

**STUDY ON RELATIONSHIP BETWEEN NURSING STUDENTS' CLINICAL PRACTICE  
STRESS AND CHANGES IN PERCEIVED NURSE IMAGES**

Yu-Kyung Park\*

Dept. of Nursing, Choonhae College of Health Sciences, Ulsan, 44965, Korea.

**\*Corresponding Author: Yu-Kyung Park**

Dept. of Nursing, Choonhae College of Health Sciences, Ulsan, 44965, Korea.

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**ABSTRACT**

This is a descriptive correlation study for examining the effect of nurse's images perceived by nursing students on their clinical practice stress. The subjects include a total of 184 nursing students, among those enrolled in the C University located in the U metropolitan, who listened to an explanation about the objective and purport of this study and agreed to participate in the questionnaire survey. Data had been collected from 07 to 31, Jul., 2020. The resulting data were analyzed with t-test, ANOVA, Scheff's test and Pearson's correlation coefficients, by using SPSS 21.0. The findings showed that the average score of the clinical practice stress was 2.62 ( $\pm 0.49$ ) out of 5, and that of a practical work burden was highest (2.94,  $\pm 0.65$ ), followed by the practical education environment (2.94,  $\pm 0.65$ ), among the sub-factors of the clinical practice stress. The nurse images perceived by nursing students had negative correlations with the clinical practice stress ( $-0.40 < .001$ ).

**KEYWORD:** clinical practice, stress, nursing students, nurse images.**I. INTRODUCTION****1. Need for the Study**

The nursing science is a practical one, whose true value would be recognized as a science, only if it can provide direct care to human beings in various circumstances, for maintaining, enhancing and recovering their health, by contacting with them and also be widely used on the nursing practice.<sup>[1]</sup> The clinical practice education accounts for a larger portion of the nursing curriculum, and Korean Accreditation Board of Nursing Education prescribes that all students graduated from nursing colleges should complete clinical practice for more than 1000 hours in general or special hospitals with more than 300 beds.<sup>[2]</sup>

Nursing students experience the practice performed by nurses through clinical practice, which provides an important learning opportunity for them to connect the knowledge they learner in colleges to the clinical settings, with assistance from nursing specialists, field experts. In the process, nursing students observe the role of nursing specialists and are directly taught by them.<sup>[3]</sup> In particular, they undergo a variety of nursing settings, learn the basic roles and skills for nursing, and acquire performance abilities to cope with changing social needs, through clinical practice.<sup>[4]</sup> Nursing students, therefore, suffer from stress stronger than general college students, as the former, different from the latter, should receive both theoretical and practical education,<sup>[5]</sup> Especially, the 'first clinical practice' for them is a factor<sup>[6]</sup> inducing the strongest stress, indicating that excess stress derived

from clinical practice may not only discourage their interests in the practice, but also let them lose their positive expectations about the nursing profession.

Nurse images involve nurses' own beliefs in nursing and the images of nurses, perceived by employees engaging in non-medical jobs in hospitals, physicians, hospital staffs, patients and caregivers<sup>[8]</sup>. The images are perceived via outcomes or experiences underwent by individuals,<sup>[9]</sup> and those of a specific job are a factor important for the roles and occupational views of employees engaging it, and for job seekers who should decide their careers,<sup>[10]</sup>

Although the nurse images perceived by prospective nursing students who did not yet enter nursing colleges were not different from those by general persons, their perspectives on nursing are changed and they accept and internalize the knowledge and skills about, attitudes toward and beliefs in nursing as the part of their self-images or behavior, as they receive nursing education<sup>[11]</sup>. They may, however, imprint nurse images as negative and disappointing ones on their minds, as they recognize differences in the images between theoretical education they receive in colleges and the clinical practice education in hospitals.

Nurses' positive views on the nursing profession have positive effects on the provision of quality nursing and the performance of effective nursing tasks, as they are combined with a variety of professional personnel in

medical settings,<sup>[12]</sup> It is thus necessary for nursing students to establish positive nurse images.

Encouraging nursing students to shape positive nurse images by understanding their perceptions on the images is thought to affect effective clinical practice education, where the need for nursing is extended and the concept of nursing is rapidly changed ahead of the fourth industrial revolution. Hence, it is very important to examine the relation between perceived images of nurses and nursing students' clinical practice stress. This study, therefore, aims to help nursing students establish the positive images and therefore, provide basic data for managing effective clinical practice, by understanding the effects of nurse images on nursing students' clinical practice stress.

## 2. Objective of Study

This study intends to examine nursing students' clinical practice stress and the effects of nurse images on it. Specific goals are as follows:

1. Understand the general characteristics of the subjects.
2. Understand differences in clinical practice stress depending on the general characteristics of the subjects.
3. Understand the correlations between nurse images and clinical practice stress.

## II. MATERIALS AND METHODS

### 1. Research Design

This is a descriptive correlation research study for understanding the effects of nurse images on nursing students' clinical practice stress.

### 2. Subjects

G \* power program 3.1 was used to select the number of subjects, and ANOVA with  $(\alpha) = 0.05$ , power  $(1-\beta) = 85\%$  and the effect size  $(f^2) = .20$  (medium) was conducted to estimate it. The results showed that the minimum sample suitable for the purpose of this study should include at least 182 subjects. A total of 200 questionnaires were distributed to nursing students, given a drop-out rate. Among all subjects, 184 were finally selected as the subjects, excluding those who provided insincere responses.

### 3. Research Tools

#### 1) Clinical Practice Stress

The clinical practice stress means a state of tension making nursing students feel anxiety or concerns, by affecting emotions, thought process and physical conditions experienced by them<sup>[13]</sup> This study used the scale of clinical practice stress developed by Beck and Srivastva (1991)<sup>[13]</sup> and corrected and complemented by Kim and Lee (2005)<sup>[14]</sup> This tool consists of a total of 24 items: 5 for practical education environment; 6 for undesirable role models; 4 for a practical work burden; 4 for interpersonal conflicts; and 5 for conflicts with patients. Each item score is calculated by using a 5-point

scale, indicating that the higher the scores, the stronger the clinical stress. The reliability of the tool was Cronbach's  $\alpha = .91$ , when it was developed, but was Cronbach's  $\alpha = .90$  in this study.

#### 2) Nurse images

The tool developed by Yang<sup>[15]</sup> and corrected and complemented by Lee et al.<sup>[16]</sup> was used to measure nurse images. This tool consists of a total of 27 items: 12 for traditional images; 6 for social images; 6 for professional images and 3 for individual images. Each item was scored on the 5-point Likert scale ranging from 1= 'strongly disagree' to 5='strongly agree', with negative items being inversely operated, indicating that the higher the scores, the more positive the nurse images. In the study of Lee et al.<sup>[16]</sup> the reliability of the tool is Cronbach's  $\alpha = .92$ , while it is Cronbach's  $\alpha = .87$  in this study.

#### 4. Data Collection

Data had been collected by using self-administered questionnaires, from 07 to 31, Jul. in 2020. This study promoted the understanding of students who participated in the data collection, by explaining the objective of this study, measuring tools and items and made efforts to minimize inter-rater errors, before the data collection. For the ethical protection of the subjects, it informed them of its objective and procedures and explained them about spontaneous participation in it and anonymity. The questionnaires were administered to the subjects, after written consents were received from them. It took about 10-15 minutes to fulfill out the questionnaires.

#### 5. Data Analysis

The data collected were analyzed by using SPSS Version 22.0.

- 1) The general characteristics of the subjects were analyzed by using descriptive statistics including percentages, means, standard deviations, etc.
- 2) Difference in clinical practice stress by the subjects' general characteristics was tested by using independent t-test and one-way ANOVA, and Scheffe test was conducted as a post-test.
- 3) The relationship among main variables was analyzed by using Pearson correlation coefficients.

## III RESULTS

### 1. General Characteristics of Subjects

In this study, the general characteristics are as shown in Table 1. Among the subjects, 84.2%(n=115) were 'females'; 79.3%(n=146) were 'under 25'; 33.7%(n=62) were motivated to select the dept. of nursing because 'it was their future dream and suited their aptitude'; 60.3%(n=111) were 'satisfied' or 'very satisfied' with their major; 53.8%(n=99) were 'healthy' or 'very healthy' in terms of subjective health status; 40.2%(n=74) were 'satisfied' or 'very satisfied' with the clinical practice, indicating that more than half of the subjects showed less than moderate satisfaction with it; 77.0%(n=130) 'discovered desirable nurse role models'

during the clinical practice; among the role models that the subjects discovered, 'general nurses in wards' were discovered by 41.2%(n=76), followed by 'head nurses in

wards' by 20.1%(37명); 90.7%(n=107) 'changed their nurse images' after the clinical practice(Table 1).

**Table 1: Characteristics of Nursing Students and Clinical Practicum Stress (n=184).**

Variables	Categories	Clinical practicum stress		
		n(%)	M±SD	t or F(p)
Gender	Female	155(84.2)	2.38 (0.60)	-1.82 (.070)
	Male	29(15.8)	2.63(0.48)	
Age	20~24 <sup>a</sup>	146(79.3)	2.67 (0.42)	5.20 (.120)
	25~29 <sup>b</sup>	25(13.6)	2.60 (0.50)	
	≤30 <sup>c</sup>	13(7.1)	2.74 (0.48)	
Motivation to enter dept. of nursing	Aptitude or dream	62(33.7)	34.05 (10.48)	-2.38 (.018)
	Others	122(66.3)	38.09 (12.38)	
Satisfaction with nursing major	Very satisfied <sup>a</sup>	18(9.8)	2.38(0.44)	5.91 (.001) a>c,d
	Satisfied <sup>b</sup>	93(50.5)	2.58(0.46)	
	Average <sup>c</sup>	61(33.2)	2.74(0.52)	
	Not satisfied <sup>d</sup>	12(6.5)	3.00 (0.33)	
Subjective health status	Very healthy <sup>a</sup>	20(10.9)	2.40(0.49)	3.64(.001) a > d
	healthy <sup>b</sup>	79(42.9)	2.54(0.50)	
	Average <sup>c</sup>	70(38.0)	2.71(0.42)	
	Non-healthy <sup>d</sup>	15(8.2)	2.78(0.40)	
Satisfaction with clinical practice	Very satisfied <sup>a</sup>	9(4.9)	2.15(0.43)	8.71(.001) a,b>d
	Satisfied <sup>b</sup>	65(35.3)	2.55(0.45)	
	Average <sup>c</sup>	98(53.3)	2.78(0.49)	
	Not satisfied <sup>d</sup>	12(6.5)	2.87(0.50)	
Did you find desirable nurse role models during clinical practice?	Yes	130 (70.7)	2.38 (0.44)	2.45 (.001)
	No	54(29.3)	3.00(0.33)	
Role model† (who did you find?)	Nursing professor	27(14.7)		
	Clinical instructor	23(12.5)		
	Clinical teaching assistant	6(3.3)		
	Head nurse/unit manager	37(20.1)		
	Nurse	76(41.2)		
	Practice guidance nurse	15(8.2)		
Were nurse images changed after clinical practice?	Yes	107(90.7)	4.06(0.43)	2.21(.001)
	No	11(9.3)	3.78(0.43)	

## 2. Changes in General Characteristics and Clinical Practice Stress

There were significant differences in the clinical practice stress, depending on the motivation to enter the dept. of nursing, satisfaction with nursing major, subjective health status, satisfaction with clinical practice, whether desirable nurse role models were discovered during the clinical practice and whether nurse images were changed after the practice(Table 1). The clinical practice stress was stronger for students who were motivated to enter the dept. of nursing due to other reasons, than for those who were motivated to enter it because it was their future dream and suited their aptitude(p=.018);for students with low satisfaction with nursing major, than for those with high satisfaction with it(p=.001); for students who thought that they were not healthy in terms of their subjective health status(p=.040); for students whose nurse images were changed after the clinical practice(p=.001).

## 3. Degree of Clinical Stress and Nurse Images

The average score of clinical practice stress was 2.62(±0.49) out of 5, indicating the moderate stress; and that of the practical work burden was highest (2.94, ±0.65), followed by the practical education environment (2.94, ±0.65), among the sub-factors of the clinical practice stress. The degree and average score of nurse images were 108.40± (13.53) and 4.01(±0.50), respectively; and the average score of professional images was 4.33점(±0.74), followed by traditional images(4.08점(±0.58)), and then social images(3.93점(±0.54),) and individual images(3.29점(±1.08)), among the sub-factors of nurse images (Table 3).

**Table 3: Degree of Clinical Practice Stress and Nurse images (N=184).**

	Variables	M±SD	Category	Range(Min-Max)
<b>Clinical practice stress</b>	Educational environment of clinical practice	2.94(0.65 )	1-5	1.40~4.80
	Unsuitable role model	2.63(0.69 )	1-5	1.17~4.83
	Clinical working loading	3.11(0.65)	1-5	1.25~4.75
	Conflict of interpersonal relationship	2.25(0.67)	1-5	1.00~4.00
	Conflict with patients	2.18(0.64)	1-5	1.00~4.20
	Total	2.62(0.49)		1.29~3.96
<b>Nurses' Image</b>		4.01(0.50)	1-5	3.51~4.51
	Traditional image	4.08(0.58)	1-5	3.50~4.66
	Social image	3.93(0.54)	1-5	3.39~4.47
	Professional image	4.33(0.74)	1-5	3.67~4.99
	Individual image	3.29(1.08)	1-5	2.21~4.37

#### 4. Relationship between Clinical Practice Stress and Nurse Images

The correlations between the subjects' clinical practice stress and nurse images are as shown in Table 4. The clinical practice stress had negative correlations with nurse images( $r = -.40, p < .001$ ) and the sub-

factors: traditional images( $r = -.30, p < .001$ ), social images ( $r = -.44, p < .001$ ), professional images ( $r = -.55, p < .001$ ) and individual images( $r = -.39, p < .001$ ), indicating that the better the nurse images, the weaker the clinical practice stress.

**Table 4: Correlation Coefficients between Practice Satisfaction and Nurse Image (N=184).**

Variables	Practice stress	Traditional image	Social image	Professional image	Personal image
<b>Traditional image</b>	-.30 (.001)				
<b>Social image</b>	-.44 (.001)	-.74 (.001)			
<b>Professional image</b>	-.55 (.001)	-.76 (.001)	-.71 (.001)		
<b>Personal image</b>	-.39 (.001)	-.49 (.001)	-.42 (.001)	-.48 (.001)	
<b>Nurse image</b>	-.40 (.001)	-.56 (.001)	-.79 (.001)	-.83 (.001)	-.64 (.001)

#### IV. DISCUSSION

This study attempted to find measures for reducing the clinical practice stress and provide basic data necessary for developing intervention to enhance nurse images, by examining the descriptive correlations between clinical practice stress and nurse images, for senior students enrolled in the dept. of nursing.

Not only nursing theories but also clinical practice education is necessary for students to be qualified as skillful clinical experts and equipped with mastered skills and experiences.<sup>[17]</sup> They may undergo strong stress and negative experiences during the clinical practice, and would not adapt to the practice, and therefore, experience many related health problems, and psychological difficulties such as anxiety, tension, frustration, etc., if such stress continues.<sup>[18]</sup> Previous analyses showed that nursing students suffered from stress during the clinical practice.<sup>[19-21]</sup>

In this study, the average score of the clinical practice stress experienced by nursing students was 2.62,

indicating that they felt moderate clinical practice stress. The period of clinical practice education was longer for nursing students than for others majoring in other medical departments. There is stress occurring in the relations with a lot of medical personnel who the former continuously encounter, probably because of psychological pressures which nursing students often feel as they face patients' diseases and death. The clinical practice stress is recognized as a serious problem even among nursing students, as more than 6000 theses are found by searching for those on the clinical practice stress from Korea Citation Index(KCI). Although a lot of studies on it have been reported, there are currently little measures against it.

The existing curriculum has required nursing students to perform clinical practice for 1000 hours, but fundamental measures for addressing many psychological problems felt by students are not yet established. In order to encourage them to regard the clinical practice as an essential learning field, rather than as a negative stressor, it may be very important to build a system for managing

negative factors. Each of college or professor should not think the clinical practice stress as students' individual problems any more, but should apply programs in which they can select and instruct students with strong clinical practice stress and respect their personality in the field of practice.

The clinical practice education is a required subject for nursing students, so this study showed that the higher the practice stress, the more negative the nurse images. Hence, it may be necessary to plan a strategy and make institutional effort for enhancing the nurse images perceived by nursing students. A program for managing the clinical practice stress by improving the practice subject connecting theories and practice, as well as practice contents, promoting practice settings and therefore, increasing their satisfaction with clinical practice should be also developed.

From the comprehensive findings, it is thought that education or institutions for reducing stress in the class or practice for nursing students should be prioritized in hospitals or colleges, for them to establish the nurse images. This study seems to have an implication, in that it provides an orientation for efficiently promoting a methodological approach and clinical practice settings, which can increase the efficiency and effectiveness of practical education, where the importance of clinical practice for nursing students has been gradually emphasized. The findings cannot be extensively interpreted and generalized to other departments, since this study only selected nursing students enrolled in a college located in an area as the subjects.

## V. CONCLUSIONS

In this study, there were significant differences in the clinical practice stress, depending on the motivation to enter the dept. of nursing, satisfaction with nursing major, subjective health status, satisfaction with clinical practice, whether desirable nurse role models were discovered during the clinical practice and whether nurse images were changed after the practice, suggesting that the better the nurse images, the weaker the clinical practice stress ( $r = -.40, p < .001$ ).

From the findings above, it can be found that experiencing stress in clinical practice may lead to a burden on nurse profession as a future job. A further study is thus warranted, which will develop and apply various intervention strategies for establishing support systems which can reduce the clinical practice stress for nursing students and managing it, and test the effects of them,

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