

The Effect of the Self-reflection Promotion Program in Non-face-to-face Video Classes due to COVID-19

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Abstract

This is a group pretest-posttest design study that aim to evaluate the effect of self-reflection promotion program of nursing students. The subjects of this study were 42 first-year nursing students. The data was collected from October 5 to November 2, 2020. A questionnaire was used to measure self-reflection and self-efficacy. The self-reflection promotion program was operated for a total of 8 hours in 4 sessions over 4 weeks. Online lectures were conducted using books, movies, and art recommended by expert. The subjects could take lectures using their smartphones, laptops, desktops, and tablet PC. As a result of the study, self-reflection was significantly improved after intervention than before intervention ($t=-2.594$, $p=.013$). In the sub-items, self-exploration and self-understanding were statistically significantly improved ($t=-2.527$, $p=.015$; $t=-2.471$, $p=.018$). However, other-exploration and other-understanding were not statistically significant ($t=-1.226$, $p=.227$; $t=-.758$, $p=.453$). The self-efficacy of the subjects was not statistically significant ($t=-.170$, $p=.866$). In future research, it will be necessary to develop and verify specific teaching and learning methods utilizing various contents that can improve self-reflection for nursing students.

Keywords: *Coronavirus infection-19, Nursing students, Self-reflection, Self-efficacy*

1. INTRODUCTION

The novel coronavirus infection, which occurred in Wuhan, China in December 2019, was an unknown disease at first, but as it spreads worldwide, the WHO declared a pandemic of COVID-19 on March 11, 2020 [1]. Coronavirus infection – 19 is defined as a respiratory syndrome caused by SARS-CoV-2 infection, and is classified as a first-class infectious disease new infectious disease syndrome [2].

This situation had a great impact on the education sector as well. Traditional face-to-face classes that have been held in classrooms have been completely suspended due to COVID-19, and a new educational method called non-face-to-face online lectures has appeared in the field of education. Both educators and professors had to endure non-face-to-face education through digital media that they had never encountered before, and now this is developing into a new paradigm of irreversible education [3-6].

The Ministry of Education has ordered all non-face-to-face classes from the first day of school in 2020. Non-face-to-face classes have the advantages of being easy to review as they are recorded and reducing the time spent commuting to school[7]. In addition, learners express their experiences of being safe from infection, psychologically stable, and benefiting from non-face-to-face classes[8]. However, problems such as

Manuscript received: October 31, 2021 / revised: November 12, 2021 / accepted: December 7, 2021

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difficulties in real-time communication among students and lack of opportunities to form social relationships have been reported[8].

Reflecting the educational changes caused by the impact of COVID-19, non-face-to-face classes have been activated in the nursing education field that trains nursing students. Non-face-to-face classes were also activated in nursing education sites. In the case of college students majoring in nursing, unlike college students with other majors, as health experts to provide care for human beings, sufficient exploration or in-depth reflection on career paths during college life is required, but previous studies have shown that this is not the case [4-6]. Therefore, nursing students who learn and train nursing care need to know themselves more than anyone else and concentrate on their major studies, so self-efficacy and self-reflection are important. Self-efficacy refers to an individual's belief that he or she can successfully perform a behavior to achieve a certain outcome, and refers to the strength of situational concrete confidence [9].

Self-reflection is a process that leads to exploration and understanding through awareness and awareness of the situation, and it refers to one's beneficial effects on personal growth and adaptation by thinking and understanding one's inner state or problems [10]. Good introspection will help you become more aware of your feelings, needs, fears, your personal history, your strengths, weaknesses, future plans and goals, and you will be able to make wise decisions in life.

Therefore, it is necessary to apply various methods to promote students' self-reflection from the first year of the nursing department to the time of graduation and provide them systematically. Previous studies have reported the effects of self-reflection self-reflection practice[11] and the writing of a reflection journal in basic nursing practice education[12]. However, since the preceding research was conducted before the covid 19 situation, considering the current class status with the ongoing covid 19 pandemic, if the self-enhancement effect is verified in non-face-to-face classes, especially online learning, basic data for practical application are not available.

In this study, the effect of the self-reflection promotion program in the non-face-to-face video class conducted in the covid pandemic class was confirmed by the self-reflection and self-efficacy of freshmen in nursing college, and the basic data for developing an online program for self-enhancement education for prospective medical personnel in the future.

2. RESEARCH METHOD

2.1 Research design

This study is a similar experimental study before-and-after a single group to evaluate the effect of self-reflection program of nursing students(Figure 1). The program consisted of 8 hours over 4 weeks. In the first session, students identified their emotions, desires, fears, strengths, weaknesses, personality types, through their awareness of the COVID-19 situation, and wrote down their future plans and goals.

Before program	Intervention	After program
Self-efficacy	E-class system	Self-efficacy
Self-reflection	- Video contents(25-30 minutes) - Supplementary study materials	Self-reflection
	Utilized Device	
	- Desk Top	
	- Notebook	
	- Tablet PC	
	- Smart Phone	

Figure 1. Research Design

For the 2nd session, books that help self-efficacy and self-reflection were used. The titles of books recommended by self-development experts are as follows. There were 'Stand on your own side', 'Don't let your fear decide your life', 'Why do you work?', 'A man who owes you 40 billion won one day', 'Miracle Morning', 'Love is allowing hurt ' and so on. After taking a lecture on the guide and use of books, students directly selected and read a book and shared their impressions. In the 3rd session, movies recommended by film experts were used. Movies presented as clips include 'Tree of Life', 'Billie Elliot', 'Goal', 'Whiplash', 'Facing the Giant', and 'Freedom Writers'. A film application worksheet was provided for use after class. In the 4th session, students expressed themselves through art using their own paper and writing instruments, or tablet PC and pencils. After viewing the sample video produced by an art expert, they were instructed to freely express themselves. The sketched material was provided for use when needed. They were asked to write a brief impression about the activity in each session.

2.2 Research subjects and data collection

The subjects of this study were 42 nursing college students. The purpose of this study and the contents of the questionnaire were explained to the students who had taken the psychology understanding class, and their intention to participate voluntarily was confirmed. In the consent form for research participation, the purpose of the research, the anonymity and confidentiality of the research participants, and the possibility of discontinuation of the research were described. In addition, the purpose of the survey was presented and the fact that all personal information related to identity is encrypted and managed. In the consent form, the purpose of the study, the anonymity and confidentiality of the research participants, and the possibility of withdrawing from the study were specified, the purpose of the questionnaire was specified, and the identity and all related personal information was encoded and recorded and managed. From October 1 to October 31, 2020, 45 questionnaires were collected, there were 3 questionnaires with uncertain responses, and 42 questionnaires were used in the final analysis.

2.3 Research tools

2.3.1 Self-Reflection

Self-reflection is the process of obtaining change by looking into the state of mind or exploring one's thoughts and feelings[13] For self-reflection, the Self-Reflection Scale developed by Hwang[14] was used. This tool consisted of 20 questions with 4 factors: 5 questions for self-exploration, 5 questions for self-understanding, 5 questions for exploring others, and 5 questions for understanding others. The measurement standard is a Likert 5-point scale, with 1 being 'disagree' to 5 points of 'strongly agree', with higher scores indicating better self-reflection. The reliability of the entire tool at the time of development[14] was Cronbach's $\alpha = .88$, and in this study it was .95.

2.3.2 Self-Efficacy

Self-efficacy was used on a 3-item 5-point scale used in the study of Kim and Yu[15]. The measurement standard is a Likert 5-point scale, with 1 being 'disagree' to 5 points of 'strongly agree', with higher scores indicating better self-reflection. The higher the number, the higher the self-efficacy. The reliability of the entire tool at the time of development was Cronbach's $\alpha = .91$, and in this study it was .93.

2.4 Data Analysis Method

The data collected through pre test and post tests were analyzed as follows using the SPSS 24.0 program. The study variables were calculated by frequency, percent, mean, standard deviation, min, max. In order to verify the effectiveness of the program, the difference in pre and post-value changes for self-reflection, self-efficacy was analyzed through a paired t-test. The reliability of the measurement tool was analyzed by Cronbach's α .

3. RESEARCH RESULTS AND DISCUSSION

3.1 General characteristics

In the general characteristics of the subjects, 10 males(23.8%) and 32 females(76.2%) by gender. The average age was 20 years old, and the stress of learning in Covid-19 situation was 6 points out of 10.

Table 1. General characteristics of the Subjects (N=42)

Categories		n(%)	M \pm SD
Gender	females	32(76.2)	
	males	10(23.8)	
Age			20.38 \pm 1.34
Stress of Learning in Covid-19			6.00 \pm 2.16

3.2 Self-Efficacy

The self-efficacy of the subjects of this study is shown in the Table 1. The self-efficacy before the intervention was 4.13 \pm 0.78 and after the intervention was 4.14 \pm 0.78, which was not statistically significant ($t=-.170, p=.866$).

3.3 Self-Reflection

Table 2 shows the self-reflection of the subjects of this study. The average score for self-reflection before intervention was 4.18 \pm 0.52. After the intervention, it was statistically significant as 4.34 \pm 0.58 ($t=-2.594, p=.013$). In the sub-items, self-exploration improved from 4.10 \pm 0.66 to 4.30 \pm 0.65, and self-understanding was statistically significantly improved from 4.02 \pm 0.71 to 4.30 \pm 0.65 ($t=-2.527, p=.015$; $t=-2.471, p=.018$). However, other-exploration and other-understanding were not statistically significant ($t=-1.226, p=.227$; $t=-.758, p=.453$).

Table 2. Self- efficacy and self- reflection of the Subjects (N=42)

Categories	Before program	After program	t (p value)
Self- efficacy	4.13 \pm 0.78	4.14 \pm 0.78	-.170(.866)
Self- reflection	4.18 \pm 0.52	4.34 \pm 0.58	-2.594(.013)
Self-exploration	4.10 \pm 0.66	4.30 \pm 0.65	-2.527(.015)
Self-understanding	4.02 \pm 0.71	4.30 \pm 0.65	-2.471(.018)
Other-exploration	4.33 \pm 0.57	4.43 \pm 0.61	-1.226(.227)
Other- understanding	4.27 \pm 0.57	4.33 \pm 0.63	-.758(.453)

In the previous study [16], the self-efficacy of nursing students averaged 3.73 \pm 0.49 points, which was lower than that of the subjects of this study. In the sub-items, self-exploration was 3.79 \pm 0.85, self-understanding was

3.55±0.60, other-exploration was 3.88±0.58, and other-understanding was 3.73±0.63, which were all lower scores than the subjects of this study.

4. CONCLUSIONS AND SUGGESTIONS

This study was attempted to confirm the effect of self-efficacy and self-reflection after applying a self-reflection promotion program to nursing students through non-face-to-face video lessons in Coronavirus infection – 19 pandemic. As a result of the study, self-efficacy was not significant, but self-reflection was statistically significant. In the sub-factors of self-reflection, the items of self-exploration and self-understanding were statistically significant. It has been known that self-reflection to think about and understand one's inner state or problems is beneficial for personal growth and adaptation [17]. In a study of college freshmen, it was found that students who were self-reflecting performed better on developmental tasks than those who were not [18]. Based on previous studies, it can be expected that the high self-reflection of nursing students in this study will lead to positive developmental tasks in the future. Self-reflection is the process of contemplating scientific and empirical evidence with an active attitude when situations involving difficulties or confusion or suspicious situations arise [19]. Therefore, it can be expected that if students systematically train for self-reflection from freshman, they will be able to make correct judgments in unclear clinical situations in the future.

A high level of self-efficacy is a factor that can increase cognitive participation in online classes [15,20]. Rather than focusing on content, it is necessary to make an effort in terms of class design that can promote learners' cognitive participation such as discussion or project learning [15]. In this study, we focused on contents such as books, movies, and art. In the future, when conducting programs, it is necessary to present contents and use them to promote classes that can be linked to discussion or project learning.

It was confirmed that the self-reflection promotion program of this study was effective, but it is necessary to study the contents and methods of education that can enhance the exploration and understanding of others in the future.

Based on the results of this study, I would like to make the following suggestions. First, in order to generalize the research results, iterative research that expands the subjects is necessary. Second, research is needed to explore various factors that influence self-reflection and to build a theoretical model that encompasses them.

ACKNOWLEDGEMENT

This work was supported by Dongseo University, "Dongseo Cluster Project" Research Fund of 2021 (DSU-20210006).

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