

Critical Thinking Disposition, Professional Self-concept and Caring Perception of Nursing Students in Korea

Hae Young Woo¹ and Young Ran Tak^{2*}

¹Lecturer, College of Nursing, Hanyang University, Seoul, Korea

²Professor, College of Nursing, Hanyang University, Seoul, Korea

¹E-mail: why996527@hanyang.ac.kr, ²yrtak@hanyang.ac.kr

*Corresponding author

Abstract

The purpose of this study was to determine the association among critical thinking disposition, professional self-concept, and caring perception in nursing students and to identify its effects on professional self-concept. 161 nursing students, who were freshmen and sophomores having performed no clinical practice in Seoul, participated in this study. The data were collected from September to December 2013 and the collected data were analyzed using descriptive statistics, Pearson's correlation coefficients, and stepwise multiple regression analysis. Significant positive correlation was found among critical thinking disposition, professional self-concept, and caring perception; critical thinking disposition and caring perception significantly affected professional self-concept and accounted for 15.7% of it. These results imply that efficient education programs can help establish a solid concept of caring and improve critical thinking ability, contributing to the development of the nursing profession.

Keywords: *critical thinking disposition, professional self-concept, caring perception, nursing students*

1. Introduction

The healthcare environment has recently been changed rapidly in a very complicated way, involving the development of medical techniques and information as well as treatment and nursing specialization. The changing awareness in health and the development of scientific techniques have shifted the concept of health from being based on treatment to health maintenance and promotion. Such a change involves attaching greater importance to the role of nurses, who provide nursing directly. To cope effectively with patients' demands, nurses need to possess professional competence, to think critically [1], to make a quick and accurate judgment, and to possess comprehensive decision-making ability [2].

Such a phenomenon emphasizes the need to change nursing education and to provide students with good-quality education and clinical practice. The fundamental goal of nursing education is to train professional nurses, who can provide good-quality nursing to patients through theoretical and practical education. In particular, they need to possess critical thinking ability for information application, analysis, synthesis, and reasoning, for efficient judgment in decision-making, and for the logical presentation of their opinions [3] with the objective of coping with diverse situations that occur in the rapidly-changing healthcare environment. While there are different descriptions of critical thinking, it is crucial to regard it as a series of processes rather than as a target of a single conclusion or awareness [4]. It is an important means of acquiring correct information to express what the information means correctly and to test whatever information or content is evaluated [1]. Ennis [5] defined the attitude of critical thinking 'disposition' and Paul [6] defined it the 'trait of mind.' Waston and Glaser [7], who explained critical thinking in early stage,

described that it is a combination of attitude, knowledge, and skills beyond the collection of cognitive skills and beyond organization and assessment of positions and arguments for decision-making and problem-solving.

Alfaro-LeFevre [8] noted that critical thinking in nursing is goal-oriented and requires a strategy to maximize the human potential based on the principles of confirmatory judgments and scientific methods. Critical thinking, which is goal-oriented, is to make a self-controlled judgment as a result of interpretation, analysis, assessment, and reasoning and to describe the basis of judgment in full consideration of all the categories in addition to evidence-based causal relations, conceptualization, and methodology and can be categorized into cognitive skills and affective disposition.

To review various definitions of critical thinking and previous research, Brunt [9] performed a meta-analysis of 18 articles on critical thinking disposition and skills in nursing students and nurses from 1992 to 2003. He noted that critical thinking is a lifelong process requiring one's own consciousness, knowledge, and practice, that growth in critical thinking requires improvement of critical mind, and that development of the ability to make critical thinking can improve nursing performance.

Critical thinking disposition, which induces critical thinking, means a personal disposition and inclination to emphasize the will to make a judgment for oneself and to use the will in solving problems and making a decision in personal or professional tasks [10]. Critical thinking disposition is important because even those with good skills of critical thinking are unable to use the skills without the disposition to use them. To promote critical thinking, therefore, it is necessary to reinforce knowledge and skills of critical thinking and attitude and disposition for critical thinking. It may be crucial to train nurses equipped with evidence-based nursing ability by improving critical thinking ability in nursing education since critical thinking disposition is an important factor to determine the quality of nursing.

With the changing concept of health, it is necessary to promote positive relationships between a nurse and a patient and provide good-quality caring with the objective of providing high-quality medical service. To provide professional service based on advanced knowledge, experiences, and techniques to meet such a demand, nurses need to establish a positive image as a professional [11]. Professional self-concept means a feeling and opinion of their own work, which may develop through school curricula and a life at workplace [12]. It is essential to establish positive professional self-concept with the aim of performing their tasks as a professional nurse efficiently in clinical practice together with healthcare professionals in various fields [13, 14]. Therefore, nursing students establishing solid professional self-concept through nursing education and a role model are expected to establish a positive view of profession, as well as to improve good-quality nursing ability.

Leininger [15] noted that caring is to be worried, concerned, and anxious about others' needs, well-being, and survival. In addition to this general definition, he specifically defined humane caring, scientific caring, and professional caring. He proposed that nursing came from the concept of rearing, including caring, growth, and support, and defined caring as a rearing and technical process of helping the target through empathic, supportive, sympathetic, and protective behavioral characteristics. Watson [16] defined caring as a humane exchange essential to the therapeutic relationships between a nurse and a patient and definitely noted the difference between caring by a nurse who helps patients maintain their health, and disease curing by a doctor.

Caring is an integrative concept differentiating nursing from other types of profession [17] and is a central concept in expressing its originality as a profession. It is necessary to correctly perceive the attributes of caring, which has traditionally been considered essential to nursing [18]. If the attributes and principles of caring are applied to the nursing profession, it would contribute to more qualitatively better nursing [19].

The caring behavior and process may be essential to human growth, development, and survival and be accepted as a key concept in nursing. Further research should be conducted in nursing students who will lead the future of nursing, instead of confining the caring perception level to nurses and patients.

Although professional self-concept is an important factor to improve nursing profession in every aspect, domestic researchers have explored it among nurses or determined its association with relevant variables. It can be said that research in nursing students, who are pre-service nurses, is crucial in training nurses as professionals. Since little research has been conducted on the association among critical thinking disposition, professional self-concept, and caring perception in nursing students, this study is significant in that it tries to develop a plan to provide nursing education that can train nursing professionals to perform whole-personal nursing. This study aims to investigate critical thinking disposition, professional self-concept, and caring perception in freshmen and sophomores in the department of nursing, determine the effects on professional self-concept, and provide basic data necessary to present a direction for nursing education.

2. Method

2.1. Design

This is a descriptive research conducted to assess critical thinking disposition, professional self-concept, and caring perception among nursing students who have not performed clinical practice.

2.2. Sample

Nursing students, who were freshmen and sophomores having performed no clinical practice in Seoul, participated in this study. The sample size for regression analysis was estimated using a G power 3.1 program. The minimum sample size for maintaining .15 effect size, $\alpha=.05$ significance level, and .95 power was estimated at 160; thus, the minimum number of subjects for the research was determined. 161 out of 169 nursing students were finally analyzed, with the exception of 8 giving unreliable responses[20].

2.3. Data Collection and Ethical Consideration

Data were collected with the approval of the Institutional Review Board in H University from September to December 2013. With the ethical aspect taken into account, the participants were given explanation of the need and purpose of the study and of the right to veto and cancel the participation, getting no disadvantage, anytime while they tried to complete the questionnaire. They were informed of the fact that the collected data would be treated anonymously and used only for the purpose of the study; afterwards, those agreeing to participate in the research were asked to give a written consent while structured questionnaires were distributed to conduct a self-directed survey.

2.4. Instrument

2.4.1. Critical Thinking Disposition:

The 27-item instrument developed by Yoon [19] was used to measure critical thinking disposition. Each item had a five-point Likert scale. This instrument was made up seven dimensions (intellectual fairness, objectivity, systemicity, intellectual eagerness/curiosity, prudence, healthy skepticism, self-confidence), The scores ranged from 1 (absolutely no) to 5 (absolutely yes), with a higher score meaning a higher level of critical thinking disposition. For the reliability of the instrument in this study, the Cronbach's alpha was .91.

2.4.2. Professional Self-concept:

This paper's adaptation of the 30-item instrument developed by Arthur [11], translated by Sohng and Noh [12, 18] and used by Song [21], was used to measure professional self-concept. It composed four dimensions (professional practice, satisfaction, ethics, self-development and leadership). Each item had a four-point Likert scale. The scores ranged from 1 (no) to 4 (yes), with a higher score meaning a higher level of professional self-concept. For the reliability of the instrument in this study, the Cronbach's alpha was .93.

2.4.3. Caring Perception:

My adaptation of the 42-item instrument developed by Arthur [11], translated by Sohng and Noh [12, 18] and used by Song [21], was used to measure caring perception. This instrument composed three dimensions (theoretical area, practical area, educational area). Each item had a five-point Likert scale. The scores ranged from 1 (absolutely no) to 5 (absolutely yes), with a higher score meaning a higher level of caring perception. For the reliability of the instrument in this study, the Cronbach's alpha was .91.

2.5. Data Analysis

The collected data were analyzed using an SPSS WIN 19.0 program. The general characteristics of the subjects were measured in frequency and the percentage and reliability of the variables were expressed in the value of Cronbach's alpha.

Critical thinking disposition, professional self-concept, and caring perception were measured in the mean and standard deviation. Correlation between variables was analyzed using Pearson's correlation coefficient, and stepwise multiple regression analysis was used to identify the factors affecting the professional self-concept of the subjects.

3. Results

3.1. General Characteristics of Subjects

94.4% of the participants were female and the mean age was 19.7 ± 1.6 years. 42.9% were freshmen and 57.1% were sophomores, while 44.1% had a religion. The most frequent motive for choosing the department of nursing was their own will (41.6%), followed by guaranteed employment (29.2%). 87.5% were attending or had attended the course related to critical thinking <Table 1>.

Table 1. General Characteristics

(N=161)			
Characteristics	Categories	n(%)	Mean±SD
Gender	Male	9(5.6)	
	Female	152(94.4)	
Age			19.7±1.6
Grade	First	69(42.9)	
	Second	92(57.1)	
Religion	Yes	71(44.1)	
	No	90(55.9)	

Reason to choose the nursing program	Their own will	67(41.6)
	Recommendation of family and surroundings	27(16.8)
	Corresponding to score	47(29.2)
	Employment guarantee	10(6.2)
	Willingness to volunteer	4(2.5)
	Others	6(3.7)
Taking course related to critical thinking	Yes	141(87.5)
	No	20(12.5)

3.2. Critical Thinking Disposition, Professional Self-concept, and Caring Perception of Subjects

They scored an average of 3.50 ± 0.51 out of 5 for critical thinking disposition in general, which was at a moderate or higher level. In the dimensions of critical thinking disposition, the score of objectivity was highest (3.89 ± 0.41), Intellectual eagerness (or curiosity) was lowest (2.69 ± 0.45). Specifically, they scored highest with 4.05 ± 0.88 for “I think any argument requires a valid evidence to support it” and “I am willing to admit any mistake I have made” and lowest with 2.91 ± 0.92 for “others consider me a logical person.”

They scored high with an average of 3.09 ± 0.40 out of 5 for professional self-concept. In the dimensions of professional self-concept, the score of ethics was highest (3.45 ± 0.42), satisfaction was lowest (2.92 ± 0.52). Specifically, they scored highest with an average of 2.59 ± 0.92 for “I will work as a nursing professional through life” and highest with an average of 3.49 ± 0.69 for “nursing profession requires a stronger sense of ethics than any other type of profession.”

They scored an average of 3.88 ± 0.42 out of 5 for caring perception, which was at a moderate or higher level. In the dimensions of caring perception, the score of theoretical area was highest (3.97 ± 0.45), educational was lowest (3.43 ± 0.53). Specifically, they scored highest with an average of 4.36 ± 0.77 for “It is time to establish reliability with patients when I think that as a nurse, I take good care of them,” followed by 4.32 ± 0.74 for “Competent nurses may respect themselves, their job, and patients.” They scored lowest for “A responsible nurse is unable to keep the balance between the personal needs and the professional duty of providing good-quality nursing to patients” (2.70 ± 1.19), followed by “One can become a caring nurse only by asking patients how they are” (3.13 ± 1.11) <Table 2>.

Table 2. Mean Score of Critical Thinking Disposition, Professional Self-Concept, and Caring Perception

(N=161)		
Variables	Sub-categories	Mean±SD
Critical thinking disposition	Intellectual fairness	3.83±0.27
	Objectivity	3.89±0.41
	Systemicity	3.23±0.52
	Intellectual eagerness/curiosity	2.69±0.45
	Prudence	3.34±0.40
	Health skepticism	3.44±0.35
	Self-Confidence	3.48±0.54
	Total	3.50±0.51

Professional self-concept	Professional practice	3.04±0.41
	Satisfaction	2.92±0.52
	Ethic	3.45±0.42
	Self-development and leadership,	3.14±0.51
Total		3.09±0.43
Caring perception	Theoretical area	3.97±0.45
	Practical area	3.95±0.41
	Educational area	3.47±0.53
	Total	

3.3. Correlation among Critical Thinking Disposition, Professional Self-concept, and Caring Perception

The level of caring perception had significantly positive correlation statistically with critical thinking disposition ($r=.174$, $p=.024$) and professional self-concept ($r=.343$, $p<.001$) while significant correlation statistically was found between critical thinking disposition and professional self-concept ($r=.278$, $p<.001$) <Table 3>.

Table 3. Correlation among Critical Thinking Disposition, Professional Self-Concept, and Caring Perception

(N=161)

Variable	Caring perception	Critical thinking disposition
	r(p)	r(p)
Critical thinking disposition	.174(.024)	
Professional self-concept	.343(<.001)	.278(<.001)

3.4. Factor Influencing Professional Self-concept

Stepwise multiple regression analysis was used to identify the factors affecting the professional self-concept of the subjects. The regression model was validated.

Prior to the regression analysis, correlation between the independent variables was determined for multicollinearity among variables. No autocorrelation was found among error terms, with Durbin-Watson statistics estimated at 1.865, which was close to 2, by an independence test of residuals and with correlation coefficient among variables estimated at less than .5. All the variables had tolerance estimated at .1 or more and the variance inflation factor (VIF) estimated at less than 10. This demonstrates that no problem of multicollinearity is caused by correlation between independent variables in this study.

The multiple regression analysis found that caring perception and critical thinking disposition significantly affected statistically professional self-concept ($F=15.630$, $p<.000$) and accounted for 15.6% of it. This conveys that the higher the levels of caring perception ($\beta=.30$, $p<.001$) and critical thinking disposition ($\beta=.23$, $p<.001$) are, the higher the level of professional self-concept is <Table 3>.

Table 4. Factor Influencing Professional Self-concept

(N=161)

Variables	B	SE	β	t	p	Adjust R ²	F	p
Constant	1.345	.305						
Caring perception	.291	.069	.30	4.229	<.001	.157	15.630	<.001
Critical thinking disposition	.178	.057	.23	3.125	<.001			

4. Discussion

This study aimed to determine the association between critical thinking disposition, professional self-concept, and caring perception; examine the level of the effects on professional self-concept; and provide basic data necessary to present a direction for higher-quality nursing education.

The subjects scored an average of 3.50 ± 0.51 out of 5 for critical thinking disposition in general, which was at a moderate level. This result was similar to the results of other studies among nursing students [22, 23] but was lower than 3.64 as obtained by Choi [24], who conducted a similar research among nurses. Nursing students had lower levels of critical thinking disposition than nurses probably because they had fewer opportunities to deal with a diversity of complicated practical situations. It is therefore necessary for a curriculum to include a program that can help improve critical thinking ability to understand nursing problems quickly and correctly and render an efficient intervention.

The subjects scored 3.09 ± 0.40 out of 5 for professional self-concept, which was at a significantly higher level, as compared with the 2.80 ± 0.30 obtained by Park and Kim [25], who conducted research among juniors and seniors. This result implies that students who have performed no clinical practice and have never been exposed to actual practical situations rather have higher levels of professional self-concept. It is necessary to complement theoretical and practical education so that clinical practice doesn't lower the level of the image of a nursing professional while nurses perform clinical practice. In addition, efforts should be made to adapt the nurses' clinical image to their profession.

The nursing students scored 3.88 ± 0.42 out of 5 for caring perception, which was at a similar level to the previous research [21]. Caring perception may be improved by continuous education and most nurses may establish relationships with patients for professional nursing, as well as educational knowledge and management techniques [26]. It is therefore necessary to cultivate caring perception by developing and applying education programs and through positive role modeling.

Significant correlation was found among critical thinking disposition, professional self-concept, and caring perception; in particular, caring perception was strongly correlated with professional self-concept. This result implies that caring is a basic concept of nursing and that those with stronger professional self-concept are more likely to get the meaning of caring as professionals. However, since caring perception was not specifically investigated in each area, it is difficult to determine which area is strong.

The literature review has found that the level of professional self-concept is high when students start to study nursing, that it is relatively lower after finishing the major, and that it is even lower in the early stage of nursing and becomes higher as one's nursing career is furthered. This result demonstrates that both practical understanding and experience in clinical practice are needed in nursing education and that nurses may become exposed to conflicts due to the difficulty in adapting themselves to the nursing profession. Such has an impact on their caring perception in the early stage of clinical practice; therefore, an attempt should be made to help them adapt well in this period.

Critical thinking disposition and caring perception accounted for 15.7% of professional self-concept; in particular, caring perception had a greater impact than critical thinking disposition. Professional self-concept may develop through official curricula and life the workplace. Self-esteem, to be specific, may affect the professional self-concept of nursing students [27]. To improve professional self-concept, therefore, it is necessary to operate programs that can help promote self-esteem, can provide a clear understanding of caring, and can establish a philosophical concept of nursing. To reinforce critical thinking disposition, additional efforts should be made to learn how to solve problems in diverse situations and cultivate the ability to think and judge in multilateral ways based on simulation.

In summary, professional self-concept may be an important concept to keep working on as a nurse in order to develop nursing into a profession. The efforts to identify variables related to professional self-concept and develop a method to make qualitative growth of nursing can be highly significant. The results of this study are also expected to be useful as basic data.

5. Conclusion

This study aimed to determine the association among critical thinking disposition, professional self-concept, and caring perception and examine their influence among nursing students having performed no clinical practice. The subjects had all of the three variables at moderate or higher levels and positive correlation was found among them. Results of this study could be included that nursing education needs realistic understanding and existential support to have positive professional self-concept for nursing student It is necessary to conduct longitudinal research from the freshmen period through the days for working as a nurse with the objective of generalizing the results and identifying the factors affecting professional self-concept.

Acknowledgements

This study was supported by Hanyang University research funds (HYRF 20120000003001).

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Authors



Hae Young Woo, she is a lecturer at college of nursing, Hanyang University. She received her Ph.D. degree from Hanyang University, Korea in 2005. Currently, she is a researcher at HEALING LAB. Her research interests include nursing education, healing environment, elderly and family



Young Ran Tak, she is a professor and Chair of College of Nursing, Hanyang University. She is director of HEALING LAB which is contributing new evidence on creating optimal healing environments in a health care setting. Professor Tak is focusing her research on health-enhancing environment and health behaviors. Currently, she is studying person-centered interventions to promote preventive health.

