



A study on grit, psychological well-being, communication competence, and nursing professionalism of nursing students

Mi-Young Chon¹, Jeong-Ah Yoon^{2*} and Hye-Won Jeon³

¹Professor, Department of Nursing, Konkuk University, Korea,

²Professor, Department of Nursing, Tongmyong University, Korea,

³Professor, Department of Nursing, Catholic Kkottongnae University, Korea,

¹mychon@kku.ac.kr, ²yja9476@hanmail.net and ³hwjeon@kkot.ac.kr

Corresponding author:

Jeong-Ah Yoon

Abstract

This study is descriptive research for providing basic data on a program development that mediates related variables so that nursing students can form positive human care professions by understanding the relationship between grit, psychological well-being, communication competence, and nursing professionalism of nursing students. Data were collected through an online survey of 148 nursing students from three universities located in B Metropolitan City and C Province from March 7 to March 12, 2024. The collected data were analyzed using descriptive statistics, t-test, ANOVA, Pearson's correlation coefficient, and multiple regressions by using the SPSS WIN 26.0 statistical program. In terms of grit, psychological well-being, communication competence, and nursing professionalism of nursing students, grit averaged 3.19 points±0.55 (out of 5), psychological well-being averaged 3.60 points±0.44 (out of 5), communication competence averaged 3.82 points±0.49 (out of 5), and nursing professionalism averaged 4.02 points±0.47 (out of 5).

Nursing professionals had a statistically significant positive correlation with subjective health status ($r=.216$, $p=.009$), grit ($r=.290$, $p=.000$), psychological well-being ($r=.492$, $p=.000$), and communication competence ($r=.400$, $p=.000$). In other words, the healthier they thought, the higher the level of grit, psychological well-being, and communication competence they got, the more positive the nursing professionalism they showed. The factors influencing nursing students' professionalism were identified as psychological well-being ($\beta=.40$, $p<.001$), and the explanatory power was 24.5%. Based on the results of this study, it is advisable to develop an arbitration program that enhances grit, communication competence, and psychological well-being to establish positive nursing professionalism.

Keywords: *grit, psychological well-being, communication competence, nursing professionalism*

1. INTRODUCTION

1.1 Research Necessities

The period for college students is not only a time when they must decide on their actions and establish their identity in order to grow into members of society in the changing times of studying, career, employment, economic responsibility, and interpersonal relationships but also an important time when responsibility is given along with autonomy [1]. Nursing students have a relatively stable college life compared to students of other majors due to their generally fixed career paths and high employment rates. In practice, however, they often experience stress as a preparation process for becoming a nurse due to the progress of intensive curriculums such as heavy academic volume, tight class schedules, frequent tests, and cultivation of social responsibility and strict ethical consciousness through clinical practice and various comparisons and activities. By this, they are reported to affect their psychological well-being [2].

Psychological well-being refers to the sum of psychological aspects that make up an individual's quality of life, and it is a concept that includes not only the emotional well-being the individual feels subjectively but also the functionality as a member of society [3]. Ryff [4] named a healthy state of mind as psychological well-being, defining happiness in terms of a self-realistic perspective. Psychological well-being is an emotional attitude that accepts oneself as it is, forms positive interpersonal relationships with others, has control over the surrounding environment, and grows with a purpose of life [4]. Nursing students were reported to have lower psychological well-being compared to other major students or early adults. Since this psychological well-being is also related to the attitude of nurses caring for the subjects, there is a need for measures to improve psychological well-being [5].



As human development is the result of constant interaction between individuals and the environment, it is desirable to examine variables and individual variables together to explain the best results, such as happiness and well-being. As an individual's internal variable affecting the level of well-being, there is Grit, a non-cognitive characteristic that has recently attracted attention in positive psychology research [6]. Duckworth [6], who first introduced grit in psychological terms, defined grit as persistence (patience) and passion for achieving long-term goals. Here, grit means trying hard without being frustrated despite the failures, hardships, adversity, and slumps you may face in the process of achieving your goals while constantly maintaining effort and interest. It is also known as a characteristic of maintaining a relatively high sense of well-being despite adversity and failure [6][7]. Early grit studies focused mainly on the relationship between academic achievement and social success such as winning competitions [6][31]. However, research results have gradually reported that grit shows effective predictive power even in subjective achievements, including life satisfaction, happiness-seeking attitude, and well-being [5].

There is an interpersonal variable as an external variable that affects the level of well-being [3], and communication is an important factor in the formation of interpersonal relationships [8]. Humans are born as social animals and live constantly forming relationships with others through communication to the death [9]. They may either achieve their goals of a happy life through communication or experience inconvenience or unhappiness caused by miscommunication. As a method of becoming a social being, communication, therefore, forms a community in various daily lives, expresses one's thoughts in various ways, shares them, and maintains a smooth relationship. Under all the situations where humans live together as members of society, communication competence refers to a personal ability to communicate their thoughts efficiently and effectively to others via various expression methods, including verbal and nonverbal language, and to make oneself and others understood through mutual exchange methods [8]. In particular, for members of the organization, communication competence for job performance is necessary ability in the process of achieving goals and can be said to mean personal competencies to maintain and develop relationships formed in various processes of performing tasks [9][32][33].

The communication competence of nurses plays a critical role in the health care field. Not only do nurses take up large human resources in medical institutions but also, but they also need to communicate with many people, including members of the organization in many occupations, subjects with health problems, and families. Therefore, effective communication competence is required to understand the roles of other occupations and members in various work environments and coordinate disagreements among members of medical institutions to increase the effectiveness and efficiency of overall work [11].

For the first year after graduating from university, new nurses have had difficulty adopting due to conflicts between high expectations and reality, making it easy for them to change jobs rather than overcome physical and psychological difficulties. In this situation, they must possess persistence and endurance, or grit, as one of the core nursing competencies [2][3]. Grit may affect academic achievement, increase job satisfaction, and reduce turnover intention [12]. If nursing students' professionalism is formed positively, satisfaction will increase with pride, and when they become nurses, they will provide quality nursing, reduce turnover, improve job satisfaction, and reduce stress [12]. The sense of mission and pride for the job in a nursing environment dealing with life, job stress, and burnout, as well as the intention of turnover, will increase [13].

Nursing professionalism, a systematic view of nursing and a professional view of nurses' nursing activities or their duties [14], is directly connected with the values of nursing. It was found that the positive nursing profession increased the degree of job satisfaction, nursing work performance ability, and organizational commitment of nurses [15] and lowered the degree of turnover intention, burnout, and role conflict [13] [16]. Professionalism can particularly be developed by social perception influencing people around them or media, according to previous studies. It has been revealed nursing professionalism can also be built through professional education, theoretical education and clinical practice learned at universities and then continues to develop through practical experience [17]. Once nursing professionalism is formed positively, the results of nursing human resources can be developed and maintained positively afterward [13].

Grit successfully obtained a strict curriculum and predicted individual well-being by previous studies [18] on grit for healthcare workers. In focus group interviews on the concept of grit and related elements for clinical nurses, grit was expressed as persistence and regarded as necessary knowledge for professional nurses [19]. It can be estimated that there is a significant correlation between grit and nursing professionalism [20].

Therefore, the purpose of this study is to provide basic data to develop a program that mediates related variables so that nursing students can form positive nursing professions by grasping the relationship between grit, psychological well-being, communication competence, and nursing professionalism of nursing students.



1.2 Research Objectives

To examine the relationship between grit, psychological well-being, communication competence, and nursing professionalism and identify affecting factors of nursing professionalism, the specific and detailed objectives of this study are as follows.

To identify general personalities, grip, psychological well-being, and nursing professionalism

To differentiate grit, psychological well-being, communication competence, and nursing professionalism by the general personalities of nursing students

To investigate the correlation between grit, psychological well-being, communication competence, and nursing professionalism of nursing students

To examine factors affecting the nursing professionalism of nursing students

2. RESEARCH CONTENTS AND METHOD

2.1 Research Design

This study is descriptive research for providing basic data on a program development that mediates related variables so that nursing students can form positive human care professions by understanding the relationship between grit, psychological well-being, communication competence, and nursing professionalism of nursing students.

2.2 Study Subjects and Ethical Consideration

This study was conducted for nursing students from first-year students to seniors enrolled in three universities in B metropolitan city and C province, and the period of collecting data was from March 7 to March 12, 2024. In the multiple regression analysis using the G*power 3.1.9.4 program, the number of samples required was calculated as 123 when the significance level was .05, the medium effect size was .15, the power was .90, and the maximum number of predictors was 6. Considering the dropout rate of 20%, data was collected from 148 respondents, of which 147 copies were used for the final analysis, excluding the incomplete one due to a few non-responses. This study was conducted as online questionnaires for ethical consideration of the subjects, and a small compliment was given to the respondents who surveyed. The time spent collecting data was about 10 to 15 minutes, and the guidance for study necessities and objectives was attached to understand. The study notified that it was voluntarily participated and could be withdrawn at any time. The survey results were used only for research purposes and discarded after completion, and only those who agreed to this could carry out the survey.

2.3 Research Tool

2.3.1 Grit

The used grit measurement tool was developed by Duckworth [6]. The adapted scale by Lee & Sohn [21] was used in this study. A total of 12 questionnaires were in the survey consisting of 6 questions for continuous interest and 6 questions for constant effort. Each question is a 5-point Likert scale, and the higher the score they obtain, the higher passion and will to achieve long-term goals they show. In Lee & Sohn [21], the reliability was Cronbach's $\alpha=.79$, and in this study, Cronbach's $\alpha=.80$.

2.3.2 Psychological Well-being

Psychological Well-being Scale (PWBS), which was based on the psychological well-being tool developed by Ryff [4] for adults adopted by Kim, was used in this study. It is a 46-question tool adapted according to the Korean situation. Kim et al. [22] used an abbreviated scale of a total of 18 questions that were validated by selecting three questions for each of the six sub-dimensions. It consists of a 5-point Likert scale. It consists of self-acceptance, environmental dominance, positive interpersonal relationships, autonomy, purpose of life, and six sub-areas of personal growth. The higher the score they get, the higher psychological well-being they show, and the reliability was Cronbach's $\alpha=.91$ in Kim's [5] study and Cronbach's $\alpha=.79$ in this study.

2.3.3 Communication Competence

In this study, communication competence used a tool modified and supplemented by Bae [11] with the Global Interpersonal Communication Competence Scale (GICC) developed by Hur [23]. Each question consists of a 5-point Likert, and the higher the score they get, the better communication competence they have. The reliability of the tool was Cronbach's $\alpha=.85$ in Bae [11]'s study and Cronbach's $\alpha=.86$ in this study.



2.3.4 Nursing Professionalism

The reduced, modified 18-question tool was used for nursing professionalism of nursing students. The 29-question nursing professional tool developed by Yeun et al. [16] was verified by Han et al. [24] to verify the construct validity through factor analysis. It is composed of 18 questions in total and 5 points on a Likert scale, consisting of 6 questions on professional self-concept, 5 questions on social awareness, 3 questions on nursing expertise, 2 questions on nursing practice role, and 2 questions on nursing independence. The higher the score the respondents obtain the higher the nursing professionalism they have. In the study of Han et al. [24], Cronbach's $\alpha=.94$, and in this study, Cronbach's $\alpha=.85$.

2.4 Data Collection Method

The subject's general characteristics and measurement variables were analyzed through descriptive statistics. The differences in grit, psychological well-being, communication competence, and nursing professionalism according to the characteristics of the subjects were analyzed by t-test and ANOVA and by Scheffe test as a post-analysis. Pearson's correlation coefficients analyzed the correlation between the measurement variables. Factors influencing nursing professionalism were analyzed by multiple regression.

3. STUDY RESULTS

3.1 General Characteristics of the Participants

The general characteristics of the study subjects are shown in [Table 1]. Among the subjects of the study, 43(29.3%) were male, 104 (70.7%) were female, and the average age was 22.41 ± 2.78 years. There were 51 seniors (34.7%), 39 sophomores (26.5%), 32 juniors (21.8%), 24 freshmen (16.3%), and the average credit was 3.0 to 3.9 with 84 students (57.1%), and the religion of the subjects was 94 none (63.9%), 31 Protestants (21.1%), 15 Catholics (10.2%), and 6 Buddhism (4.1%). Regarding the motivation for applying for the Department of Nursing Science, 60 respondents (40.8%) answered "employment security", 41 (27.9%) "cutting out for nursing (Aptitude)", and 23 (15.6%) "recommendation of their parents and around them". Only 10 respondents were applied for the nursing according to their academic scores on Korean SAT. 121 (82.3%) participants were satisfied with the college satisfaction, while 26 (17.7%) were dissatisfied. 134 (91.2%) subjects were satisfied with their major, while 13 (8.8%) were dissatisfied. Regarding the question of subjective health status, 27 respondents (18.4%) "very healthy", 71 (48.3%) "healthy", 33 (22.4%) "normal", 13 (8.8%) "not healthy", 3 (2%) "not very healthy" took up respectively.

[Table 1] General Characteristics of the subjects (N=147)

Variable	Categories	No. of subjects (%)	Mean±SD
Gender	Male	43(29.3)	
	Female	104(70.7)	
Age (yr)	≤20	32(21.7)	22.41±2.78
	21	28(19.0)	
	22	30(20.4)	
	23	23(15.6)	
	≥24	34(23.3)	
Grade	Freshman	24(16.3)	
	Sophomore	39(26.5)	
	Junior	32(21.8)	
	Senior	51(34.7)	
College Credit (Korean College Grade)	2.0~2.9	5(3.4)	
	3.0~3.9	84(57.1)	
	4.0~4.5	34(23.1)	
Religion	None	94(63.9)	
	Protestants	31(21.1)	
	Catholics	15(10.2)	



	Buddhism	6(4.1)	
Motivation for applying nursing	Employment Security	60(40.8)	
	Parents Recommendation	23(15.6)	
	Aptitude	41(27.9)	
	Academic Score(SAT)	10(6.8)	
	Others	13(8.8)	
School satisfaction	Satisfied	121(82.3)	
	Dissatisfied	26(17.7)	
Major satisfaction	Satisfied	134(91.2)	
	Dissatisfied	13(8.8)	
	Not Very Healthy	3(2.0)	
	Not healthy	13(8.8)	
	Normal	33(22.4)	
	Healthy	71(48.3)	
	Very healthy	27(18.4)	

3.2 Grit, Psychological well-being, Communication competence and Nursing Professionalism of the Subjects

Grit, psychological well-being, communication competence, and nursing professionalism of the subjects are shown in [Table 2]. Grit averaged 3.19 out of 5, psychological well-being averaged 3.60 out of 5, communication competence averaged 3.82 out of 5, and nursing professionalism averaged 4.02 out of 5. As a result of checking skewness and kurtosis, skewness did not exceed the absolute value of 3 and kurtosis of 10, which are the standard of normal distribution in all measurement variables [25], satisfying the assumption of normal distribution.

[Table 2] Degree of Grit, Psychological well-being, Communication competence, Nursing professionalism(N=147)

	Min.-Max.	Mean±SD	Skewness	Kurtosis
Grit	2.00-4.75	3.19±0.55	0.193	-0.271
Psychological well-being	2.50-4.56	3.60±0.44	-0.054	-0.588
Communication competence	2.53-4.93	3.82±0.49	0.214	-0.213
Nursing professionalism	2.67-4.94	4.02±0.47	-0.349	-0.247

3.3 Differences in Grit, Psychological well-being, Communication competence, and Nursing professionalism by General Characteristics of the subjects

The differences in grit, psychological well-being, communication competence, and nursing professions according to the general characteristics of the subject are shown in [Table 3]. The degree of grit by the general characteristics of the subjects was statistically significant in average credit ($F=5.45, p=.005$) and college satisfaction ($t=2.39, p=.018$). As a result of post-verification, the subjects of 4.0-4.5 credits were higher than those of 2.0-2.9 credits. There was a statistically significant difference in psychological well-being between nursing department application motivation ($F=2.59, p=.040$) and major satisfaction ($t=2.56, p=.011$). However, after post-verification, the psychological well-being score of the applicants who chose nursing science according to their aptitude was higher than that of the applicants because employment was guaranteed. There was no significant difference in communication competence by general characteristics, and nursing professionalism had statistically significant differences in gender ($t=-2.25, p=.026$), average grades ($F=3.34, p=.039$), college satisfaction ($t=2.12, p=.036$), and major satisfaction ($t=2.41, p=.017$). Female students had higher nursing professionalism scores than male students, and those who were satisfied with their college and major had higher nursing professionalism scores. As a result of post-verification, it was found that the average credit(grade) was 4.0-4.5, and the nursing professionalism score was higher than that of 2.0-2.9.



[Table 3] Differences in Grit, Psychological well-being, Communication competence, and Nursing professionalism by General Characteristics (N=147)

Variable		Grit		Psychological well-being		Communication competence		Nursing professionalism	
		M±SD	torF(p) Shéffe	M±SD	torF(p) Schéffe	M±SD	torF(p) Schéffe	M±SD	torF(p) Schéffe
Gender	Male	3.20±0.53	0.07 (.947)	3.58±0.46	-0.37 (.714)	3.75±0.53	-1.21 (.229)	3.88±0.51	-2.25 (.026)
	Female	3.19±0.56		3.61±0.44		3.86±0.48		4.07±0.44	
Grade	Freshman	3.15±0.48	0.96 (.412)	3.51±0.38	0.67 (.571)	3.66±0.41	1.85 (.142)	4.02±0.41	0.07 (.977)
	Sophomore	3.28±0.51		3.59±0.40		3.76±0.48		4.00±0.49	
	Junior	3.21±0.50		3.57±0.43		3.84±0.54		3.99±0.53	
	Senior	3.16±0.61		3.65±0.49		3.92±0.49		4.03±0.45	
College Credit (grade)	2.0~2.9 ^a	2.72±0.50	5.45 (.005) a<c	3.32±0.43	2.20 (.115)	3.65±0.39	1.13 (.327)	3.54±0.50	3.34 (.039) a<c
	3.0~3.9 ^b	3.16±0.55		3.59±0.47		3.84±0.53		4.07±0.48	
	4.0~4.5 ^c	3.44±0.50		3.73±0.38		3.96±0.44		3.94±0.46	
Religion	None	3.17±0.56	0.22 (.883)	3.58±0.43	0.98 (.405)	3.80±0.48	0.58 (.630)	4.04±0.47	2.16 (.096)
	Protestant	3.16±0.58		3.56±0.48		3.91±0.54		3.87±0.46	
	Catholic	3.27±0.46		3.76±0.46		3.91±0.42		4.11±0.30	
	Buddhism	3.31±0.47		3.73±0.39		3.73±0.66		4.31±0.43	
Motivation for applying nursing	Employment security ^a	3.11±0.55	2.11 (.082)	3.47±0.42	2.59 (.040) a<c	3.73±0.53	1.05 (.385)	3.98±0.50	1.04 (.388)
	Parents recommendation ^b	3.21±0.43		3.68±0.41		3.87±0.43		4.09±0.40	
	Aptitude ^c	3.33±0.53		3.73±0.44		3.91±0.46		4.08±0.45	
	Admission score ^d	3.41±0.62		3.69±0.37		3.94±0.60		4.03±0.37	
School satisfaction	Others ^e	2.94±0.64	2.39 (.018)	3.57±0.50	1.54 (.126)	3.84±0.44	0.12 (.903)	3.82±0.51	2.12 (.036)
	Satisfied	3.24±0.55		3.63±0.44		3.83±0.48		4.05±0.45	
Major satisfaction	Unsatisfied	2.96±0.51	1.77 (.079)	3.48±0.45	2.56 (.011)	3.81±0.55	1.76 (.080)	3.84±0.52	2.41 (.017)
	Satisfied	3.22±0.55		3.63±0.43		3.85±0.49		4.04±0.45	
	Unsatisfied	2.94±0.52		3.31±0.45		3.59±0.48		3.72±0.50	

3.4 Correlations among Grit, Psychological well-being, Communication competence, Nursing professionalism

The correlation between variables of nursing students is shown in [Table 4]. The subject's nursing professionalism was found to have a positive correlation with subjective health status ($r=.216, p=.009$), grit ($r=.290, p=.000$), psychological well-being ($r=.492, p=.000$), and communication competence ($r=.400, p=.000$). In addition, grit was found to be significantly positively correlated with psychological well-being ($r=.627, p=.000$), communication competence ($r=.481, p=.000$), and nursing professionalism ($r=.290, p=.000$), and psychological well-being was found to have a significant positive correlation with communication ability ($r=.720, p=.000$), nursing professionals ($r=.400, p=.000$), and subjective health status ($r=.178, p=.031$).

[Table 4] Correlations among Grit, Psychological well-being, Communication competence, Nursing professionalism

	Subjective health status $r(p)$	Grit $r(p)$	Psychological well-being $r(p)$	Communication competence $r(p)$	Nursing professionalism $r(p)$
Age	-.021 (.800)	.106 (.201)	.162 (.050)	.147 (.075)	-.022 (.795)
Subjective health status		.098 (.238)	.178 (.031)	.057 (.493)	.216 (.009)



Grit			.627 (.000)	.481 (.000)	.290 (.000)
Psychological well-being				.720 (.000)	.492 (.000)
Communication competence					.400 (.000)

3.5 Factors Affecting on nursing professionalism of nursing students.

[Table 5] shows the results of regression analysis by inputting subjective health status, grit, psychological well-being, and communication skills that showed statistically significant correlations to identify factors affecting the subjects' nursing professionalism. After the analysis, psychological well-being ($\beta=.40$, $p=.001$) was the factor influencing nursing students' nursing professionalism, and the explanatory power of the variable was 24.5%.

[Table 5] Factors Affecting on nursing professionalism of nursing students

Variables	B	SE	β	t	p
(constant)	1.88	.31		6.15	<.001
Subjective health status	.07	.04	.14	1.92	.057
Grit	-.03	.08	-.03	-0.35	.727
Psychological well-being	.43	.13	.40	3.39	.001
Communication competence	.11	.10	.12	1.13	.261
$R^2 = .266$, Adjusted $R^2 = .245$, $F = 12.86$, $p < .001$					

4. DISCUSSION

This study was conducted to provide basic data to develop a program that mediates related variables so that nursing students can form positive nursing professions by identifying the degree of relationship between grit, psychological well-being, communication competence, and nursing professionalism of nursing students.

When looking at the grit, psychological well-being, communication competence, and nursing professionalism of the subjects in this study on a 5-point scale, the average of nursing professionals was 4.02 ± 0.47 , which was the highest compared to the other three areas, and the average grit was 3.19 ± 0.55 , which was the lowest among them. However, in Jin and Kim's [2] study, grit averaged 3.02 points, No and Kim [13] averaged 3.17 points, Yang et al. [12] averaged 3.00 points, and Cho and Yun [26] averaged 3.19, similar to this study, and nursing students' grit scored medium or higher out of 5 points.

Grit refers to the tendency to work steadily to achieve long-term goals and perseverance and enthusiasm to achieve goals. It is necessary to identify Grit levels as factors that successfully perform tasks such as studying, clinical practice, and passing the national examination for nursing students and that form a positive nursing profession as a nurse in the future. Grit is a competence that is in demand in subjective achievements, including life satisfaction, job choice, and competence to become a professional nurse [3]. In this study, grit had statistically significant differences according to average grades and university satisfaction. Grit score was higher in the grades range 4.0~4.5 than 2.0~2.9, which is because grit is improved by one's efforts, not by natural ability. Students with high grades are expected to have a high level of effort and goal achievement, and thus, there is a difference according to academic performance. Cho and Yun [26] also showed statistically significant differences in grit by academic performance and major satisfaction, and Yang et al. [12] also showed significant differences in academic performance and grit, backing up the results of this study. It is believed that efforts to improve the satisfaction of nursing students in universities and departments of nursing science are needed so that nursing students can constantly strive to achieve their goals and maintain their passion. For enhancing grit scores, a career search program to maintain interest should be developed upon admission as a nursing student. And constant information should be provided to help maintain their efforts and passion for achieving their goals as they advance to higher grades. Lastly, mentor-mentee programs should be ready for the students in need. In this study, grit had a statistically significant positive correlation with psychological well-being, communication competence, and nursing professionalism, but it was not a factor affecting nursing professionalism. This was the same result in the previous studies [12] and [13]. However, it needs repeated



studies to reaffirm the relationship between grit and nursing professionalism in the future.

Psychological well-being was 3.60 points in this study, 3.49 points in Ryu and Kim [3] for nursing students using the same tool, 3.40 points in Jin and Kim [2], 3.38 points in Kim and Kang [27] for the subjects of nurses, and 3.3 points in Lee et al. [20], which was lower than nursing students. Since psychological well-being is also related to the attitude of nurses to care for patients [5], it is necessary to prepare an intervention method to improve the psychological well-being of nursing students who will become nurses in the future. In this study, there was a statistically significant difference in psychological well-being depending on the motivation for applying to the nursing department and the level of major satisfaction with applying for the nursing department. In other words, students who applied for the department "cutting out for nursing" and were satisfied with their major had higher psychological well-being points than students who applied for "employment security" and "were dissatisfied with their major. Psychological well-being is an emotional attitude that embraces oneself, forms positive interpersonal relationships, has control over the surrounding environment, and grows toward the purpose of life [4]. Students who applied according to their aptitude had higher psychological well-being scores than students who applied for job security, and students who were satisfied with their major had higher psychological well-being scores than students who were not. In this study, psychological well-being had a statistically significant positive correlation with subjective health status, grit, communication competence, and nursing professionalism. It can be seen that the higher grit scores, the higher psychological well-being scores, and this is a supportive result over previous studies [2][3][5] that the higher grit had a positive effect on subjective well-being and psychological well-being. It can be seen that anyone with high grit feels psychological well-being by constantly striving and achieving goals, even if the situation changes.

In this study, communication competence averaged 3.82 ± 0.49 points out of 5, which was more than moderate, and it was similar to Oh and Kim's [28] 3.87 points for nursing students. However, direct comparison was difficult because no prior studies were using the same tools. This is because communication competence as a core competence in the healthcare field is being conducted through subject and non-subject courses. Communication competence was found to have no statistically significant difference among the general characteristics in this study. Oh and Kim [28] reported that there was a difference in age and motivation for application, while Kim et al. [29] showed that there was no significant difference. The results may differ according to the number of samples and research tools hence, it may be necessary to conduct a further study. In this study, communication competence had a statistically significant positive correlation with psychological well-being, grit, and nursing professionalism. As an external variable that affects psychological well-being level, communication competence is an important variable in the formation of interpersonal relationships, constantly forming relationships with others, and achieving job performance and goals. So, it can be interpreted that the higher communication ability, the higher psychological well-being, and grit. It can be translated if the higher communication competence. Although most nursing departments open and operate basic humanities and social studies courses to improve communication skills, scenario development and educational programs practice should be provided in order that nursing students can effectively communicate their thoughts to others verbally and nonverbally and play a role in coordinating differences among members of medical institutions.

In this study, nursing professionalism scored an average of 4.02 points out of 5 points, similar to Yang et al. [12], who used the same tool, and higher than Han et al. [24]'s 3.30 points for nurses. The recent experience of COVID-19, the national crisis, reflects the social recognition of nurses as professionals with trust and positive images in the role and performance of nurses [20], and it is thought that nursing students' professionalism has been formed positively since COVID-19.

Nursing professions by the general characteristics of nursing students in this study showed statistically significant differences in gender, credit, college satisfaction, and major satisfaction. In terms of gender, female students were high, those who had high grades were high, and those who satisfied both university and major were high. In the group with high grades, and nursing professional scores were high in those who were satisfied with college and major. No and Kim [13], Lee, etc. [20] reported that there was a significant difference according to major satisfaction, and Lee et al. [20] and Kang and Kim [30] reported that there was a statistically significant difference in grades, which had the same result as this study. According to the results of this study, high academic achievement and satisfaction with nursing are related to the formation of positive nursing professions, so active efforts will be needed to provide theory and practical nursing education to establish a positive nursing profession by giving interest, value, and learning motivation for their major.

In this study, nursing professionalism had a statistically significant positive correlation with grit, psychological well-being, and communication competence. It can be seen that the higher the grit, the higher the level of nursing professionalism, and in No and Kim [13], there was a positive correlation between grit and nursing



professionalism. It will be helpful to establish a nursing profession by promoting grit, so education is needed to maintain continuous efforts and interest to achieve goals. According to Kim et al. [29], nursing professionalism was found to have a positive correlation with communication competence, and it can be seen that the higher communication competence, the higher the nursing professionalism score. Since communication skills can enhance interpersonal relationships, academic achievement, and job evaluation, nursing professionalism is also expected to improve positively.

Moreover, the higher the psychological well-being subjects got, the more positive nursing professionalism they showed, and psychological well-being was identified as a factor affecting nursing professionalism, and the explanatory power was 24.5%. People with high psychological well-being promote personal growth, embrace themselves, have control over the environment, have positive interpersonal relationships and a clear purpose in life, and act autonomously [1]. These characteristics are considered to have a positive effect on establishing a nursing profession, which is a systematic view of nursing as a professional and a professional consciousness of the job itself in the course of nursing activities [16]. It is required to find an intervention plan that can improve psychological well-being, as the establishment of a positive nursing profession for nursing students is very important for the development of nursing professions.

5. CONCLUSION AND SUGGESTIONS

This study was conducted to provide basic data to develop a program to mediate related variables so that nursing students can form positive nursing professions by identifying the relationship between grit, psychological well-being, communication competence, and nursing professionalism of nursing students. Nursing professionals were positively correlated with grit, psychological well-being, and communication competence, and psychological well-being was confirmed as a factor affecting nursing professionalism, and explanatory power was 24.5%. This study was meaningful in that basic data was provided to develop programs so that nursing students could be satisfied with college life, improve their understanding of their major, and achieve their goals according to the grit, communication competence, psychological well-being, degree of nursing professionalism, correlation, and influencing factors of nursing students identified in the results of this study. Because grit, psychological well-being and communication competence were positively correlated, data from this study can be utilized for supporting schools and society or developing educational programs that can improve nursing students' grit, communication competence, and psychological well-being. Since psychological well-being is a factor that affects nursing professionalism, subjects, non-subject programs, and student support measures should be prepared to improve the psychological well-being of nursing students.

Based on the results of this study, I suggest the following suggestions.

First, since this study conveniently sampled subjects in a certain region, there is a limit to generalize, so it is suggested to expand regions and subjects for further study.

Second, it is suggestive to do repeated studies to identify factors that influence nursing professionalism.

Third, it is advisable to do a study to develop an intervention program that enhances the grit, communication competence, and psychological well-being of nursing students and to confirm its effectiveness.

6. ACKNOWLEDGEMENT

This paper was written as part of Konkuk University's research support program for its faculty on sabbatical leave in 2023.

Funding Details

This research received no external funding.

Authors' contributions

All authors contributed toward data analysis, drafting and revising the paper and agreed to be responsible for all the aspects of this work.

Declaration of Conflicts of Interests

Authors declare that they have no conflict of interest.

Availability of data and materials

Not Applicable

Use of Artificial Intelligence

Not applicable



Declarations

Authors declare that all works are original and this manuscript has not been published in any other journal.

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