to which practical skills, such as clinical skills and attitude, have been acquired as well as the extent of intellectual ability, which has been attained through the transfer of nursing knowledge. Clinical performance skills are critical thinking and professional skills required for clinical practice. Includes alcohol and communication skills and integrates knowledge, attitudes and skills. In order to improve clinical performance, the nursing education community is seeking new changes such as simulation to experience on-site practice-oriented training, clinical performance evaluation, objective structured clinical trial, etc.

In-school practical training using simulations has been shown to help improve critical thinking and problem-solving skills, but there are limitations in nursing skills practice. Objective structured clinical trials improve nursing skills, and nursing college students are more active than passive observation in practical education. It provides opportunities for enemy participation and provides opportunities for nursing technology. It has been shown to improve confidence, but there are limitations on improving critical thinking skills. Clinical performance assessment is a practical training method that helps improve diagnosis and problem-solving skills through critical thinking as well as knowledge and judgment in clinical situations using a scenario centered on problems that patients appeal to. Through this clinical performance evaluation, the difference between theory and clinical sites is reduced and adaptability in nursing practice sites is improved. Since 2000, it has been used as an innovative way to integrate technology, attitude, and knowledge aspects in nursing in Korea. However, in some cases, the use is confused between objective structured clinical trials centered on fragmented hand skills and the comprehensive, near-realistic scenario-driven clinical performance assessment.

In particular, nursing education in the rapidly changing, knowledge-based twenty-first century society should enable learners to take responsibility for their own learning process and develop their ability to learn autonomously and in a self-directed way [1]. Nursing education should also enable learners to accurately and quickly identify the phenomenon, critically analyze and review the phenomenon, predict possibility for change as needed, and develop learners' ability to adapt creatively to changes[1]. In order to check whether the purpose of nursing education has been achieved, the evaluation of the practical practice training curriculum is an important process. However, the evaluation of the clinical practical practice training so far has focused on measuring the intellectual domain[2,3]. In order to check whether the purpose of nursing education has been achieved, the evaluation of the practical practice training curriculum is an important process. However, the evaluation of the clinical practical practice training so far has focused on measuring the intellectual domain[3-5]. In other words, the evaluation content do not measure all the aspects of intellectual ability, decision-making ability, problem-solving ability, judgment, skill, and attitude, and objective, valid, and reliable evaluation is not conducted effectively.

In recent years, various methods have been introduced to evaluate attitudes, clinical skills, and problem-solving abilities objectively and reliably. For example, there are methods such as Objective

Structured Clinical Examination (OSCE), involving standard patients, Clinical Practice Examination (CPX), a more comprehensive approach to OSCE, a computer-based clinical decision-making ability evaluation, and a simulation-based clinical performance evaluation[6,7]. These methods allow students to go through each process composed of clinical-like situations, become assigned to patients having problems, understand the problem by communicating directly with a patient called standardized patient, and fulfill a series of procedures such as questionnaires, physical assessment, and specific nursing performance to solve the problem, while the professor observes and evaluates each process[8]. Interactions with patients and the actual nursing practice process that occur in the evaluation process have the advantage of providing students with a strong realistic experience and long-lasting learning effects in the cognitive system[9]. Because CPX is not limited to the knowledge aspect, but includes various aspects such as problem-solving ability through critical thinking and interpersonal skills, it is useful for evaluating the basic competencies that nursing graduates should have[10].

Therefore, this study aims to provide the basic data necessary to contribute to the development of CPX evaluation guidance method. This will be done by discovering the cultural specificity of the nursing students' evaluation experience via interview and direct observation after the fourth year nursing students' CPX performance at the end of second semester and by correcting and evaluating deficiencies related to CPX implementation.

1.2 The Purpose of the Study

The purpose of this study is to discover the cultural specificity of nursing students' evaluation experience through interview and direct observation following their CPX performance by using cultural, technical, and intellectual research. In turn, this study aims to provide the basic data for the qualitative CPX evaluation of nursing students.

1.3 The Research Question

The research questions to achieve the purpose of this study are as follows:

"What is the nursing students' experience with the evaluation following the CPX?"

The guiding questions for the informal interview used for this research question are as follows:

"Were the CPX items necessary for practice?"

"Was the role of the CPX standardized patient appropriate?"

"Did you gain confidence in your practice after implementing CPX?"

"Was the whole process of CPX systematic?"

"Was the timing of the CPX implementation evaluation appropriate?"

"Was the environment for CPX implementation evaluation appropriate?"

2. Method

2.1. Study Design and Method

As a qualitative study, the design of this study applied the cultural, technical, and intellectual research method in order to discover the cultural specificity of nursing students' evaluation experiences after the CPX implementation through direct interviews with the subjects and to understand the basic data from the CPX evaluation. A convenience sample was selected from 8 students of the senior students. Ages of the subjects were between 23 ~ 29 years old. Individual interview was utilized. Field research techniques are used. Field research involves entering the field of daily life where human actions occur, and participant observation and ethnographic interview are the main methods.

2.2 Selection of Study Participants and Ethical Considerations

The study participants were fourth year nursing students who had completed all current curriculum and practical training. In accessing the research participants, the purpose of the research was explained to and selected among fourth year nursing students who wanted to participate in the research.

In ethical consideration of the study participants, the purpose and procedure of this study were explained prior to the start of the study. After explaining that anonymity was guaranteed and that interview contents would not be used for any other purpose, study participants gave consent to participate in the study. In addition, this research team provided compensation to study participants as a token of appreciation for their participation in the study.

2.3 Data Collection

The researcher directly selected the participants and asked them to talk about their experiences through unstructured and open-ended questions. The interview question to understand nursing students' experiences of post-CPX evaluation through interview and direct observation was "What is the nursing students' experience with the evaluation after the CPX?" In the initial interview, the participants were encouraged to talk about their experiences comfortably as the researchers guided the conversation with general questions. The average number of interviews per study participant was about two times, and the average interview time was about one hour each interview. Additional interviews were conducted over the phone or the author's email for incomplete or uncertain details in the initial interview. In addition, to confirm the validity of the results derived in this study, one follow-up interview was conducted with three participants. The interviews were all recorded with the consent of the study participants and then transcribed in the vivid language of the study participants. Field notes were used to record non-verbal behavior and contextual data not captured during the interview. The interview was conducted in a natural atmosphere in a quiet laboratory or an integrated lab at the school, and the data collection period was from December 21, 2020 to December 24, 2020.

2.3 Data Analysis

The analysis of this research data is an ongoing process that occurs simultaneously with

collection. This process is a continuous and repetitive regression process of asking, listening, exploring, comparing, contrasting, synthesizing, confirming, and evaluating to form the basis of knowledge. Interview contents and field notes recorded in text were analyzed using Spreadley(1979)'s domain analysis, classification analysis, component analysis, and topic analysis, and the process is as follows.

First, in order to record the verbal expression of the information provider as it is, we review the recorded material, journal, and note materials from the beginning to the end.

Second, we read the material above repeatedly from beginning to end, underline important words and sentences related to the research purpose, and record each sentence separately.

Third, the properties are discovered by classifying and analyzing similar contents.

Fourth, we categorize according to the characteristics classified by attributes.

Fifth, we systematically organize the areas related to categorization.

In order to ensure that the attributes identified through the analysis methods listed above, categorized content, and other related content are consistent with the original data and to reduce the intervention of researchers' unilateral thoughts or prejudices and errors in judgment in the data analysis process and increase reliability, one doctorate in nursing and one nursing scholar with experience in qualitative research participated.

In the naming process, one Korean literature major joined and discussed the naming together, and finally received advice and evaluation from one nursing professor.

3. Results

3.1 Pressure and Tension

Participants answered that they felt too pressured and nervous implementing the CPX.

"At first, it was very nerve recking and burdensome. I didn't think I would be able to do it well, but once I got into it, I realized that I had cultivated my ability to some extent to exercise my reflexes as a professional. Again, it was difficult, but as I was doing it, I think I was able to do it well because I was used to doing it and it was like the field practice." (Informant #5)

"Um....It's actually all the things we did when we practiced. But when I recalled it was an exam, I became nervous, and I couldn't remember well. I was quite nervous." (Informant #8)

"There were five different things, and it took me about two full days reading Adult Nursing, Basic Nursing, and Basic Nursing Techniques book." (Informant #1)

"I prepared for about a week." (Informant #8)

3.2 Critical Thinking

With regards to critical thinking, students answered that the difficulty of constructing a scenario

and realistic situations such as clinical trials were excluded, and that the CPX was out of touch with reality.

"It was very difficult, because during the CPX, there was no checklist that was presented to me before. Also, there was only an illness I had to work with without being given any circumstance. But anyway, for a standardized patient, I had to assess the patient and perform nursing. So first of all, I studied the textbook like this and then, secondly, I wrote my own scenario while thinking about what order I should do it in a real situation." (Informant #7)

"Usually, patients are more anxious and curious when they say they are sick...But when asked, 'Do you have any questions?' the patient said he was okay and so I think the sense of an actual place and reality was lacking" (Informant #1)

*"What I learned at school is that it's just the basics, and it's different when you go to the hospital. When you listen to the seniors who have recently gone to the hospital, they say that everything you learn at school is just more of the same thing. They tell us a lot that you learn for real from the patients at the hospital and so go to *the hospital and do well there.*"* (Informant #2)

3.3 Self-Confidence

As for confidence, it included helpfulness in practice and confidence in practice.

"Certainly, when I conducted cpx with my friends, I gained confidence in nursing actual patients." (Informant #3)

"If the case involves just a diabetic, then the symptoms of hypoglycemia can come at any time, right? Since there are many cases, if it is the same case, I will adapt quickly and because the symptoms of hypoglycemia are similar, I think it will be easy for me to apply." (Informant #6)

"At first, it was very nerve recking and burdensome. I didn't think I would be able to do it well, but once I got into it, I realized that I had cultivated my ability to some extent to exercise my reflexes as a professional. Again, it was difficult, but as I was doing it, I think I was able to do it well because I was used to doing it and it was like the field practice." (Informant #5)

"First of all, I think the most important thing in diabetes is education. It is also important to take appropriate first aid measures in case of hypoglycemia, but I think education is important. However, it is very different being educated as opposed to knowing it just by reading a book. So I think I can do things like education with confidence." (Informant #7)

"Um...So, back in the day, when you were doing something like practice, you would gather in a group and go somewhere and do what you were taught, but this is doing it alone. Assessing and diagnosing the patient from start to finish and then carrying out what I had planned, all on my own...I think I gained confidence in myself especially since I had to do the whole thing by myself." (Informant #5)

3.4 Satisfaction

As for satisfaction, subjects were satisfied with the standardized patient role help, progress, evaluation environment, and although the timing was burdensome, they were generally satisfied.

"It was appropriate, but because the pulse wasn't fast, it was virtual anyway, and the patient wasn't actually hypoglycemic, I had to do it arbitrarily...But I think it's better because I was able to communicate with standardized patients, unlike when I was doing it on a mannequin or something like that during practice." (Informant #7)

"Certainly, when I conducted cpx with my friends, I gained confidence in nursing actual patients."(Informant #3)

"Before becoming a nurse, I liked the program where I could care for patients as a nursing student."(Informant #4)

."Um...well, I was surprised that it was better than I expected. Whether complaining or saying he was sick, the acting was quite good, better than I thought? I think it was good that the standardized patient spoke and complained like a real patient." (Informant #1)

"It was nice to be able to do a practical test in a separate room. I think it was better because the standardized patient was lying down the same way as a real patient, and the room was created like a hospital room environment." (Informant #8)

4. Discussion

With the emphasis on learning outcomes-based curriculum, the demand for improvement of practical education has grown in order to improve the actual nursing performance of nursing college students. Each university is trying to strengthen in-school practice, such as simulation practice, clinical performance evaluation (CPX), objective structuring clinical trial (OSCE), and standardized patient use, and changes are also being detected in clinical practice education, such as qualitative and quantitative improvement. Clinical performance assessment can measure comprehensive clinical performance, such as communication skills, patient education, information integration skills, and problem-solving skills, by organizing clinical situations similar to actual conditions for students to treat standardized patients directly. On the other hand, objective structured clinical trials are centered on performing clinical procedures in standardized patients or models, which makes it difficult to evaluate through interviews with subjects or train them on target-medical human communication. The term objective structured clinical trial has been generalized to refer to the entire clinical performance assessment, but at some point it is used as an objective structured clinical trial and clinical performance assessment, which is often described as an objective structured clinical trial. Through this study, the burden and tension after CPX implementation were confirmed, and this was consistent with the study results of Hyesil Han et al. (2007), whose students felt burdened due to national examinations and employment. In particular, the participants said that English was a burden.

In critical thinking, it was reported that there was a difficulty of constructing a scenario and that a sense of reality was lacking. However, in the previous study, the common opinion of the students who

took the CPX was that they felt the same sense of an actual place as in the clinical[11], which is contradictory to the results of this study. It was found that these results depended on the competency of the students who acted as standardized patients. In other words, it can be said that the sense of reality felt by a student who took on the role of a standardized patient differs depending on how they performed. Therefore, it is believed that students who act as standardized patients should engage in prior education including more diverse contents before the CPX implementation.

Confidence was confirmed after CPX implementation, and it was consistent with the results of a previous study that reported that self-confidence was gained in practice after CPX implementation[12-14] and that the knowledge was enriched by knowing what to do after going to the clinic. Furthermore, in other prior studies, the integrated practice evaluation program improved decision-making ability for solving nursing problems and the ability to apply the nursing process[15]. The integrated practice evaluation program was also said to be of great help in applying the nursing process and in setting priorities[16]. Therefore, for fourth-year nursing students who are about to graduate, the CPX can be seen as helpful when actually performing nursing tasks in clinical practice by boosting their confidence.

In terms of satisfaction, they were satisfied with the standardized patient role help, progression, and evaluation environment. The evaluation period was a little burdensome to students, but generally satisfactory. In prior studies, it was reported that the evaluation environment for the CPX implementation was appropriate[17-20], and the common opinion of the students who participated in the CPX was that they felt a sense of it being an actual place, as if it was real as in the clinicals[20]. However, as some students reported that the sense of reality was lacking depending on the role of standardized patients, further research on the role of standardized patients is necessary.

Since clinical practice education is conducted at the site where patients are actually being treated and cared for, nursing students should minimize mistakes while protecting patients' safety and safety through practice and helping them solve health problems. Therefore, thorough preparation is needed to understand clinical situations in practice and to have clinical performance capabilities that are helpful to patients before starting clinical practice. However, most studies have shown that clinical performance assessments are conducted partially within the basic nursing and adult nursing curriculum, or integrated at graduation. In the future, it is necessary to develop various modules that reflect the needs of the next semester's practice ward to conduct a systematic in-school clinical performance evaluation for all students to reduce reality shock and improve satisfaction and confidence in practical education.

5. Conclusion and Suggestion

This study is a cultural, technical, and intellectual study on the CPX performance and evaluation, which were used as methods for evaluating the comprehensive practical practice skills of prospective graduates who have completed all the integrated practical practice training courses.

The informants consisted of eight fourth-year students attending the Faculty of Nursing at a university and participated in the study with written consent. The data collection period was from December 21, 2020 to December 24, 2020. The average number of interviews per person was about two

times, and the average interview time was about one hour each session. Additional interviews were conducted over the phone or email for incomplete or unclear details in the initial interview. In addition, to confirm the validity of the results derived from this study, one follow-up interview was conducted with three participants. The collected data were analyzed using Spradley's analysis method, and the study results are summarized as follows:

As a result of the study, a total of four areas—burden/tension, critical thinking, confidence, and satisfaction—were derived.

The first area, burden/tension, was categorized into burden of preparation, anxiety, and English stress.

The second area, critical thinking, was categorized into a difficulty of constructing a scenario and a low sense of reality.

The third area, confidence was categorized as helpful in practice and confidence in practice.

Satisfaction, the fourth area, was categorized into standardized patient role help, good progress, satisfaction with timing, and satisfaction with evaluation environment. Looking at this in further detail, the burden/tension was categorized into the burden of preparation, anxiety, and English stress. The burden of preparation was felt from second day to a week, and it was found that the anxiety was related to the anxiety and nervousness in the actual practice.

In the area of critical thinking and a low sense of reality, it was found that a lot of critical thinking was experienced from the preparation process for the CPX, and a low sense of reality and presence was experienced when performing the CPX with standardized patients.

In the confidence domain, it was found that students experienced practical application ability through the CPX performance and psychological confidence in practice. Finally, in terms of satisfaction, it was found that

Finally, in terms of satisfaction, it was found that the subjects were satisfied with the CPX progress, where the standard patient role assistance and progress were reported to be smooth. Although the timing was burdensome, it was found to be appropriate. and the evaluation environment was satisfactory.

According to the results above, fourth year students attending the Faculty of Nursing experience practical practice and psychological burden concerning graduate certification after completing four years of theoretical study and integrated practical practice. It can be seen that they are living their daily lives with hard work and effort in various areas. After the evaluation, the burden of the CPX performance generally became positive. However, the area where students feel the burden suggests specific and practical requirements to improve the inconvenience and problems. The influence of various negative factors should be minimized, and the needs of fourth year nursing students should be reflected to make appropriate adjustments for addressing the negative factors—the pressure of preparation, English stress, and a low sense of reality during the CPX.

Based on the results of this study, I would like to suggest the following:

First, in order to minimize stress in each CPX evaluation area, concrete orientation is presented, and practical examples in clinical practice are emphasized to increase the sense of reality and minimize psychological burden.

Second, students who play the role of standardized patients receive training and education and participate in the CPX, but students who perform the CPX complain of a low sense of reality. Therefore, it is suggested to implement various training education for students who play the role of standardized patients.

Third, it is suggested that quantitative and qualitative research related to the CPX needs be conducted prior to the CPX evaluation.

Fourth, in order to relieve the students' burden towards English and the CPX, it is suggested to provide CPX-related materials and sufficient practice period, and to operate English CPX preparation and CPX preparation classes for students who wish to participate.

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