

Effect of PBL-INP Education on Nursing Process Confidence and Critical Thinking Disposition Among Nursing Students

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Abstract. Problem-based learning (PBL) plays a pivotal role in improving the clinical competency of nursing students. We identified the effect of PBL-integrative nursing process (PBL-INP) education on teamwork, problem-solving ability, confidence in nursing process, and critical thinking disposition among nursing students. This study used a one-group pre–post-test design to verify the effects of the program. Participants were 78 second-year students from a nursing school located in Chungcheong-do, South Korea. The program was performed for eight weeks from May 1 to June 23, 2023. There were significant differences in teamwork ($t = 3.76, p < .001$) and problem-solving ability ($t = 2.27, p = .025$) before and after the PBL-INP. There was a significant difference in the confidence in the nursing process ($t = 6.09, p < .001$) and critical thinking disposition ($t = 2.46, p = .016$) before and after the intervention. The PBL-INP was effective in improving teamwork, problem-solving ability, confidence in nursing process, and clinical thinking disposition among second-year nursing students. The PBL-INP was an effective educational method, and this study provides basic data to improve nursing students' nursing process learning ability.

Keywords: Problem-based learning; Nursing process; Critical Thinking Disposition; nursing student.

1. Introduction

The nursing process is a problem-solving method that provides systematic nursing to all participants, including individuals, families, and communities [1]. However, not only nursing students but also nurses have complained about applying the nursing process to solve the participant's problem [2,3]. Currently, It is not only insufficient to understand the nursing process but also difficult to apply the problem-solving process through critical thinking among nursing students. Therefore, it is necessary to apply effective teaching methods in the nursing department curriculum so that students can be confident in applying the nursing process.

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2. Methods

We developed and applied a PBL-integrative nursing process (PBL-INP) program that mimics real situations as closely as possible. This study used a one-group pre-test-post-test design to identify the effects of PBL-INP education on teamwork, problem-solving ability, nursing process confidence, and critical thinking disposition among nursing students. 78 participants were recruited from a nursing school located in Chungcheong-do, South Korea. The inclusion criteria: 1) completed the fundamentals of nursing and health assessment courses, 2) had no experience with the nursing process course. The program was performed from May 1 to June 23, 2023. The education program applied to the experimental group consisted of 14 hours for eight weeks. The Cronbach's α for the scale to measure teamwork was 0.90, and for the problem solving ability scale, it was 0.95. The Cronbach's α for the scale to measure confidence in the nursing process was 0.98, and for the critical thinking disposition scale, it was 0.89.

3. Results

The average age of the students was 23.18 ± 4.13 years, and 72 (92.3%) participants were female. Of these, 77 (98.7%) was "satisfied" with their nursing major, indicating that most students were highly satisfied with their nursing major. Eight students (10.3%) obtained a grade of "A+~A", while 55 (70.5%) and 3 (19.2%) students achieved "B+~B" and "C+~C" respectively. The student's teamwork ($t = 3.76, p < .001$) and problem solving ability ($t = 2.27, p < .025$) were significantly higher after the PBL-INP program than before. The confidence in the nursing process ($t = 6.09, p < .001$) was significantly higher after PBL-INP program than before, as well. Critical thinking disposition was significantly higher after the program than before ($t = 2.46, p = 0.016$).

4. Conclusions

This study verified that PBL-INP programs are effective in improving nursing students' teamwork, problem-solving abilities, confidence in the nursing process, and critical thinking disposition. Considering that this study was conducted during a nursing process class for second-year nursing students at a university, there are limitations to generalizing the research results. Future studies should conduct repeated experiments with randomly selected participants.

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