Affecting Factors on Academic Resilience of Nursing Students

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Abstract

The purpose of this study was to investigate the ways of coping and the academic resilience of nursing students according to MBTI personality types, and to examine the factors affecting the academic resilience. The data were collected by self-reported questionnaire from 188 nursing students in G city from September 15 to October 17, 2014. Korean version of MBTI, ways of coping checklist, and academic resilience scale were used. The result of this study showed that Extroversions preference (E) respondents use ways of coping more frequently than Introversions preference (I) (t=-3.516, p=.001) and the Academic resilience was significantly higher in the Extroversions preference (E) than in the Introversions preference (I) (t=-2.902, p=.004) while the Judging types (J) have higher academic resilience than the Perceiving types (P) (t=-3.113, p=.002). The factors that most influenced academic resilience for the nursing students were satisfaction in major, academic records, judging type preference, and ways of coping, which explained about 45.2% of the total variances.

Keywords: Academic resilience, Nursing students, MBTI

1. Introduction

Nursing students experience heavy stress from an unfamiliar environment in clinical practice, responsibility for clients, fear or sense of helplessness from the lack of knowledge or clinical skills [2], apart from stress factors of general college students, including adaptation to new culture and human relations, preparation for the future, and independence from parents [3]. Under such stressful conditions, anyone attempts to cast off stress, which are behaviors that are called coping [4]. Since the way one resolves stress makes a difference in his or her physical, psychological, social stability, coping is more important than the stress itself [5]. Successful coping is intended to mediate the potentially deleterious effects of the experience of unpleasant emotional states [6]. Moreover, even under the same stress, the ways of coping are different for each individual, and these differences were explained to be due to the inherent preference tendencies of the individual rather than coincidental difference in individual behaviors [7]. By understanding the personality type of an individual, it is possible to predict the behavior according to the personality [7]. Personality of individual gives rise to tendencies to cope in unique ways in stressful situations [6].

Recently, academic resilience has been noted as a factor in ways of coping of university students; academic resilience refers to an ability, as an individual resource to protect psychological health from stressful condition, to follow the university norms with high academic achievement and high motivation and interest in university life even under stressful conditions [8]. Academic resilience enhances the resistance to academic burnout, such as the sense of frustration or failure due to stress at school, assists successful performance in college life, and thus is also referred to as stress resistance [9]. Academic resilience gives a positive impact on stress coping, and thus is worth researching along with coping mechanisms of nursing students. However, the researches about coping and

academic resilience of nursing students are insignificant and there is barely any research about academic resilience with respect to personality type. Thus, this study aims to examine the difference in ways of coping and academic resilience according to MBTI preference indices of nursing students, and therefore to provide the fundamental data to prepare a nursing intervention strategy for enhancing academic resilience of nursing students by investigating its influencing factors.

2. Research Method

2.1. Design of Research

This research is a descriptive survey research design that attempts to study the difference in the ways of coping and the academic resilience of nursing students according to MBTI personality types, and to examine the factors affecting the academic resilience.

2.2. Subjects and Data Collection

This research uses a structured questionnaire for 188 nursing students in a university at G city from 15 September to 17 October, 2014, to measure MBTI personality type, ways of coping, and academic resilience of nursing students.

2.3. Research Tool

To analyze the personality types of nursing students, the Korean Version of MBTI developed by Myers and Briggs and translated and standardized by Hyesook Shim and Jeongtaek Kim (1990) called MBTI GS type was used. To measure the ways of coping, a measure consisting of 24 items reconstituted by Jooyeong Park (1995) among 62 items selected and developed via factor analysis by Jeonghee Kim and Jangho Lee (1985) from The Way of Stress Coping Checklist developed by Folkman & Lazarus (1985) was used. In order to measure the academic resilience of nursing students, academic resilience scale developed by Nuri Kim (2008) was used.

2.3. Analysis Method

The data were analyzed using t-test, ANOVA, Scheffe's test and hierarchical regression analysis with SPSS 22.0 program.

3. Research Results and Discussion

3.1. MBTI Personality Types of the Subjects

The MBTI personality type analysis result of the subjects exhibited that on E-I index, which represents the direction of energy, there are 117 (62.2%) extroverts (E) and 71 (37.8%) introverts (I), and on S-N index, which represents the way information is collected, there are 146 (77.7%) Sensing types (S) and 42 (22.3%) iNtuition types (N). On T-F index, which represents the decision-making, there are 110 (58.5%) Thinking types (T) and 78 (41.5%) Feeling types (F), and on J-P index, which represents the life style, there are 106 (56.4%) Perceiving types and 82 (43.6%) Judging types. Among 16 MBTI personality types, 15 types except INFJ type are represented, and the most commonly distributed types are ESTP with 32 subjects (17.0%), ESTJ with 30 subjects (16.0%), ISTJ with 20 subjects (10.6%) in order Table 1.

Table 1. MBTI Preference and Personality Type

(N=188)

Preference	N (%)	Personality type			
		Type	N (%)	Type	N (%)
Extroversion	117(62.2)	ISTJ	20(10.6)	ESTJ	30(16.0)
Introversion	71(37.8)	ISFJ	9(4.8)	ESFJ	12(6.4)
Sensing	146(77.7)	INFJ	0(0)	ENFJ	6(3.2)
iNtuition	42(22.3)	INTJ	2(1.1)	ENTJ	3(1.6)
Thinking	110(58.5)	ISTP	15(8)	ESTP	32(17.0)
Feeling	78(41.5)	ISFP	15(8)	ESFP	13(6.9)
Judgment	82(43.6)	INFP	7(3.7)	ENFP	16(8.5)
Perception	106(56.4)	INTP	3(1.6)	ENTP	5(2.7)
Total	188(100)		188(100)		

3.2. Ways of Coping of the Subjects

The overall ways of coping was $2.51\pm.44$ out of 4 points scale, active coping was $2.50\pm.53$, passive coping was $2.53\pm.46$, and thus, nursing school students used passive coping more frequently than active coping. The most frequently used ways of coping by nursing students is 'Hope seeking thought' with $2.80\pm.52$ out of 4 points on average. In decreasing order, social support seeking ($2.53\pm.62$), problem-focused coping ($2.46\pm.60$), and emotional coping ($2.26\pm.55$) follow Table 2.

Table 2. Ways of Coping

(N=188)

Variable	M±SD	Min	Max	Range
Social support seeking	2.53±.62	1.00	4.00	
Problem focused coping	2.46±.60	1.00	5.00	
Active coping	2.50±.53	1.00	3.83	
Hope seeking thought	2.80±.52	1.33	4.00	1~4
Emotion focused coping	2.26±.55	1.00	4.00	
Passive coping	2.53±.46	1.17	4.00	
Ways of coping(total)	2.51±.44	1.13	3.88	

3.3. Academic Resilience of the Subjects

The academic resilience of the subjects is $3.66\pm.59$ out of 5 points on average, self-control was the highest with $3.89\pm.59$, friends' support was the second highest with $3.84\pm.75$, and positive attitude with $3.66\pm.78$, parents' support with $3.66\pm.81$, assignment responsibility with $3.62\pm.74$, and learning regulation with $3.50\pm.83$ followed Table 3.

Table 3. Academic Resilience of the Subjects

(N=188)

Variable	M±SD	Min	Max	Range
Self-control	3.89±.59	1.67	5.00	
Friends' supporting	3.84±.75	1.40	5.00	
Parents' supporting	3.66±.81	1.00	5.00	
Positive attitude	3.66±.78	1.00	5.00	1~5
assignment responsibility	3.62±.74	1.00	5.00	
Learning regulation	3.50±.83	1.00	5.00	
Academic resilience	3.66±.59	1.18	5.00	

3.4. Ways of Coping and Academic Resilience According to General Characteristics

The result of ways of coping and academic resilience according to general characteristics of subjects is as follows Table 4. The ways of coping was significantly different according to grade (F=3.888, *p*=.010), academic records (F=4.091, *p*=.003), dating experience (F=2.554, *p*=.011), and motivation of major (F=2.559, *p*=.029). Sophomores use coping more frequently than juniors. Students that have scores of more than 2.5 points compared to students who got less than 2.5 points are more likely to use coping. Students who have dating experiences are also more likely to use coping than students who did not. Academic resilience was significantly different according to residence form, academic records (F=4.007, *p*=.004), motivation of major (F=2.761, *p*=.020), and major satisfaction F=10.279, *p*<.001). Students with good grades have higher academic resilience. Students who are satisfied with their major showed higher academic resilience than those who are not.

Table 4. Ways of Coping and Academic Resilience According to General Characteristics

(N=188)

Characteristics	Classification	Ways of coping				Academic Resilience			
		M±SD	F or t	*p*	scheffé	M±SD	F or t	*p*	scheffé
Grade	Freshmen(a) Sophomore(b) Junior(c) Senior(d)	2.45±.46 2.67±.42 2.39±.36 2.54±.48	3.888	.010	b>c	3.69±.68 3.68±.51 3.62±.64 3.79±.51	.668	.573	
Gender	Male Female	2.51±.50 2.51±.52	-.042	.966		3.73±.77 3.68±.51	.430	.668	
religion	Christian Catholic Buddhism None	2.57±.41 2.54±.39 2.55±.29 2.48±.47	.592	.621		3.79±.62 3.79±.63 3.73±.41 3.62±.57	1.205	.309	
Registration form	parents' house Dormitory Live alone	2.47±.41 2.53±.44 2.52±.46	.277	.759		3.56±.48 3.74±.62 3.73±.61	1.561	.213	
Academic records	4.0 < (a) 3.5~4.0 (b) 3.0~3.5 (c) 2.5~3.0 (d) 2.5 >(e)	2.52±.31 2.53±.47 2.53±.41 2.56±.39 1.67±.42	4.091	.003	a,b,c,d >e	3.96±.47 3.75±.58 3.69±.52 3.45±.56 2.84±.51	4.007	.004	a,b,c >e
Dating experience	Yes No	2.55±.41 2.35±.52	2.554	.011		3.71±.57 3.61±.66	.982	.327	

		M±SD	t	p	M±SD	t	p	
Allowance a month	100,000 won>	2.31±.42			3.62±.54			
	100,000~200,000	2.49±.31			3.57±.46			
	200,000~300,000	2.51±.50	1.121	.348	3.72±.63	.366	.833	
	300,000~400,000	2.57±.43			3.72±.61			
	400,000 won<	2.48±.30			3.73±.47			
Motivation of major	Aptitude	2.66±.45			3.86±.47			
	To serve	2.50±.48			3.87±.50			
	High school records	2.42±.32			3.44±.55			
	Employment guarantee	2.41±.41	2.559	.029	3.61±.64	2.761	.020	
	Recommendation of others	2.59±.36			3.75±.65			
	others	2.41±.73			3.19±.31			
major Satisfaction	Very unsatisfied	2.53±.51			3.25±.54			
	Unsatisfied	2.45±.43			3.15±.79			
	Usually	2.49±.44	.470	.758	3.53±.48	10.279	<.001	a,b <d,e
	Satisfied	2.52±.50			3.86±.52			
	Very satisfied	2.63±.44			4.11±.60			

Table 5. Ways of Coping According to MBTI Preference

(N=188)

preference	N (%)	Problem focused coping M±SD	t	p	Social support seeking M±SD	t	p	Hope seeking thought M±SD	t	p	Emotion focused coping M±SD	t	p	Stress coping(total) M±SD	t	p
Extroversion	117(62.	2.52±.52	-1.807	.072	2.66±.59	-3.595	<.001	2.87±.54	-2.223	.027	2.35±.55	-2.984	.003	2.60±.42	-3.516	.001
Introversion	71(37.8	2.36±.70			2.33±.63			2.69±.49			2.11±.51			2.37±.44		
Sensing	146(77.	2.47±.61	-.280	.780	2.56±.64	-.764	.446	2.79±.53	.570	.569	2.25±.53	.425	.672	2.52±.45	-.64	.949
iNtuition	42(22.3	2.44±.55			2.47±.59			2.84±.50			2.29±.59			2.51±.40		
Thinking	110(58.	2.51±.63	-1.284	.201	2.51±.65	.772	.441	2.77±.54	.815	.416	2.23±.55	.965	.336	2.50±.46	.384	.702
Feeling	78(41.5	2.39±.54			2.58±.59			2.84±.51			2.31±.55			2.53±.40		
Judgment	82(43.6	2.53±.56	-1.448	.149	2.55±.63	-.183	.855	2.78±.50	.413	.680	2.19±.52	1.684	.094	2.51±.45	.090	.929
Perception	106(56.	2.40±.62			2.53±.62			2.81±.54			2.32±.56			2.52±.43		

3.5. Ways of Coping According to MBTI Preference

Ways of coping according to MBTI preference indexes of the subjects demonstrated that extroverts (E) used overall ways of coping (t=-3.516, p=.001) and

its subcategories, such as seeking social support (t=-3.595, *p*<.001), hopeful thinking (t=-2.223, *p*=.027), and emotional coping (t=-2.984, *p*=.003) more frequently Table 5.

3.6. Academic Resilience according to MBTI Preference Indexes

Academic resilience according to MBTI preference indexes of the subjects exhibited significant differences in E-I index and J-P index. The Extroverts (E) showed a higher academic resilience than the Introverts (I) (t=-2.902, p=.004), and the Judging types (J) showed a higher academic resilience than the Perceiving types (P) (t=-3.113, p=.002) Table 6.

Table 6. Academic Resilience According to MBTI Preference Indexes

(N=188)

Preference	N (%)	Academic resilience		
		M±SD	t	*p*
Extroversion	117(62.2)	3.80±.52	-2.902	.004
Introversion	71(37.8)	3.55±.65		
Sensing	146(77.7)	3.74±.59	-1.512	.132
iNtuition	42(22.3)	3.58±.55		
Thinking	110(58.5)	3.76±.58	-1.479	.141
Feeling	78(41.5)	3.63±.59		
Judgment	82(43.6)	3.85±.59	-3.113	.002
Perception	106(56.4)	3.59±.56		

3.7. Factors Affecting Academic Resilience

The hierarchical regression analysis result with academic resilience as the dependent variable and initial motivation of choosing nursing science major, academic records, satisfaction of nursing science major, J-P preference index, and ways of coping among general characteristics of the subjects as independent variables explained academic resilience with 45.2% of the total variance Table 7.

Table 7. Factors Affecting Academic Resilience

model		B	SE	β	t	*p*	R^2	adj R^2	F (*p*)
1	(confidence)	2.976	.168		17.719	<.001	.248	.227	11.760 (<.001)
	Professional motives	.013	.104	.011	.122	.903			
	Academic record	.335	.170	.175	1.972	.051			
	Major satisfaction	.663	.147	.411	4.523	<.001			
2	(confidence)	2.733	.188		14.568	.000	.382	.340	2.145 (<.001)
	Professional motives	-.051	.098	-.042	-.519	.605			
	Academic record	.344	.162	.180	2.123	.036			
	Major satisfaction	.517	.145	.320	3.566	.001			
	EIP	.258	.102	.201	2.538	.013			
	SNP	.060	.124	.041	.480	.632			
	TFP	-.041	.103	-.034	-.396	.693			
	JPP	.377	.100	.317	3.784	<.001			
3	(confidence)	1.640	.289		5.677	<.001	.492	.452	12.336 (<.001)
	Professional motives	-.110	.090	-.092	-1.221	.225			
	Academic record	.304	.148	.159	2.054	.042			
	Major satisfaction	.533	.132	.330	4.037	.000			

EIP	.151	.095	.118	1.589	.115
SNP	.007	.114	.005	.062	.950
TFP	-.008	.094	-.007	-.089	.929
JPP	.324	.092	.272	3.537	.001
Ways of coping	.494	.105	.352	4.691	<.001

EIP: Extroversion Introversion Preference, SNP: Sensing iNtuition Preference,
TFP: Thinking Feeling Preference, JPP: Judgment Perception Preference

4. Conclusion and Discussion

This research attempted to clarify the difference in ways of coping and academic resilience according to MBTI personality types of nursing students, and to examine factors that affect academic resilience. Among MBTI preference indexes of the subjects, there were 62.2% Extroverts and 37.8% Introverts and there were 77.7% Sensing types and 22.3% iNtuition types. There were 58.5% Thinking types and 41.5% Feeling types, and there were 56.4% Perceiving types and 43.6% Judging types. Moreover, among 16 MBTI personality types, 15 types except INFJ type were represented, and the most commonly distributed types were ESTP (17.0%), ESTJ (16.0%), ISTJ (10.6%) in decreasing order. This is similar to the result of Nam's research (2008) that demonstrated the preference indexes of nursing students were 51.8% Extroverts, 82.2% Sensing type, 62.4% Thinking type, 53.8% Perceiving type. Among nursing students, many were active and outgoing, perceived realistic and concrete information via senses, behaved accordingly to the situation, and thus, the most common types were ESTP, the combination of Extroverts, Sensing, Thinking, and Perceiving. ESTP types collect information based on rich experiences and make a quick estimate of the situation, and thus, are able to react to urgent clinical situations. However, they are also considered to be indifferent to the emotions of others, and thus, an educational method is necessary for them to pay attention to others and manage their time and take full responsibility.

Nursing students most frequently use hopeful thinking as a way of coping, and academic resilience is somewhat high with the average of 3.66 out of 5 points scale. On ways of coping according to MBTI preference indexes of the subjects, the Extroverts used social support seeking, hopeful thinking, and emotional coping more frequently than the Introverts. Since the Extroverts gain energy from the external world, it is inferred that they frequently cope with stress by social support seeking. On the academic resilience according to MBTI preference indexes of the subjects, the Extroverts and Judging types displayed higher academic resilience than the Introverts and Perceiving types. Since the Extroverts (E) are sociable, active, passionate, and able to overcome a given condition, and the Judging types plan ahead, live in an organized manner, are objective-oriented, and are capable of overcoming difficulties and reaching their goals, both types are thus considered to have high academic resilience. Through this, it is confirmed that the choice of ways of coping and academic resilience are related to E and I among MBTI 4 personality indexes. The factors that affect the academic resilience of nursing students are satisfaction of their major, academic records, Judging type preference, and ways of coping, and they explain academic resilience with 45.2% of the total variance. Therefore, nursing interventions are necessary to improve academic resilience that provides high motivation and interest in college life by understanding the students' personality types and promoting appropriate ways of coping.

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