The Effect of Self-Efficacy, Critical Thinking Disposition and Self-Confidence of Core Nursing Skills on Clinical Competence in Nursing Students

Han Mi Lee[1]
Doctoral Student, Department of Nursing, Kongju National University, Gongju, 32588, South Korea
ddurumi6468@hanmail.net

Hee Kyung Kim[2]*
Professor, Department of Nursing Kongju National University, Gongju, 32588, South Korea
*Corresponding Author hkkim@kongju.ac.kr

Abstract
The purpose of this study was to analyze factors that influence clinical competence such as self-efficacy, critical thinking disposition, self-confidence of core nursing skills of nursing students.

Methods:
The research subjects were 122 third and fourth year students in the department of nursing at the University located in K city of Chungnam who had experienced core basic nursing skill self-directed practice and clinical practice. The research was done in the way where the students who agreed to participate in the research self-reported in the structured survey. The collected data was analyzed through descriptive statistics, t-test, ANOVA, Pearson's correlation coefficient, and stepwise multiple regression.

Results:
In stepwise multiple regression analysis of general characteristics that were found to have correlation with clinical competence including university life satisfaction (r=.194, p=.016), major satisfaction (r=.251, p=.003), and clinical practice satisfaction (r=.302, p<.001), and independent variables self-efficacy(r=.473, p<.001), critical thinking disposition(r=.345, p<.001), and self-confidence of core nursing skills(r=.398, p<.001), the factor that influenced clinical competence of nursing students the most was self-efficacy(β=.37, p<.001), then it was self-confidence of core nursing skills(β=.08, p<.001). These variables explained 29.1% of clinical competence in nursing students.

Conclusion:
Through the research results it could be confirmed that self-efficacy and self-confidence of core nursing skills were important variables of clinical competence. There is need for development of curriculum and teaching methods to improve self-efficacy and self-confidence of core nursing skills, and there is need for objective evaluation tool development and implementation research about self-confidence of core nursing skills. Also there is need for repeated research expanding research subjects and variables as well as research to figure out the unknown predictive factors.

Keywords: Clinical Competence, Self-efficacy, Skilled Nursing, Students, Nursing

Introduction
Nursing science is a discipline that is based on hands on work and the purpose of nursing education is to create competent nurses by educating nursing students to be able to learn the professional rules needed in solving problems of nursing subjects after completing the curriculum [1]. Nursing students also must learn by themselves to skills to be able to specifically apply their knowledge and functions in various real situations. Therefore in nursing students practical training that can improve understanding of clinical situations and which can effectively apply knowledge and techniques for certain situations is very important [2]. However current practical training has limitations in fully educating nursing students to be able to know the nursing skills needed in performing their roles as new nurses in the rapidly changing practical field and new nurses faced difficulties nursing patients in the practical field [3]. In addition, informatization due to development of scientific and medical technology brought changes in social and cultural values that are characterized by surge of knowledge and active participation from the subjects and this is requiring a better quality of nursing [4]. According to this the country promoted the nurse supply increase policy to rapidly increase nursing education institutions from 133 institutions in 2008 to 201 institutions in 2014, and also raised the entrance quota from 13,455 to 23,190 [5]. However there are only 41 universities with Department of nursing that has hospitals which is only 20% of the number of Department of nursing therefore there is difficulty in acquiring places for clinical practice.

Also the recent clinical practice situation due to changes in health and medical environment such as decrease in length of stay, aging of the population, complicated changes in diseases, and increase of patients with severe diseases and various subject characteristics is requiring a more professional clinical competence from nursing students [6]. However imminent and unpredictable clinical environment, qualitative nursing demand increase of subjects, dangers of nursing incidents, and lack of education personnel in the field made practical training focused on observation rather than practical nursing practice [7][8]. Although newly employed nurses receive one to three

months of practical training there is difficulty in completing the clinical competence with this short training period, and nurses feel lack of nursing skill and desire to improve upon their skills [9]. Therefore there is need for checking factors that influence improving clinical competence for nursing students to have the nursing skills for role performance after graduation.

Exploring previous studies about clinical competence of nursing students it is reported that clinical competence of nursing students is improved through factors such as self-efficacy [10], critical thinking disposition [1][11], and self-confidence of core nursing skills [12]. According to Bandura [13] it was found that confidence about one's efficacy influenced the aspect of putting effort into dealing with the given situations. When self-efficacy of nursing students increase, it enables moderation of self for goal achievement even in difficult situations and by actively participating in practical training can increase practice satisfaction [10] which enables them to overcome disabilities or difficulties in performing their role as new nurses and it can be seen as a necessary factor in successful nursing performance [14].

Critical thinking figures out the logical structure and meaning about verbal expression and behavior to decide which opinion to accept or which actions to take and considers things such as concepts, evidence, compliance, process, and context to make the optimal decision [15]. Recently, critical thinking disposition is one of core nursing skills that need to be learned through the curriculum as an important concept that influences clinical competence. Through research results of Do & Seo [16] in various previous studies [17][18] the importance is being emphasized. It is deemed that strengthening of critical thinking disposition of nursing students will nurture thinking skills and problem-solving skills that can enable accurate decision-making to ultimately contribute to the improvement of clinical competence [6].

Also core basic nursing skill education and practical nursing situations considering clinical context to improve confidence in nursing practice in nursing students increases the confidence about nursing practice in newly graduated nurses to improve adaptability at the clinical field [19] and decides the success in the transition period where student nurses become head nurses [20]. According to this, in the education performance portion of the second cycle nursing education accreditation of Korea evaluation Institute of nursing chose core basic nursing skill as a necessary performance ability needed clinically to guarantee adaptation to the clinical field and competence as professional nurses [21], and by specifically listing 20 nursing skill items that is the core and basics that must be accomplished until graduation year of nursing students in performing accomplishment level evaluation they are evaluating the level of competence in nursing students.

For this the researcher tried to figure out the level of clinical competence, self-efficacy, critical thinking disposition, and self-confidence of core nursing skills of nursing students and tried to figure out the relation between these variables and factors that influence clinical competence to provide basic data for development of a program to improve clinical competence in nursing students.

Purpose
The study tries to figure out the influence of self-efficacy, critical thinking disposition, and self-confidence of core nursing skills of nursing students on clinical competence and the specific purposes are as follows;

1) Figure out the levels of self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence in nursing students;

2) Compare differences in clinical competence according to general characteristics of nursing students;

3) Figure out the relation between self-efficacy, critical thinking disposition, and self-confidence of core nursing skills of nursing students and clinical competence;

4) Figure out the predictive factors that influence clinical competence in nursing students.

Methods
The simulations have been conducted to evaluate the proposed system in large-scale networks. The proposed system is simulated in a NS_2 simulator. In the simulations, 150 nodes are randomly deployed in a 100 m x 150 m field. Each sensor node will transfer there sensed data. Each node will also sends energy message to the cluster head when the CH request.

Research design
The study is a descriptive research study to identify the influences of self-efficacy, critical thinking disposition, and self-confidence of core nursing skills of nursing students on clinical competence.

Subjects
The research subjects were chosen by convenience sampling 122 third and fourth year students in the department of nursing at the University located in K city of Chungnam who had experienced core basic nursing skill self-directed practice and clinical practice who understood the purpose of this study that agreed to the participation in the study. For sample size, the minimal sample size was 119 when using G-Power 3.1 program to set Level of significance.05, Effect Size 0.15, and Statistical power 0.95, but considering elimination rate, 122 nursing students who experienced core basic nursing skill self-directed practice and clinical practice were chosen the samples.

Instruments
Self-efficacy
Self-efficacy was measured through the general self-efficacy measurement tool developed by Sherer et al. [22] which was modified and supplemented by Jung [23]. It is composed of a total of 17 questions in each question is composed of a five-point Likert scale where 1 denotes 'strongly disagree' and 5 denotes 'strongly agree.' Higher points denote higher self-efficacy. At the time of development the reliability of the

instrument was Cronbach's α=.71 and in Jung's [23] research it was.86. In this research it was.90.

Critical thinking disposition

Critical thinking disposition was measured through the critical thinking disposition tool developed by Yoon [15] targeted towards nursing students. The tool is composed of a total of 27 questions divided into seven subareas composed of four questions about sound skepticism, for questions about intellectual fairness, three questions about objectivity, three questions about systemicity, four questions about prudence, five questions about intellectual enthusiasm/curiosity, and for questions about confidence and negative questions were reverse converted. It is in a five-point scale and points range from minimum 27 points to maximum 135 points and higher points denote higher level of critical thinking disposition. In the study by Yoon [15] the reliability was Cronbach's α=.84 and in this study it was.86.

Self-confidence of core nursing skills

It is a subjective score about the level of confidence in performing core basic nursing skills in nursing task process by new nurses based on previous study [24], it denotes evaluation score in a survey where the participant can choose from 1 'not confident at all' to 10 'very confident' and in the paper by Han, Cho, and Won [12] the reliability was found to be Cronbach's α=.92 and in this study it was found to be.95.

Clinical competence

The study used a clinical competence measurement tool developed by Lee et al. [25] then modified and supplemented by Choi [26]. This tool measures five areas about clinical competence and it is composed of a total of 45 questions including 11 questions about nursing process, 11 questions about nursing techniques, eight questions about nursing education/cooperation relation, six questions about interpersonal relationship/communication, and nine questions about professional development. The scope of scores is from minimum 45 to maximum 225, and each question is a five-point Likert scale from 1 'cannot do well at all' to 10 'can do very well', and higher points denote higher levels of clinical competence. The reliability of the tool developed by Lee et al [25] was Cronbach's α=.96 and in the study it was.93.

Data collection

Data collection was conducted from March 5, 2015 to March 30, 2015 on third and fourth year nursing students at K city 4-year College of Nursing and the research was done in the way where the students who agreed to participate in the research self-reported in the structured survey. The time consumed in writing the survey was around 15 to 20 minutes and the survey was distributed to 124 students and 124 surveys were collected showing 100% collection rate. 122 surveys excluding two surveys with inadequate responses were used in the analysis.

Ethical consideration

The study underwent K university institutional bioethics committee's (IRB) review (IRB approval number KNU_IRB_2015-09) for the protection of subjects and data was collected in accordance with the approved content. Considering the ethical aspects of the subjects, before distributing the survey the researcher explained the research purpose and methods in the survey was done limited to the subjects who accepted the agreement. The agreement specified about anonymity and confidentiality where the personal information acquired through this research will not be used outside of research purposes.

Data analysis

The collected data was statistically analyzed by SPSS Win 21.0 program.

1)   The general characteristics of the nursing students were analyzed through frequency and percentage level.
2)   The analysis of self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence of nursing students used average and standard deviation.
3)   To analyze the differences in clinical competence according to general characteristics of nursing students, t-test and ANOVA was used and post evaluation used Scheffe test.
4)   The correlation between self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence of nursing students was analyzed through Pearson's correlation coefficient.
5)   To figure out the factors influencing clinical competence of nursing students stepwise multiple regression analysis was used.

Results

General characteristics of the subjects

The general characteristics of nursing students are listed in Table 1. 71 students (58.2%) were in their fourth year and 51 students (41.8%) were in their third year. For gender 115 (94.3%) were female students, and 107 (87.7%) were aged 20 to 24. For religion 75 (61.5%) were nonreligious. For health status 96 (70.7%) reported good and 26 (21.3%) reported normal.

For University life satisfaction 69 (56.6%) reported average and 37 (30.3%) reported low, and for major satisfaction 57 (46.7%) reported average and 44 (36.1%) reported low. Clinical practice satisfaction showed the highest number in average with 61 (50.0%), then it was 23 (26.2%) reporting low, and 18 (14.8%) reporting high. In on-campus training 50 (41.0%) each reported average and low, 19 (15.6%) reported high.

Table 1: General characteristics of the Subjects (N=122)

Characteristics		Range	N (%)
Grade		3rd	51(41.8)
		4th	71(58.2)
Gender		Male	7 (5 . 7)
		Female	115(94.3)
Age		20-24	107(87.7)
		≤ 25	15(12.3)
Religion		Yes	47(38.5)
		No	75(61.5)
Perceived health state		Good	96(78.7)
		Average	26(21.3)
Satisfaction	Satisfaction on college	High	42(34.4)
		Average	69(56.6)
		Low	11(9.0)
	Satisfaction with major	High	52(42.6)
		Average	57(46.7)
		Low	13(10.7)
	Satisfaction with clinical practice	High	38(31.1)
		Average	61(50.0)
		Low	23(18.9)
	Satisfaction on campus training	High	20(16.4)
		Average	50(41.0)
		Low	52(42.6)

The degree of Self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence of nursing students

The degree of self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence of nursing students are listed in Table 2. The self-efficacy of nursing students was on average 3.64 points out of five points, critical thinking disposition was on average 3.56 points out of five points, self-confidence of core nursing skills was on average 6.40 points out of 10 points, and clinical competence was on average 3.32 points out of five points.

Table 2: The degree of Self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence of nursing students (N=122)

Variables	M±SD	Range
Self-efficacy	3.64±.42	1~ 5
Critical thinking disposition	3.56±.31	1~ 5
Self-confidence of core nursing skills	6.40±1.40	1~ 10
Clinical competence	3.32±.39	1~ 5

Differences in clinical competence according to general characteristics

The differences in clinical competence according to general characteristics of nursing students are listed in Table 3. The variables that show significant difference in clinical competence according to general characteristics of nursing students are satisfaction on college (F=3.604, p<.030), satisfaction with major (F=4.018, p<.020), and satisfaction with clinical practice (F=4.603, p<.002). In the post evaluation results the group that reported high satisfaction on college had higher levels of clinical competence compared to the group that reported low satisfaction on college and on average they also reported high satisfaction with clinical practice.

Table 3: Differences in clinical competence according to general characteristics (N=122)

Variables		Range	M±SD	t or F (p)
Grade		3rd	3.28±.40	-1.011(.314)
		4th	3.35±.39	
Gender		Male	3.48±.18	2.091(.063)
		Female	3.31±.40	
Age		20-24	3.30±.37	-.798(.437)
		≤25	3.42±.52	

Religion		Yes	3.37±.44	1.033(.308)
		No	3.29±.36	
Perceived health state		Good	3.34±.39)	1.033(.308)
		Average	3.25±.39	
Satisfaction	Satisfaction on college	High[a]	3.38±.42	3.604(.030) a>c
		Average[b]	3.33±.37	
		Low[c]	3.03±.29	
	Satisfaction with major	High	3.43±.41	4.018(.020)
		Average	3.26±.37	
		Low	3.14±.28	
	Satisfaction with clinical practice	High[a]	3.48±.36	6.186(.003) a>b,c
		Average[b]	3.28±.36	
		Low[c]	3.16±.43	
	Satisfaction on campus training	High	3.36±.38	.697(.500)
		Average	3.27±.39	
		Low	3.33±.42	

Correlations among the self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence

The correlation between the variables related to clinical competence of nursing students is listed in Table 4. Clinical competence of nursing students showed significant correlation with university life satisfaction (r=.194, p=.016), major satisfaction (r=.251, p=.003), practical training satisfaction (r=.302, p<.001), self-efficacy(r=.473, p<.001), critical thinking disposition(r=.345, p<.001), and self-confidence of core nursing skills(r=.398, p<.001).

Table 4: Correlations among the self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence

	SC r(p)	SM r(p)	SCP r(p)	SE r(p)	CTD r(p)	SCCNS r(p)	CC r(p)
SC	1						
SM	.659 (<.001)	1					
SCP	.488 (<.001)	.614 (<.001)	1				
SE	.382 (<.001)	.380 (<.001)	.190 (.018)	1			
CTD	.294 (.001)	.222 (.007)	.110 (.114)	.548 (<.001)	1		
SCCNS	.014 (.438)	.093 (.155)	.354 (<.001)	.267 (.001)	.263 (.002)	1	
CC	.194 (.016)	.251 (.003)	.302 (<.001)	.473 (<.001)	.345 (<.001)	.398 (<.001)	1

SC= Satisfaction on college,
SM=Satisfaction with major,
SCP= Satisfaction with clinical practice

SE= Self-efficacy,
CTD= Critical thinking disposition,
SCCNS= Self-confidence of core nursing skills,
CC= Clinical competence

Affecting factors on clinical competence

To figure out the factors influencing clinical competence in nursing students, variables that showed significant differences in the difference in evaluation of clinical competence according to general characteristics and independent variables that had significant relation in the correlation analysis were inputted to conduct a stepwise multiple regression analysis. In the basic assumption of the regression analysis in the study, Durbin-Watson statistic was 2.104 which satisfied the mutual independence of the residuals, and in the evaluation of the multicollinearity between the independent variables the tolerance was.93 which was a value under 1.0, and VIF (variance inflation factor) was found to be 1.08 which was under the threshold of 10, and it was found that there was no problems of multicollinearity between the independent variables.

Among the general characteristics university life satisfaction (high = 1,0, average = 0,1, low = 0,0), major satisfaction (high = 1,0, average = 0,1, low = 0,0), and practical training satisfaction (high = 1,0, average = 0,1, low = 0,0) that showed significant differences in clinical competence were each variable number processed based on 'high', and it was analyzed including independent variables self-efficacy, critical thinking disposition, and self-confidence of core nursing skills. In the analysis of predictive factors of clinical competence in nursing students the factor that influenced clinical competence most was self-efficacy (β=.37), then it was self-confidence of core nursing skills (β=.08). These variables explained 29.1% of clinical competence of nursing students (Table 5).

Table 5: Affecting factors on clinical competence of nursing students

Variables	B	SE	β	t	p	Tolerance	VIF
Constant	1.468	.269		5.460	<.001		
Self-efficacy	.365	.073	.395	4.967	<.001	.929	1.077
Self-confidence of core nursing skills	.082	.022	.292	3.679	<.001	.929	1.077

R^2=0.303, Adj. R^2=0.291, F=25.82, P<.001

Discussion

In the period that requires nursing students to have higher professional clinical competence, the study tried to identify the predictive factors that influence clinical competence of nursing students, and tried to provide basic data needed for establishing a nursing education program that can improve clinical competence of nursing students.

The study will now discuss focusing on degree of self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence of nursing students, relationship between variables, and predictive factors of clinical competence.

Study results showed that clinical competence of nursing students were on average 3.3 points out of five points which was above average clinical competence. The result matched the degree of clinical competence that Chang & Kwag [1], Do & Seo [16], and Kim [27] measured targeting nursing students which was also 3.3 points, and it was similar to 3.4 points of Shin & Cho [18], 3.5 points of Kwon [6], 3.6 points of Seo & Park [11], and 3.6 points of Song, Kim and Yu [2]. These results show that in the diverse clinical situations nursing students will face after graduation, there needs to be active participation inducement and encouragement in core basic nursing skill self-directed practice and clinical practice so that they can improve skills to specifically practice their knowledge or functions, and it is deemed that there needs to be application of such things as expansion of problem-based learning and simulation training. In addition, it is deemed that there is need for guidance for the nursing students to experience diverse extracurricular activities [16].

The self-efficacy of the subjects of the study was on average 3.6 points (maximum five points), and it was slightly higher than 3.2 of Yoo, Son, Yoo and Hong [28] and 2.9 of Jho [14] which used identical tools to survey nursing students. These results show that through core basic nursing skill self-directed practice nursing students experience various core basic nursing skills in the clinical practice observation based practical training and the experience of achievement help increase of confidence that they are able, thus self-efficacy.

Critical thinking disposition of nursing students was on average 3.6 points out of five points which was higher than 3.2 of Chang & Kwag [1], 3.4 of Kwon [6], and 3.4 of Shin & Cho [18], and it was a similar result to 3.6 points of Chang [5]. Although above average points were shown there is temporal limitations in increasing critical thinking disposition through the course created to strengthen critical thinking skills [17] and it is deemed that there is need for in-depth review of the instructional content and methods of operation.

Self-confidence of core nursing skills showed an average of 6.40 which in comparison to previous study converting the points to a maximum of 10, was similar to the 6.7 points of Han et al [12], but it was lower than 7.42 of Bang & Kim [29] that studied new nurses and 7 points of Kim, Hwang and Lee [19] that studied newly graduated nurses. These results are deemed to be because of nurses experiencing various nursing skills in the clinical field which will show improved self-confidence of core nursing skills compared to nursing students.

In the analysis of the differences in clinical competence according to general characteristics of subjects the result was, satisfaction on college (F=3.60, p<.05), satisfaction with major (F=4.02, p<.05), and satisfaction with clinical practice (F=6.19, p<.05). These results showed that students with higher satisfaction with college life and major showed higher satisfaction in clinical practice. These results were also supported by previous studies and it matched the study results of Kim [27], Kim et al [19], Do & Seo [16], and Chang &

Kwag [1]. Looking at the results above, it is thought that through efforts such as activities related to the major and teaching method development reflecting on student needs will be able to increase satisfaction about major in clinical practice.

There was positive correlation between self-efficacy, critical thinking disposition, and self-confidence of core nursing skills, and clinical competence of subjects. With higher self-efficacy, critical thinking disposition, and self-confidence of core nursing skills of nursing students, degree of clinical competence was higher, and with higher critical thinking disposition and self-confidence of core nursing skills, self-efficacy was higher. With higher self-confidence of core nursing skills critical thinking disposition was higher. Also self-efficacy (β=.35, p<.001) was the factor that had the most influence on clinical competence of nursing students, and then self-confidence of core nursing skills was found to have significant influence. These results are identical to the results in the previous study [10][28] where self-efficacy had influence on clinical competence, but it is contradictory to the results of the study by Jho [14]. This study and study by Jho [14] used the same tools to measure self-efficacy, and the methods of conducting core basic nursing skill practical training was similar, but compared to the study by Jho [14] the group headcount was lower, the subjects of core basic nursing skill practical training were third and fourth year students, and the practical training period was longer by two semesters, which is thought to have caused the contradictory results. Therefore there is need for systematic operation of core basic nursing skill practical training in strategic curriculum development that can foster self-efficacy.

The second factor influencing clinical competence of nursing students was self-confidence of core nursing skills, and dismissed the results of the study by Bang & Kim [29] that studied new nurses. Although it is difficult to compare with other studies due to lack of previous studies analyzing the relation between self-confidence of core nursing skills and clinical competence, it was similar to the results of the studies by Choi [8], Han et al [12], and Liou et al. [30] that reported level of experience in core basic nursing skills could influence clinical competence and performance confidence.

To summarize the results of the study the variables that showed significant difference with clinical competence among general characteristics of the study subjects were satisfaction on college, satisfaction with major, and satisfaction with clinical practice, self-efficacy, critical thinking disposition, self-confidence of core nursing skills was all above average in clinical competence, and the influencing factors of clinical competence of nursing students were self-efficacy and self-confidence of core nursing skills. Therefore through this study there is need to explore about methods for systematic and effective education that can increase self-efficacy and self-confidence of core nursing skills.

Because this study collected data from nursing students of one college of nursing there needs to be discretion in generalizing the results of the study, and because the points of self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence was measured according to personal subjective perception, there needs to be a method to secure objectivity. Regardless of these limitations

the significance of this study is that it figured out the relation between self-efficacy, critical thinking disposition, self-confidence of core nursing skills, and clinical competence of nursing students to provide basic data for development of program to improve clinical competence of nursing students.

Conclusion and suggestion

The study identified the relation between self-efficacy, critical thinking disposition, and self-confidence of core nursing skills, and clinical competence of nursing students and investigated the predictive factors influencing clinical competence. Study results showed that variables that showed significant difference with clinical competence among general characteristics were satisfaction on college, satisfaction with major and satisfaction with clinical practice, self-efficacy, critical thinking disposition, self-confidence of core nursing skills was all above average in clinical competence, and the influencing factors of clinical competence in nursing students were self-efficacy and self-confidence of core nursing skills and the explanatory power of these variables was 29.1%.

The study proposes the following based on the results of the study. Because self-efficacy and self-confidence of core nursing skills was found to be important variables of clinical competence, there needs to be development of curriculum and teaching methods to improve self-efficacy and self-confidence of core nursing skills, and there needs to be development and implementation research of objective evaluation tools about self-confidence of core nursing skills. Also there is need for repeated research expanding research subjects and variables as well as research to figure out the unknown predictive factors.

References

[1] Chang. H. J., and Kwag. Y. J., 2013, "Affecting factors on clinical competence of nursing students", Journal of the Korea Academia-Industrial cooperation Society, 14(9), pp. 4380-4387.

[2] Yoo, M. S., Son, Y. J., Yoo, I. Y., and Hong, S. K., 2006, "Relationship between self-efficacy and clinical skill competence of nursing students", Journal of Korean Academy Fundamentals of Nursing, 13(30), pp. 343-350.

[3] Byeon, Y. S., 2005, "The present status and future direction of practicum of fundamentals of nursing in baccalaureate nursing programs", The Journal of Korean Academic Society of Nursing Education, 11(2), pp. 169-176.

[4] Park, k. j., and Kim, Y. K., 2011, "Effects of a nursing practice manual on nursing performance of newly graduated nurses" Journal of Korean Clinical Nursing Research, 17(3), pp. 297-306.

[5] Ministry of Education, 2014, "Statistical yearbook of education", Seoul.

[6] Kwon, M. S., 2011, "The influence of self-directed learning & critical thinking disposition on clinical competence in nursing students", The Journal of Korean Academic Society of Nursing Education, 17(3), pp. 387-394.

[7] Cho, M. H., and Kwon, I. S., 2007, "A study on the clinical practice experiences on nursing activities of nursing students", The Journal of Korean Academic Society of Nursing Education, 13(2), pp. 143-154.

[8] Choi, D. W., 2014, "Clinical competence according to experiences on the essential of fundamental nursing skills in nursing students", The Journal of Korean Academic Society of Nursing Education, 20(2), pp. 184-191.

[9] Kim, Y. J., 2014, "A study on type of clinical experience of adaptation of new nursing staffs in a general hospital", Journal of Digital Convergence, 12(4), pp. 443-454.

[10] Shin, E. J., 2008, "A study related to self-efficacy, satisfaction with practice and fundamentals of nursing practicum", Journal of Korean Academy Fundamentals of Nursing, 15(3), pp. 380-386.

[11] Seo, B. M., and Park, H. J., 2014, "Factors affecting clinical competence among nursing students", The Journal of Health Service Management, 8(4), pp. 149-161.

[12] Han, K. Y., Cho, D. S., and Won, J. S., 2014, "A study on learning experiences and self-confidence of core nursing skills in nursing practicum among final year nursing students" Journal of Korean Academy Fundamentals of Nursing, 21(2), pp. 162-173.

[13] Bandura, A., 1977, "Self-efficacy: Toward a unifying of behavioral change", Psychological Review, 84(2), pp. 191-215.

[14] Jho, M. Y., 2014, "Effects of core fundamental nursing skills education on self-efficacy, clinical competence and practice satisfaction in nursing students", Journal of Korean Academy Fundamentals of Nursing, 21(3), pp. 292-301.

[15] Yoon, J., 2004, "Development of an instrument for the measurement of critical thinking disposition : In nursing", Unpublished doctoral dissertation, Catholic University. Seoul.

[16] Do, E. S., and Seo, Y. S., 2014, "Factors influencing clinical competence in nursing students", Journal of Korean Academy Fundamentals of Nursing, 21(3), pp. 283-291.

[17] Chang, S. K., 2011, "Critical thinking disposition, problem solving ability, and clinical competence in nursing students", Journal of Korean Academy Fundamentals of Nursing, 18(1), pp. 71-78.

[18] Shin, K. A., and Cho, B. H., 2012, "Professional self-concept, critical thinking disposition and clinical competence in nursing students", Journal of Korean Academy Fundamentals of Nursing, 19(1), pp. 46-56.

[19] Kim, Y. H., Hwang, S. Y., and Lee, A. Y., 2014, "Perceived confidence in practice of core basic nursing skills of new graduate nurses", The Journal of Korean Academic Society of Nursing Education, 20(1), pp. 34-46.

[20] Kim, K. H., 2007, "Clinical Competence Among Senior Nursing Students After Their Preceptorship Experiences", Journal of Professional Nursing, 23(6), pp. 369-375.

[21]   Korean Accreditation Board of Nursing Education, 2013, "Specify the college four-year term of study screening retrieved", Seoul.

[22]   Sherer, M., Maddux, J. E., Mercandante, B., Prentice- Dunn, S., Jacobs, B., and Rogers, R. W., 1982, "The self- efficacy scale: Construction and validation", Psychological Reports, 51, pp. 663-671.

[23]   Jung, A. S., 2007, "A study on the relations between a health promoting behaviors and self-efficacy in general hospital nurse", Unpublished master's thesis, Hanyang University, Seoul.

[24]   Kim, Y. H., 2002, "Nursing students' performance and confidence in basic nursing skills after the completion of clinical practice : focused on basic nursing skills of low performance", Unpublished master's thesis, Keimyung University, Daegu.

[25]   Lee, W. H., Kim, J. G., Yoo, J. S., Hau, H. K., Kim, K. S., and Yim, S. M., 1991, "A study of clinical competence of nursing students", Yeonse Nursing, 13, pp. 17-29.

[26]   Choi, M. S., 2005, "A study on the relationship between teaching effectiveness of clinical nursing education and clinical competence in nursing students", Unpublished master's thesis, Ewha Womans University, Seoul.

[27]   Kim, K. N., 2014, "Affecting Factors on Competence of Clinical Practice of Nursing Students", The Korean journal of stress research, 22(2), pp. 55-65.

[28]   Song, M. R., Kim, E. M., and Yu, S. J., 2012, "Analysis on the competency of nursing students' basic nursing skills", The Journal of Contents Association, 12(6), pp. 390-401.

[29]   Bang, S. S., and Kim, I. O., 2014, "Relationship among essentials of fundamental nursing skills performance, stress from work and work capability of new clinical nurses", The Journal of Korean Academic Society of Nursing Education, 20(4), pp. 628-638.

[30]   Liou, S. R., Chang, C. H., Tsai, H. M. and Cheng, C. Y., 2013, "The effects of a deliberate practice program on nursing student's perception of clinical competence", Nurse Education Today, 33, pp. 358-363.