Journal for Re Attach Therapy and Developmental Diversities
eISSN: 2589-7799
2023 August; 6 (9s2): 335-346

Psychological Effects of Clinical Learning Environment, Nunchi, And Burnout on Clinical Practice Adaptation of Nursing Students in the Intensive Care Unit

Sook Kang
Assistant Professor, Chosun Nursing College, Republic of Korea
skang@cnc.ac.kr

Received: 15- June -2023
Revised: 12- July -2023
Accepted: 10- August -2023

ABSTRACT
This cross-sectional descriptive study was executed to examine the correlations between clinical learning environment, and nunchi, burnout and confirm the influencing factors on clinical adaptation practice of nursing students. This is a. Data were gathered from 171 nursing students from March 12 to June 4, and August 23 to November 5, 2021. The clinical learning environment, nunchi, burnout, and clinical practice adaptation of each subject were measured using the clinical learning environment inventory, nunchi inventory, Maslach Burnout Inventory Student Survey (MBI-SS), and adaptation to clinical practice inventory. Data were explored using t-test, one-way ANOVA, Pearson's correlation coefficients, and stepwise multiple regression. Clinical environment, nunchi, burnout, and clinical practice adaptation depending on the general characteristics commonly showed significant differences in clinical practice satisfaction, confidence in core basic nursing. Adaptation to clinical practice showed significant positive correlations with clinical learning environment, nunchi, burnout and adaptation on clinical practice. Adaptation to clinical practice, which explained for 53% of the variance, were significant factors influencing burnout, core basic nursing confidence, major satisfaction, clinical learning environment in nursing students. In order to increase nursing college students' adaptation to clinical practice, measures are required to upgrade the clinical learning environment and reduce burnout. In addition, various programs should be conducted to increase core basic nursing confidence and major satisfaction.

Keywords: Adaptation, Burnout, Clinical learning environment, Nunchi, Nursing student

1. INTRODUCTION

1.1. The necessity of study

Clinical practice not only provides an opportunity to apply the theories learned in school in actual clinical practice, but also is a course in which nursing students engage in practical practice in the actual nursing work environment [1]. The Korea Institute of Nursing Education Evaluation, an institution that manages the quality of nursing education, regulates and manages the clinical practice time in the nursing curriculum as more than 1,000 hours [2]. Within the organization of a medical institution composed of various medical professional members, nursing students acquire sociality and responsibility through clinical practice, check their aptitude for nursing professions, and form a nursing philosophy and ethical sense [3].

Participants who left the familiar space of the school and were put into the actual nursing situation for the first time expressed strong anxiety by recognizing the clinical field as an unfamiliar environment. This anxiety was shown as a concern about not being able to understand what words mean due to difficult clinical terms, and a fear of failing to perform a task because of insufficient nursing knowledge and skills [4]. Nursing students may experience psychological stress about having to form interpersonal relationships with subjects and guardians with complex and diverse psychological characteristics in clinical practice, and difficulty in rapid, accurate decision-making based on scientific knowledge, and strict ethical awareness and responsibility [5]. The clinical learning environment is a total that immediately effects the clinical practice results of nursing college students, and has a lot of influence on obtaining nursing skills and knowledge, organizing for practice, organizational skills, and confidence in role performance [6]. The clinical learning environment refers to a network of forces of interest in the clinical environment, including the propensity of nursing unit managers, qualitative guidance, and the relationship between hospital staff and nursing students in clinical practice [7]. The more positive nursing students perceive the clinical learning environment, the higher their clinical performance ability, and the clinical learning environment is an important factor in reducing the exhaustion of nursing students and positively experiencing clinical practice [8].

The intensive care unit is a place where intensive treatment is provided to high-severity subjects, and can be considered as a place where life and death always coexist closely with frequent emergencies due to the subject's situational characteristics [9]. Since intensive care nurses often have to treat of diverse and hard situations that determine life and death, this requires an understanding and mastery of high-quality nursing skills and nursing knowledge [10]. Because of this, nursing students are likely to engage in clinical practice passively in a tense and

atrophied state. Since the practice environment of the intensive care unit is very different from that of the general ward, it is need to comprehend the factors of the practice adaptation of the intensive care unit practice students. Adaptation to clinical practice is the process of students adapting themselves to the unfamiliar environment of hospital [4] and can be an important clue to how to adapt to clinical practice when they become new nurses in the future [11]. Adaptation to clinical practice is a difficult process, and physical and mental stress occurs severely as various factors affect adaptation.

Due to the recent trend in clinical sites where patient safety and human rights are emphasized, nursing students are under stress by indirect practice and nunchi at clinical sites [12]. Nunchi is not an individual's internal characteristic, rather an interpersonal process and aspect of understanding the 'context' and 'meaning' expressed in the communication process [13]. Nunchi means grasping the other person's mind (thoughts, feelings, moods, etc.) or the atmosphere of the situation and acting according to the other person's mind or the atmosphere of the situation [14]. In clinical practice, nursing students' tactful behavior was induced to adapt and protect themselves in an environment where the standards of behavior were ambiguous, and in this process, they experienced stress and developed the ability to cope [15]. Nunchi is used in all situations with others to maintain a smooth interpersonal relationship and promote stability [14]. The group with a high level of nunchi was found to be higher in self-esteem, subjective well-being, and interpersonal relationships than the group with a low level of nunchi [16]. If you look closely at the coping strategy actions related to students' practical adaptation, it is worth noting that irrational parts such as students' unilateral patience or excessive nunchi are included [4]. This lack of clear beliefs or overly passive coping behaviors leads to avoidance and irrational coping in various ethical situations and important decision-making processes encountered in the clinical field as nursing students [17]. Nunchi behavior has both the positive aspect of identifying and coping with objects and situations, and the negative aspect of causing fatigue and exhaustion of the mind and body and hindering work performance with excessive nunchi [15]. Nursing students see nunchi in various relationships such as patients and medical staff during clinical practice. This leads to physical and mental fatigue and acts as a factor that makes it difficult to adapt to clinical practice.

Nursing students are at risk of experiencing burnout because they continue to work in relationships with patients and medical staff and are directly exposed to clinical practice training [18]. Burnout refers to a phenomenon in which emotional exhaustion, depersonalization, and self-fulfillment are reduced as a result of continuous and repeated emotional pressure in the process of maintaining close relationships with people over a period of time [19]. Difficulties in forming relationships with patients, the burden of showing the behavior and attitude expected as a prospective nurse, and the inexperience and anxiety about mistakes when applying learned knowledge to patients cause tension and physical and mental exhaustion [20]. If nursing students continue to feel burnout, their academic immersion during class, their preparation for the nurse job, and their work proficiency after graduation decreases, while their turnover intention increases [21]. The burnout experienced by nursing students in the practice process hinders their health and well-being and can negatively affect their role performance when they work as a new nurse in the nursing field [22]. The most important variable affecting burnout was the practical education environment, followed by emotional labor, grade, and conflict with patients [23].

Former studies associated to clinical practice of intensive care nursing students have been conducted so far, including intensive care clinical practice experience studies [9], content analysis [24], and intervention programs on nursing students' clinical performance and contentment with clinical practice education [25]. However, studies on whether the clinical learning environment, nunchi, and burnout affect the adaptation of clinical practice for nursing students practicing in intensive care units, which are special parts, are insufficient. Nursing students have a high interest in the intensive care unit, which is a special part, and there is a growing demand for students who want to get a job as a special part, so it is necessary to investigate the factors that affect nursing students' adaptation to clinical practice. Therefore, this study aims to investigate how nursing students' clinical learning environment, nunchi, and burnout affect their adaptation to clinical practice, and provide basic data necessary for developing nursing intervention strategies to strengthen nursing students' adaptation to clinical practice.

1.2. Conceptual Framework of the study

In this study, a theoretical framework was constructed based on the field theory of Lewin (1890) for the purpose of comprehensively identifying the factors affecting the adaptation of intensive care unit practical nursing students to clinical practice. Lewin said that human behavior is the result of interaction between individuals and the environment, and developed a field theory focusing on the dynamic relationship and totality of individuals and the environment [26].

As mentioned in the field theory, this study focused on the view that behavior is the result of the interaction between individuals and the environment to identify personal and environmental factors that affect clinical practice adaptation.

In this study, it was largely divided into personal factors and environmental factors, and personal factors were divided into personal characteristics, nunchi, and burnout. As an environmental factor, it was viewed as a clinical learning environment.

Taken together, this study aims to verify how clinical practice adaptation will be related and different as a result of individuals who are the subjects of behavior interacting with the environment in intensive care unit practice. This theoretical framework is presented as <Figure 1>.

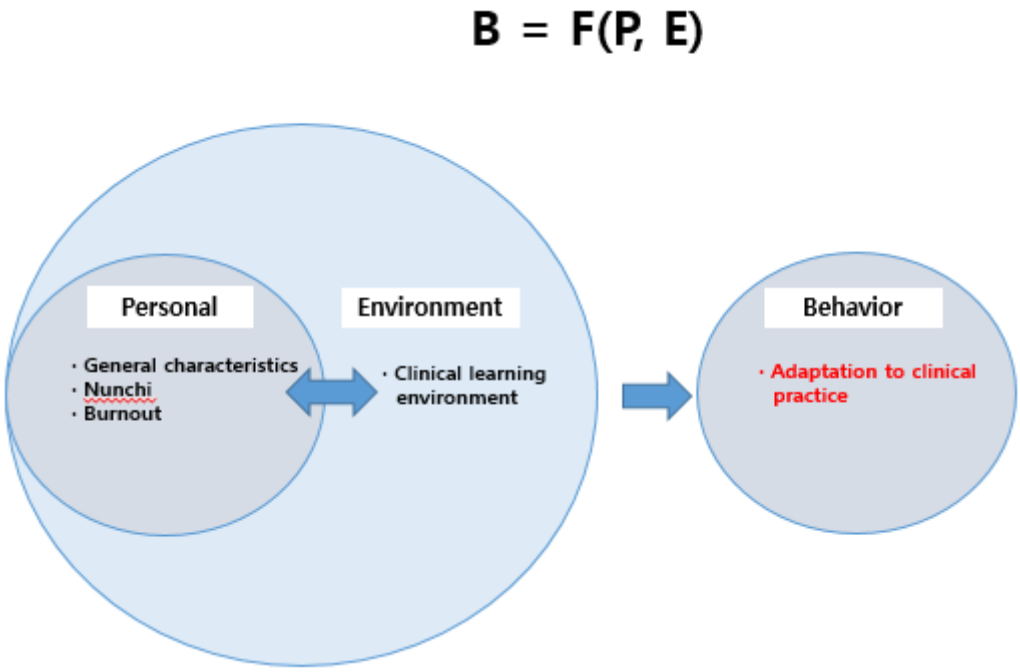

Figure 1. Framework of the study

1.3. Study Purpose

The purpose of this study is to find out the factors affecting the adaptation of nursing students to clinical practice, and the definite aims are as follows.

(1) The subject's clinical learning environment, nunchi, burnout, and degree of adaptation to clinical practice are identified.

(2) The difference in clinical learning environment, nunchi, burnout, and clinical practice adaptation depending on the general characteristics of the subject is identified.

(3) The connection between the subject's clinical learning environment, nunchi, burnout, and clinical practice adaptation is identified.

(4) The influencing factors on the subject's adaptation to clinical practice are identified.

2. METHODS

2.1. Research Plan

This study was a cross-sectional descriptive survey investigating the correlations among clinical learning environment, nunchi, burnout, and adaptation to clinical practice. This study also aimed to confirm factors that influence the adaptation to clinical practice.

2.2. Research Samples

The subjects of this research were conveniently extracted from 4th graders who were nursing students involved in the Department of Nursing in A-city and experienced intensive care unit practice at a university hospital. The standards of choice for the subjects of this research are as follows: (a) senior nursing student; (b) people who has experienced intensive care unit; (c) people who did not have mental diseases and who could dialogize with each other; (d) people who interpret the purpose of this research and gave written consent to take part in this research. The minimum number of samples was computed to be 153 when set to effect size .15, power .95, significance level .05, and 7 predictors for multiple regression analysis using G*Power 3.1.2 analysis software [27] 171 people participated in this study, and the minimum number of samples was suitable.

2.3. Research Instruments

The survey composed of five domains estimating study participants' general characteristics, clinical learning environment, nunchi, burnout, and adaptation to clinical practice. The Cronbach's alpha of the instruments are shown in Table 1. Details of the major instruments are as follows.

Table 1. Cronbach's alpha in tools

Instrument	Number of items	Cronbach's alpha in the original research	Cronbach's alpha in this research
Clinical learning enviroment	19	.84	.92
Nunchi	12	.87	.95
Nunchi understanding	7	.88	.95
Nunchi behavior	5	.86	.90
Burnout	15	Detailed reliability	.91
Emotional exhaustion	5	.87	.88
Cynicism	4	.83	.90
Academic efficacy	6	.75	.87
Adaptation to clinical practice	14	.86	.80

2.3.1. General Characteristics

The general characteristics of the participants contained gender, age, last semester grade, satisfaction with major, satisfaction with clinical practice, and confidence in core basic nursing.

2.3.2. Clinical Learning Environment

The clinical learning environment was confirmed using a tool developed by Dunn and Burnett [28] and modified and supplemented by Han [29]. This tool has a total of 19 questions, and the sub-area consists of 3 questions about the relationship between staff and students, 2 questions about hierarchy and rituals, 5 questions about the commitment of nursing managers, 4 questions about the relationship with patients, and 4 questions about student satisfaction. The instrument uses a 5-point Likert scale from 1 to 5 (5: strongly agree, 4: agree, 3: neutral, 4: disagree, 5: strongly disagree). Scores on this instrument range from 19 to 95 points, with higher scores meaning a more positive view of the clinical learning environment. In the research of Han [29], the reliability of the instrument Cronbach's alpha was .84, and in this research, the reliability of the instrument Cronbach's alpha was .92.

2.3.3. Nunchi

Nunchi was measured using a tool exploited by Heo and Park [16]. This instrument has a total of 12 questions, and the sub-area consists of 7 questions for nunchi understanding and 5 questions for nunchi behavior. The instrument uses a 5-point Likert scale from 1 to 5 (5: strongly agree, 4: agree, 3: neutral, 4: disagree, 5: strongly disagree). Scores on this instrument range from 12 to 60 points, with higher scores indicating higher levels of nunchi. In the study of Heo and Park [16], the reliability of the instrument Cronbach's alpha was .87 (nunchi understanding .88, nunchi behavior .86), and in this research, the reliability of the instrument Cronbach's alpha was .95 (nunchi understanding .95, nunchi behavior .90).

2.3.4. Burnout

Burnout experienced during clinical practice was checked using the Maslach Burnout Inventory-Student Survey (MBI-SS) tool modified and supplemented by Hong [30] of the Maslach Burnout Inventory-General Survey (MBI-GS) developed by Schaufelli et al. [31]. This tool has a total of 15 questions, and the sub-area consists of 5 questions of emotional exhaustion, 4 questions of cynicism, and 6 questions of academic efficacy. The instrument uses a 5-point Likert scale from 1 to 5 (5: strongly agree, 4: agree, 3: neutral, 4: disagree, 5: strongly disagree). Scores on this instrument range from 15 to 75 points, with higher scores indicating higher levels of burnout. In the study of Hong [30], the reliability of the instrument was Cronbach's alpha emotional exhaustion .87, cynicism .83, and academic efficacy .75, and in this research the reliability of the instrument was Cronbach's alpha .91 (emotional exhaustion .88, cynicism .90, academic efficacy .87).

2.3.5. Adaptation to Clinical Practice

Adaptation to clinical practice was checked using a tool developed by Yi [32]. This instrument consists of a total of 14 questions. The instrument uses a 5-point Likert scale from 1 to 5 (5: strongly agree, 4: agree, 3: neutral, 4: disagree, 5: strongly disagree). Scores on this instrument range from 14 to 70 points, with higher scores means adaptation to clinical practice. In Yi's [32] research, the reliability Cronbach's alpha of the instrument was .86, and in this study, the reliability Cronbach's alpha of the instrument was .80.

2.4. Data Collection

The data collection period was conducted twice from March 12 to June 4, 2021, and from August 23 to November 5, 2021. As for the data collection method, the questionnaire was made into a Google form and distributed, and the subject was self-reported. As a particular step, the researcher interpreted the study to the participants in advance and sent an online survey link address using social network service (SNS). The questionnaire was organized so that responses could be made only if participation was agreed after reading the contents of the purpose of the study, the anonymity and confidentiality of the subject, and the possibility of withdrawal of the study. It took about 10 minutes to complete the survey. When collecting and analyzing data, codes were assigned to protect the identity of the subject, and only researchers were allowed to view the data.

2.5. Data Analysis

The gathered data were explored using the IBM SPSS Statistics 25.0 program.

(1) The general characteristics were presented in real numbers and percentages.

(2) The levels of clinical learning environment, nunchi, burnout, and clinical practice adaptation were produced in means and standard deviations.

(3) The differences among clinical learning environment, nunchi, burnout, and adaptation to clinical practice according to general characteristics were explored using t-tests, one-way analysis of variance (ANOVA), and Kruskal-Wallis statis.; post hot test was made through Duncan's test.

(4) The connection between clinical learning environment, nunchi, burnout, and clinical practice adaptation was analyzed by Pearson correlation coefficient.

(5) To identify the factors that influenced adaptation to clinical practice, stepwise multiple regression analysis was executed, and categorical variables were explored as dummy variables.

3. RESEARCH RESULTS

3.1. General characteristics of subjects

As shown in Table 3, the subjects consisted of 147 women (86.0%) and 24 men (14.0%). There were 91 people (53.2%) under the age of 23 and 80 (46.8%) over the age of 23. In the last semester's grades, 69 (40.4%) were in 3.0 to 3.4 grades, and 55 (32.2%) were in 3.5 to 3.9. In terms of satisfaction with major, 103 people (60.2%) were the highest in "satisfied". In terms of satisfaction with clinical practice, 106 people (62.0%) were the highest with "satisfied". As for confidence in core basic nursing, 95 (55.6%) showed "normal" and 64 (37.4%) showed "high".

3.2. Subject's clinical learning environment, nunchi, burnout, and degree of adaptation to clinical

As shown in Table 2, the clinical learning environment was 3.46±0.60 points for the relationship between staff and students, 3.52±0.83 points for hierarchy and rituals, 3.66±0.72 points for nursing managers, 3.77±0.67 points for patients, 3.82±0.82 points for student satisfaction, and 3.66±0.60 points overall. Nunchi was 3.90±0.66 points for understanding nunchi, 4.12±0.55 points for nunchi behavior, and 4.00±0.57 points overall. Burnout scored 3.40±0.89 points for emotional exhaustion, 2.05±0.83 points for cynicism, 2.10±0.60 points for academic efficacy, and 2.53±0.61 points for the total. Adaptation to clinical practice was 3.52±0.50 points.

Table 2. Degree of clinical learning environment, nunchi, burnout, adaptation on clinical practice (N=171)

Variables	Mean±SD	Range
Clinical learning environment	3.66±0.60	1-5
Staff-student relationship	3.46±0.79	1-5
Hierarchy and rituals	3.52±0.83	1-5
Nurse manager commitment	3.66±0.72	1-5
Patient relationships	3.77±0.67	1-5
Student satisfaction	3.82±0.82	1-5
Nunchi	4.00±0.57	1-5
Nunchi understanding	3.90±0.66	1-5
Nunchi behavior	4.12±0.55	1-5
Burnout	2.53±0.61	1-5
Emotional exhaustion	3.40±0.88	1-5
Cynicism	2.05±0.83	1-5
Academic efficacy	2.10±0.60	1-5
Adaptation on clinical practice	3.52±0.50	1-5

3.3. Differences in clinical learning environment, nunchi, burnout, and adaptation to clinical practice depending on general characteristics

As shown in Table 3, the clinical learning environment, which has major satisfaction (F=12.79, p<.05), clinical practice satisfaction (F=35.43, p<.001), confidence in core basic nursing (F=33.69, p<.001) showed a statistically significant difference. As a result of the post-test, 'satisfied' and 'moderate' were higher than 'unsatisfied' in terms of major satisfaction. In terms of satisfaction with clinical practice, 'moderate' was higher than 'unsatisfied'. In addition, 'unsatisfied' was higher that 'normal'. Confidence in core basic nursing was higher in 'high' and 'normal' than 'low'. In nunchi, satisfaction with clinical practice (F=8.99, p<.001), confidence in core basic nursing (F=21.44, p<.001) showed a statistically significant difference. As a result of the post-test, 'unsatisfied' was higher than 'moderate' in satisfaction with clinical practice. Confidence in core basic nursing was higher in 'moderate' than 'low'. In addition, 'high' was higher than 'moderate'. In burnout, major satisfaction (F=26.11, p<.001), clinical practice satisfaction (F=53.44, p<.001), confidence in core basic nursing (F=22.83, p<.001) showed a statistically significant difference. As a result of the post-test, in view of major satisfaction, 'moderate' was higher than 'satisfied'. In addition, 'unsatisfied' was higher than 'moderate'. In terms of satisfaction with clinical practice, 'moderate' was higher than 'satisfied'. In addition, 'unsatisfied' was higher than 'moderate'. Confidence in core basic nursing was higher in 'moderate' than 'high'. In addition, 'low' was higher than 'moderate'. In clinical practice adaptation, major satisfaction (F=37.32, p<.001), clinical practice satisfaction (F=36.26, p<.001), confidence in core basic nursing (F=34.99, p<.001) showed a statistically significant difference. As a result of the post-test, 'moderate' was higher than 'unsatisfied'. In addition, 'unsatisfied' was higher than 'moderate'. Satisfaction with clinical practice was higher in 'moderate' than 'unsatisfied'. In addition, 'unsatisfied' was higher than 'moderate'. Confidence in core basic nursing was higher in 'moderate' than 'high'. In addition, 'high' was higher than 'moderate'.

Table 3. Differences of clinical learning environment, nunchi, burnout, adaptation on clinical practice by general characteristics (N=171)

Characteristics	Categories	N (%)	Clinical learning environment	Nunchi		Burnout		Adaptation on clinical practice		
			M±SD	t/F(p) Duncan	M±SD	t/F(p) Duncan	M±SD	t/F(p) Duncan	M±SD	t/F(p) Duncan
Gender	Female	147(86.0)	3.64±0.60	-1.34	3.99±0.53	-0.46	2.56±0.60	1.89	3.51±0.49	-0.62
	Male	24(14.0)	3.82±0.63	.183	4.06±0.76	.646	2.31±0.66	.061	3.58±0.54	.539
Age (yr)	<23	91(53.2)	3.73±0.55	1.57	4.02±0.54	0.60	2.50±0.51	-0.46	3.56±0.40	1.13
	≥23	80(46.8)	3.59±0.66	.118	3.97±0.60	.550	2.55±0.71	.650	3.48±0.59	.261
Last semester grade	<3.0	22(12.9)	3.71±0.60	2.13	3.96±0.76	0.83	2.51±0.64	0.80	3.51±0.42	1.45
	3.0-3.4	69(40.4)	3.74±0.61	.099	4.03±0.57	.481	2.45±0.62	.498	3.58±0.56	.231
	3.5-3.9	55(32.2)	3.68±0.48		3.92±0.54		2.57±0.55		3.53±0.45	
	≥4.0	25(14.6)	3.39±0.78		4.12±0.41		2.65±0.68		3.34±0.46	
Satisfaction with major	Satisfied[a]	103(60.2)	3.81±0.49	12.79^{+}	4.07±0.55	2.48	2.33±0.49	26.11	3.70±0.40	37.32^{+}
	Moderate[b]	60(35.1)	3.52±0.59	$.002^{*}$	3.87±0.54	.087	2.73±0.57	$<.001^{**}$	3.32±0.39	$<.001^{**}$
	Unsatisfied[c]	8(4.7)	2.89±1.12	c<a,b	4.02±0.75		3.56±0.81	a<b<c	2.71±0.85	c<b<a
Satisfaction with clinical practice	Satisfied[a]	106(62.0)	3.88±0.47	35.43^{+}	4.11±0.55	8.98	2.26±0.47	53.44^{+}	3.70±0.41	36.26^{+}
	Moderate[b]	60(35.1)	3.39±0.54	$<.001^{**}$	3.77±0.52	$<.001^{**}$	2.90±0.49	$<.001^{**}$	3.29±0.38	$<.001^{**}$
	Unsatisfied[c]	5(2.9)	2.39±0.97	c<b<a	4.43±0.66	b<c	3.64±1.06	a<b<c	2.59±1.14	c<b<a
Confidence in core basic	High[a]	64(37.4)	3.88±0.51	33.68	4.31±0.55	21.44^{+}	2.27±0.54	22.83	3.79±0.41	34.99^{+}
	Normal[b]	95(55.6)	3.62±0.54	$<.001^{**}$	3.86±0.43	$<.001^{**}$	2.59±0.51	$<.001^{**}$	3.42±0.38	$<.001^{**}$

nursing	Low[c]	12(7.0)	2.90±0.85	c<a,b	3.42±0.77	c<b<a	3.39±0.80	a<b<c	2.91±0.81	c<b<a

*p<.05, **p<.001, +Kruskal-Wallis statis.

3.4. Correlation between subject's clinical learning environment, nunchi, burnout, and adaptation to clinical practice

As shown in Table 4, the clinical learning environment showed a statistically significant positive correlation with nunchi (r=.36, p<.001) and adaptation to clinical practice (r=.60, p<.001), and a significant negative correlation with burnout (r=-.76, p<.001). Nunchi showed a statistically significant positive correlation with clinical practice adaptation (r=.37, p<.001) and a significant negative correlation with burnout (r=-37, p<.001). Burnout showed a statistically significant negative correlation with clinical practice adaptation (r=-69, p<.001).

Table 4. Correlations among clinical learning environment, nunchi, burnout, adaptation on clinical practice (N=171)

Variables	Clinical Learning Environment	Nunchi	Burnout	Adaptation on Clinical Practice
	r(p)	r(p)	r(p)	r(p)
Clinical learning environment	1			
Nunchi	.36(<.001)**	1		
Burnout	-.76(<.001)**	-.37(<.001)**	1	
Adaptation on clinical practice	.60(<.001)**	.37(<.001)**	-.68(<.001)**	1

*p<.05, **p<.001

3.5. Factors affecting the subject's adaptation to clinical practice

A stepwise multiple regression analysis was conducted to confirm the factors of the subjects' adaptation to clinical practice. In the analysis, nunchi, burnout, and adaptation to clinical practice were included, which showed a significant correlation with adaptation to clinical practice. In addition, major satisfaction, clinical practice satisfaction, and core basic nursing confidence, which showed significant differences in general characteristics, were included. First, as a result of reviewing the satisfaction of basic assumptions for multiple regression analysis, the correlation between independent variables was independent, and the Durbin-Watson statistic was 1.99, indicating no autocorrelation. In addition, the Variance Inflation Factor (VIF) for identifying the problem of multicollinearity of error was 1.22-2.56, which was smaller than 10, and it was confirmed that there was no problem with multicollinearity. Next, as a result of the test to satisfy the assumption of the residual, the supposition of normality and equal variance was also satisfied. As a result, the regression model for nursing students' adaptation to clinical practice was significant (F=48.85, p<.001). The revised coefficient of determination was .53. As shown in Table 4, the factor influencing nursing college students' adaptation to clinical practice is burnout (β =-.42, p<.001), core basic nursing confidence (β =.16, p<.05), major satisfaction (β =.16, p<.05), clinical learning environment (β =.19, p<.05), 53% of the total change was explained (Table 5).

Table 5. Factors influencing adaptation on clinical practice (N=171)

Variables	B	S.E	β	t	p
(Constant)	3.65	.39		9.29	<.001**
Burnout	-.34	.07	-.42	-4.97	<.001**
Confidence In Core Basic Nursing_High	.17	.06	.16	2.82	.005
Satisfaction With Major_Satisfied	.17	.06	.16	2.72	.007
Clinical Learning Environment	.16	.06	.19	2.36	.019
R^2=.54, Adj. R^2=.53, F=48.85 (p<.001**)					

*p<.05, **p<.001

4. DISCUSSION

It was endeavored to use basic data necessary to found a more efficient clinical practice adaptation intervention strategy for nursing students by identifying the clinical learning environment, nunchi, burnout, and clinical practice adaptation of nursing students. The degree of clinical learning environment of the subjects in this study was an average of 3.66 points out of 5 points, which was at the upper-middle level. Among the sub-areas, the relationship between staff and students was 3.46 points, the hierarchy and rituals was 3.52 points, the commitment of nursing managers was 3.66 points, the relationship with patients was 3.77 points, and student satisfaction was

3.82 points. The result of this study was an average of 3.13 points for nursing students in the 3rd and 4th higher than that of Jeon et al. [33], who showed the median level. The reason for this difference is that only fourth-grade students who practice intensive care units are investigated in this study on a limited basis, and it is seen as a difference according to the subject and the place of practice. Compared to other practice places, the intensive care unit was able to experience various things such as providing direct care, so it was confirmed that the environment was relatively satisfying. The nunchi of the subjects of this study showed a high level with 3.90 points for nunchi understanding, 4.12 points for nunchi behavior, and 4.00 points for the overall average. The results of this study were analogize with those of Yang, Hong, Ryu [34] and Jeon et al. [33] (2021). In a study by Yang et al. [34], the overall nunchi score of nursing students in the 3rd and 4th grades was 3.86 points, and the average of the sub-areas was 3.82 points for nunchi recognition and 3.90 points for nunchi behavior. In a study by Jeon et al. [33], the nunchi score was 3.90 points. Nurses who practice nursing for patients with sensitive emotional states may experience nunchi behavior to sensitively cope with non-verbal as well as verbal expressions of subjects [15]. The reason why the score of nunchi behavior was higher than that of the subject of this study was thought to have been affected by the environment of the 4th grade and the closed intensive care unit. It is understood that practical students are looking at nunchi a lot regardless of the place of practice, but it is necessary to conduct a study comparing whether there are differences in nunchi in each practice in the future. The burnout of the subjects in this study was 3.40 points for emotional exhaustion, 2.05 points for cynicism, 2.10 points for academic efficacy, and 2.53 points for the overall average. The results of this study were analogize with those of Kim, Park [35] and Kim, Park [36]. In a study by Kim and Park [35], emotional exhaustion 3.32 points, callousness 2.25 points, incompetence 2.61 points, and burnout average scores 2.75 points for second, and fourth graders. In a study by Kim and Park [36], the burnout score was 2.77 points. The results of the study by Kim and Park [35], it can be seen that nursing college students showed high scores in emotional exhaustion and incompetence. The score of emotional exhaustion was higher in the subjects of this study, which may be different by grade, but it seems to be due to the characteristics of the intensive care unit. The subjects of this study are thought to have felt incompetent due to closed and severe patient conditions. The average adaptation of the subjects to clinical practice was 3.52 points, indicating a median level. This result was analogized with those of Kim, Shin [11] and Lee, Kim [37]. In a study by Kim and Shin [11], the 3rd and 4th graders scored 3.21 points in the clinical practice adaptation score. In a study by Lee and Kim [37], the third grade scored 3.40 points in the clinical practice adaptation score. In this study and several studies, the score of adaptation to clinical practice was not high. It seems necessary to operate and evaluate various management or response programs to increase adaptation to clinical practice.

The clinical learning environment, which has major satisfaction, clinical practice satisfaction, and core basic nursing confidence showed a statistically significant difference. As a result of the post-test, ‘satisfied’ and ‘moderate’ were higher than ‘unsatisfied’ in terms of major satisfaction. In terms of satisfaction with clinical practice, ‘moderate’ was higher than ‘unsatisfied’. In addition, ‘unsatisfied’ was higher than ‘normal’. Confidence in core basic nursing was higher in ‘high’ and ‘normal’ than ‘low’. This result was supported by the research results of Jeon et al. [33]. In a study by Jeon et al. [33], the clinical practice education environment was found as a factor affecting clinical performance ability in the third and fourth grades. It seems necessary to provide systematic preparatory education in terms of theoretical and practical aspects before practice. In nunchi, satisfaction with clinical practice, core basic nursing confidence showed a statistically significant difference. As a result of the post-test, ‘unsatisfied’ was higher than ‘moderate’ in satisfaction with clinical practice. Confidence in core basic nursing was higher in ‘moderate’ than ‘low’. In addition, ‘high’ was higher than ‘moderate’. According to a study by Jeon et al. [33], the factor affecting clinical performance is nunchi, which is seen as a factor influencing practice. If you prepare in advance and practice, nunchi is expected to be higher than otherwise. Strategies including clinical practice satisfaction factors, core skills, and theoretical prior knowledge preparation are needed to prepare in advance for nunchi. In burnout, major satisfaction, clinical practice satisfaction, core basic nursing confidence showed a statistically significant difference. As a result of the post-test, in view of major satisfaction, ‘moderate’ was higher than ‘satisfied’. In addition, ‘unsatisfied’ was higher than ‘moderate’. In terms of satisfaction with clinical practice, ‘moderate’ was higher than ‘satisfied’. In addition, ‘unsatisfied’ was higher than ‘moderate’. Confidence in core basic nursing was higher in ‘moderate’ than ‘high’. In addition, ‘low’ was higher than ‘moderate’. The results of this study were match with the study of Cho and Kang [38], who showed a difference in satisfaction with major and clinical practice. It was consistent with the study of Ko [22], who showed a difference in practical satisfaction. In addition, it was consistent with the study of Kim and Park [35], who showed differences in department satisfaction. It can be seen that the degree of burnout is low for subjects who are satisfied with their major and clinical practice. In a study, which showed a difference in burnout depending on the practice period [39], it can be assumed that burnout also decreased as confidence in core skills increases as the grade increases. In clinical practice adaptation, major satisfaction, clinical practice satisfaction, core basic nursing confidence showed a statistically significant difference. As a result of the post-test, ‘moderate’ was higher than ‘unsatisfied’. In addition, ‘unsatisfied’ was higher than ‘moderate’. Satisfaction with clinical practice was higher in ‘moderate’ than ‘unsatisfied’. In addition, ‘unsatisfied’ was higher than ‘moderate’. Confidence in core

basic nursing was higher in 'moderate' than 'high'. In addition, 'high' was higher than 'moderate'. This result was match with those of Lee and Kim [37], who showed differences in clinical practice satisfaction and prior knowledge preparation for adaptation to clinical practice for third-grade nursing students. It can be seen that the higher the satisfaction with clinical practice and the sufficient preparation for prior knowledge, the better the adaptation to clinical practice. A study by Kim and Shin [11], which showed that the readiness of clinical practice affects the adaptation of clinical practice, can also be supported.

The clinical learning environment showed a statistically significant positive correlation with nunchi and adaptation to clinical practice, and a significant negative correlation with burnout; nunchi showed a statistically significant positive correlation with clinical practice adaptation, and a significant negative correlation with burnout. Burnout showed a statistically significant negative correlation with clinical practice adaptation. The results of this study were agree with the study of Jeon et al. [33], who showed a positive correlation between the clinical learning environment and burnout in nursing college students in the 3rd and 4th grades, and the study of Cho and Kang [38]. In addition, student satisfaction was included as a sub-factor of the clinical learning environment, and the results were similar to those of Kim, Yoo, and Cheon [40], who showed a significant maladaptive relationship between clinical practice satisfaction and burnout. This results was also similar to the research results of Lim [23], who showed a significant correlation between clinical practice stress and burnout, including the practical education environment. The relationship with patients is included in the clinical learning environment. The higher nunchi, the higher the level of interpersonal harmony, the similar results to the studies of Yang et al. [34]. In other words, the higher the adaptation to clinical practice with nunchi and the lower the burnout, the more positive the clinical practice education environment is. Thus, it is require to develop and apply a program that can increase adaptation to nunchi and clinical practice for nursing students and reduce burnout.

The factors influencing nursing college students' adaptation to clinical practice were burnout, confidence in core basic nursing, major satisfaction, and clinical learning environment, according to 21% of the total change. This results was analogize with those of Kim et al. [40], who showed that factors affecting clinical practice satisfaction related to clinical practice adaptation in nursing college students were exhaustion. It can be seen that the exhaustion of nursing students is an important factor in adapting to clinical practice. It seems necessary to operate a program to explore the cause of burnout and lower it. It was confirmed that the clinical learning environment affected clinical practice stress and anxiety during clinical practice [41][43][44]. To reduce the burnout of nursing students, it is necessary to prepare an official reporting system in cooperation with schools and hospitals and active efforts to improve the incivility in nursing organizations [42]. Through this, it can be inferred that the clinical learning environment affects the adaptation of clinical practice. Hence, to increase the adaptability of nursing college students to clinical practice, it is necessary to check and improve the clinical learning environment.

5. CONCLUSION

This study was attempted to confirm the influencing factors of adaptation to clinical practice in 171 nursing college students. Results showed that burnout, core basic nursing confidence, major satisfaction, and clinical learning environment were found to be factors influencing adaptation to clinical practice. Therefore, in order to refine adaptation to clinical practice, it is necessary to exploit a practical program to reduce burnout and verify the effectiveness, and improve the clinical environment. In addition, various extracurricular programs should be conducted to increase core basic nursing confidence and major satisfaction. Since adaptation to clinical practice was related to the clinical learning environment, nunchi, and burnout, measures should be prepared to improve the clinical learning environment of nursing college students, increase nunchi, and reduce burnout. Based on the results of this study, we suggest the following for future research. First, since this study surveyed nursing students in one area, repetitive studies targeting nursing students in more areas are required to secure the generalization and validity of the research. Second, it is necessary to develop a tool with high validity and trust that can measure the clinical learning environment of nursing college students. Third, research is needed to exploit a program to lower burnout for nursing college students and verify its effectiveness.

REFERENCES

[1] Dunn, S. V., Ehrich, L., Mylonas, A., & Hansford, B. C. (2000). Students' perceptions of field experience professional development: a comparative study. Journal of Nursing Education, 39(9), 393-400. Doi: https://doi.org/10.3928/0148-4834-20001201-05

[2] Korean Accreditation Board of Nursing Education. (2020). Presentation materials for self-evaluation of nursing education certification evaluation in the first half of 2020, http://old.kabone.or.kr/HyAdmin/upload/goodFile/120200130140218.pdf

[3] Hartigan, T. A., Cobbett, S. L., Amirault, M. A., & Muise, M. E. (2007). Nursing graduates' perception of their undergraduate clinical placement. International Journal of Nursing Education Scholarship, 4(1), 1-12.

[4] Kang, S. Y. (2016). The social adjustment process of nursing students in the clinical practice. ISSN: 2508-2116, Journal of Korean Association for Qualitative Research, 1, 9-19. Doi: https://doi.org/10.48000/KAQRKR.2016.1.9

[5] Kwag, Y. K. (2013). Effect of self-esteem, ego-resilience, social support on nursing students adjustment to college. Journal of the Korea Academia-Industrial cooperation Society, 14(5), 2178-2186. Doi: https://doi.org/10.5762/KAIS .2013.14.5.2178

[6] Chan, D. (2001). Development of an innovative tool to assess hospital learning environments. Nurse Education Today, 21(8), 624-631. Doi: http://dx.doi.org/10.1054/nedt.2001.0595

[7] Papp, I., Markkanen, M., & von Bonsdorff, M. (2003). Clinical environment as a learning environment: student nurses' perceptions concerning clinical learning experiences. Nurse Education Today, 23(4), 262-268.

[8] Han, J. Y., Park, H. S. (2011). Effects of teaching effectiveness and clinical learning environment on clinical practice competency in nursing students. Journal of Korean Academy Fundamental Nursing, 18(3), 365-372.

[9] Park, K. S., Hwang, Y. Y., & Choi, E. H. (2003). The study of the nursing students' lived experience of clinical practice at the intensive care unit. Korean Journal of Adult Nursing, 15(3), 373-382.

[10] Park, H. S., Kim, K. N., Kang, E. H., Lee, J. M., & Park, S. M. (2011). Lived adaptation experience of new ICU nurses who are working in a newly established university hospital. Journal of Korean Academy Fundamental Nursing, 18(2), 226-236.

[11] Kim, S. Y., Shin, Y. S. (2018). Factors influencing adaptation on clinical practice in nursing students. Journal of the Korea Academia-Industrial cooperation Society, 19(9), 234-242. Doi: https://doi.org/19.5762/KAIS.2018.19.9.234

[12] Jang, H. J., Lee, Y. J. (2021). The influence of self-compassion, conflict resolution strategy on the adaptation of clinical practice in nursing college students. ISSN: 2384-0358(Print); 2384-0366(Online), The Journal of the Convergence on Culture Technology, 7(2), 77-83. Doi: http://dx.doi.org/10.17703/ JCCT. 2021.7.2.77

[13] Jin, M. J., Hyun, M. H. (2014). Affect and person-evaluation about the other's nunchi behavior: success and intention of nunchi. Korean Journal of Youth Studies, 21(5), 463-482.

[14] Heo, J. H., Park, W. J., & Kim, S. J. (2012). Conceptualization of nunchi. Institute of Human Sciences, 33, 557-581.

[15] Park, H. J., An, H. J. (2019). Nursing students' experiences on nunchi in clinical practice. The Journal of Korean Academic Society of Nursing Education, 25(1), 48-57. Doi: http://dx.doi.org/10.5977/jkasne.2019.25.1.48

[16] Heo, J. H., Park, W. J. (2013). Development and validation of nunchi scale. Korean Journal of Counseling, 14(6), 3537-3555.

[17] Chen, H. C., Lo, H. S. (2015). Nursing student satisfaction with an associate nursing program. Nursing Education Perspectives, 36(1), 27-33.

[18] Michalec, B., Diefenbeck, C., & Mahoney, M. (2013). The calm before the storm? Burnout and compassion fatigue among undergraduate nursing students. Nurse Education Today, 33(4), 314-320.

[19] Maslach, C., Jackson, S. E. (1981). The measurement of experienced burnout. Journal of Organizational Behavior, 2, 99-113. Doi: http://dx.doi.org/10.1002/job.4030020205

[20] Ha, N. S., Han, K. S., & Choi, J. (1998). The relationship of perceived stress, ways of coping, and stress response of nursing students. Journal of Korean Academy of Nursing, 28(2), 358-368.

[21] Rudman, A., Gustavsson, J. P. (2012). Burnout during nursing education predicts lower occupational preparedness and future clinical performance: a longitudinal study. International Journal of Nursing Studies, 49(8), 988-1001. Doi: http://dx.doi.org/10.1016/j.ijnurstu.2012.03.010

[22] Ko, C. M. (2017). Effects of empowerment and emotional intelligence in the relationship between clinical practicum stress and burnout among nursing college students. ISSN: 1225-665X(Print); 2234-1668(Online), Stress, 25(2), 120-127. Doi: https://doi/org/10/17547/kjsr.2017.25.2.120

[23] Lim, Y. J. (2017). The impact of nursing students' emotional labor and clinical practice stress on burnout. Journal of Learner-Centered Curriculum and Instruction, 17(6), 461-474. Doi: http://dx.doi.org/10.22251.jlcci.2017.17.6.461

[24] Son, Y. J., Song, H. S., Won, M. H., & Lim, S. H. (2017). Clinical experience of undergraduate nursing students in adult intensive care unit using content analysis. The Journal of Learner-Centered Curriculum and Instruction, 17(16), 353-370.

[25] Lee, E. S., Kim, J. S., & Kim, A. Y. (2011). Effects of clinical practicum reinforcement program on nursing student's clinical competency and satisfaction in the ICU. Journal of Korean Clinical Nursing Research, 17(2), 262-274.

[26] Bak, B. G. (2003). Challenging tasks in the educational studies initiated by the developmental processes and the contents of field theory. Education Research Principles, 8(1), 165-205.

[27] Faul, F., Erdfelder, E., Lang, A. G., & Buchner, A. (2007). G*Power 3: a flexible statistical power analysis program of the social, behavioral, and biomedical science. Behavior Research Methods, 39(2), 175-191. Doi: http://dx.doi.org/10.3758/bf03193146

[28] Dunn, S.V., Burnett, P. (1995). The development of a clinical learning environment scale. Journal of Advanced Nursing, 22(6), 1166-1173. Doi: http://dx.doi.org/10.1111/j.1365-2648.tb03119.x

[29] Han, J. Y. (2010). Nursing students' perceptions of clinical learning environment. Journal of The Korean Data Analysis Society, 12(5), 2595-2607.

[30] Hong, Y. K. (2016). Incivility experienced by nursing student, coping, and burnout in clinical practice. Master's Thesis, Pusan National University.

[31] Schaufeli, W. B., Martínez, I. M., Marques-Pinto, A., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: a cross-national study. Journal of Cross-Cultural Psychology, 33(5), 464-481.

[32] Yi, Y. J. (2007). Development and evaluation of the e-learning orientation program for nursing student's adapting to clinical practicum. Journal of Korean Academy of Adult Nursing, 19(4), 593-602.

[33] Jeon, M. K., Han, M. Y., Kim, I. J., & Kim, Y. S. (2021). The relationship among communication competency, nunchi, clinical learning environment, clinical practice competency in nursing students. ISSN: 1598-2106(Print); 2671-776X(Online), Journal of Learner-Centered Curriculum and Instruction, 21(5), 85-94. Doi: https://doi.org/10.22251/ jlcci.2021.21.5.85

[34] Yang, Y. S., Hong, S. H., & Ryu, J. L. (2020). Effects of communication competence and nunchi on interpersonal harmony in nursing students. ISSN: 2586-4440(Online), Journal of Convergence for Information Technology, 10(7), 75-83. Doi: https://doi.org/10.22156/ CS4SMB.2020.10.07.075

[35] Kim, N. H., Park, S. Y. (2019). Effect of burnout and stress coping on resilience of students nurses. Journal of the Korean society for wellness, 14(2), 295-304.Doi: http://dx.doi.org/10.21097/ksw.2019.05.14.2.295

[36] Kim, M. S., Park, J. A. (2018). Effects of incivility experienced nursing students, clinical practice satisfaction, burnout on stress of clinical practice. Journal of Learner-Centered Curriculum and Instruction, 18(10), 811-828. Doi: http://dx.doi.org/10.22251. jlcci. 2018. 18.10.811

[37] Lee, O. S., Kim, E. J. (2019). The moderating effect of emotional intelligence on the relationship between transition shock and adaptation on clinical practice among nursing students. ISSN: 1738-1916(Online), Journal of Digital Convergence, 17(11), 387-394. Doi: https://doi.org/10.14400/JDC.2019.17.11.387

[38] Cho, H. H., Kang, J. M. (2017). Factors influencing clinical practice burnout in student nurses. ISSN: 2287-9110(Print); 2287-9129(Online), Korean Academy of Child Health Nursing, 23(2), 199-206. Doi: https://doi.org/10.4094/chnr.2017.23.2.199

[39] Kang, S. Y. (2015). Impact of nursing students' emotional labor on burnout during nursing practice in a hospital: moderating effect of emotional intelligence. ISSN: 1225-9330(Print); 2288-4955(Online), Journal of Korean Academy of Nursing Administration, 21(1), 77-87. Doi: http://dx.doi.org/10.11111/ jkana. 2015. 21.1.77

[40] Kim, J. G., Yoo, J. H., & Cheon, E. Y. (2017). Relationship among incivility, burnout, coping and satisfaction to clinical practice experienced by nursing college students in clinical practice. ISSN: 1975-4701(Print); 2288-4688(Online), Journal of the Korea Academia-Industrial cooperation Society, 18(1), 316-324. Doi: https://doi.org/10.5762/KAIS.2017.18.1.316

[41] Kim, E. Y., Yang, S. H., (2015). Effects of clinical learning environment on clinical practice stress and anxiety in nursing students. ISSN: 1225-9330(Print); 2288-4955(Online), Journal of Korean Academy of Nursing Administration, 21(4), 417-425. Doi: http://dx.doi.org/10.11111/jkana.2015.21.4.417

[42] Lee, M. H., Bae, J. Y. (2023). The mediating effect of resilience in the between incivility and burnout experienced of nursing students in clinical practice. ISSN: 2508-9080(Print); 2671-5325(Online), Asia-pacific Journal of Convergent Research Interchange, 9(4), 297-311. Doi: http://dx.doi.org/10.47116/apjcri.2023.04.24

[43] Lee, J., Gang, M. (2018). Impact of Academic Stress on Depression among Nursing Students: Testing for the Moderating Effect of Social Support. International Journal of Advanced Nursing Education and Research, vol.3, no.1, May. 2018, pp.99-104, Doi:10.21742/IJANER.2018.3.1.17

[44] Kim, E. J. (2019). Stress and Coping to Nursing College Students. International Journal of Advanced Nursing Education and Research, vol.4, no.1, Apr. 2019, pp.31-38, Doi:10.21742/IJANER.2019.4.1.05