

Relationship between Social Support Perceived by Nursing Students and Stress Coping: Focusing on the Moderating Effect of Major Satisfaction

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Abstract: Background/Objectives: The purpose of this study was to investigate the effect of major satisfaction on the social support of nursing students and stress coping. **Methods/Statistical analysis:** 135 male and female nursing college students using convenience sampling. The tools used were social support tool, modified and supplemented by Park and K-CSI (Korean Version of Stress Coping Strategy) developed by Amirkhan and Ha Hae Sook's major satisfaction tool. Data were analyzed using Pearson coefficient correlation and multiple regression analysis using SPSS23. **Findings:** Social support and stress coping showed a somewhat higher correlation coefficient of .519 and the higher the social support, the higher the stress coping ability. Also, stress coping and majors' satisfaction were also correlated with a somewhat higher correlation coefficient of .576. In the relationship between stressors coping with social support, major satisfaction was found to have a moderating effect. In other words, R² is increasing at 51.9% in Model 1, 53.1% in Model 2, and 56.6% in Model 3. The significance level of the third stage was .007 ($p < .01$), indicating that the major satisfaction was moderating in the relationship between perceived social support and stress coping by the nursing college students. **Improvements/Applications:** Therefore, to improve the stress coping ability of nursing college students, it is necessary to prepare a plan to improve the social support and improve the satisfaction of the majors.

Keywords: Social Support, Stress Coping, Major Satisfaction, Nursing Students, Moderating Effect

I. INTRODUCTION

College students experience a lot of stress from the start of their admission to interpersonal relationships, sexuality management, and job preparation. In particular, nursing college students are faced with more difficulties in stress management and adaptation to college life because of the variety of teaching methods centering on program outcomes, preparation of national examinations, and many practical subjects are held in human being in various clinic sites such as hospitals[1], [2]. Among others, adaptation stress to a large number of academic and practical areas are exposed to more stress factors than other students[3].

If the stress is not properly controlled, it can lead to psychological disturbances such as tension, anxiety, and depression[4] and it is important to cope with stress properly because it is an impediment to learning and nursing performance, and has a negative effect on the adaptation to

college life related to decrease of learning motivation and grades[5]. In addition, the coping style to stress in college life is very important because it can affect the physical and mental health due to the stress from adulthood to the old age[6].

According to previous studies, social support is a factor that influences stress coping and coping strategies and it is reported to actively cope with the problem as you perceive that you have a lot of social support from meaningful others [7]. In addition, the higher the degree of perceived social support, the greater the psychological well-being and it is reported that the pain caused by stress is reduced, and the severity of recognizing stress is also reduced[8]. In addition, social support for nursing college students is highly correlated with college life adaptability, and aggressive stress coping enhances the adaptability of college life[9] and the effects of social support and stress coping need to be examined.

On the other hand, the degree of satisfaction with the major means the degree of satisfaction with the major, it is a process of judging the evaluation of the current department by comparing with the expectation of career or occupation set by the individual and has a beneficial correlation with career search behavior[10]. College students with a high degree of satisfaction with a major has a positive attitude toward their careers after graduation[11], the level of meaning of life was increased and it was influenced to adapt to positive university life[12]. In addition, the higher the satisfaction level of the major, the greater the effort to participate in the lesson or to act more actively in the school life and the curriculum to lower the academic stress and achieve the learning goal[13].

Therefore, the purpose of this study is to investigate the effect of major satisfaction on nursing students' social support and stress coping. The findings are vital in the broader context for enhancing adaptation college life.

II. RESEARCH PURPOSE AND HYPOTHESIS

The purpose of this study was to examine the effect of individual's moderating effect of major satisfaction on the relationship between social support and stress coping among nursing college students. The moderating effect is called the buffering or promoting effect of the independent variable on the dependent variable when the moderating variable is added and the hypothesis of this study is as follows.

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In other words, the research hypothesis would strengthen the relationship between social support and stress coping by promoting major satisfaction in social support and coping with stress. In examining the effect of major satisfaction on the relationship between stress coping by sub-concepts of social support and the hypothesis of a specific study is as follows.

Hypothesis 1. The relationship between parental support and stress coping, as perceived by the nursing students, would have a moderating effect on major satisfaction.

Hypothesis 2. In terms of the relationship between the support of professors as perceived by the nursing students and the coping of stress, major satisfaction would have a moderating effect.

Hypothesis 3. Nursing students' perceived satisfaction with their friends' support and stress coping would have a moderating effect.

The conceptual framework of this study is shown in Figure 1.

III. RESEARCH METHOD

3.1. Research Design and Analysis

This study is a descriptive-correlation study conducted to 135 nursing students. They understood the purpose and significance of the study, and agreed to the agreement. Upon proper explanation, they voluntarily participated in the study. A structured questionnaire was used and the reliability of the tool was calculated as the internal consistency Cronbach's alpha values. Then, it was distributed to respondents and upon retrieval the questionnaire was checked for completeness and accuracy of the responses.

Using the SPSS 23 program, the general characteristics of the subjects were analyzed by frequency, percentage, mean and standard deviation. The reliability of the tool was calculated as the internal consistency Cronbach's alpha value. Correlation between variables was calculated by Pearson coefficient correlation and multiple regression analysis was used for moderating effect.

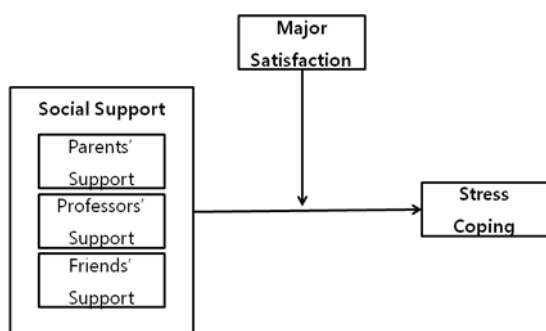


Figure 1. The Moderating Effect of Major Satisfaction between Social Support and Stress Coping

There are three levels of testing for moderating effect in the relationship between independent variables and dependent variables. In the first step, regression analysis is performed between independent variables (social support) and dependent variables (stress coping). In the second stage, regression analysis is performed between social support (independent variable), major satisfaction (control variable) and stress coping (dependent variable). In the last three steps, when an independent variable, a moderating variable, and an interaction term (independent variable X control variable) are

added to the regression equation, if the explanatory power (R^2) increases significantly under the significance level, it is interpreted as having a moderating effect. In other words, a regression analysis between social support, major satisfaction, interaction term (social support x major satisfaction) and stress coping interprets that there is the effect of a moderating as a significant increase in explanatory power (R^2).

3.2. Research Tools

3.2.1. Social Support

Social support includes all positive resources provided by others and it means positive help and assistance that can be obtained from physical, informative, evaluative help and interpersonal relationships received from people around the family, teachers, friends, neighbors, etc. [14]. Social support tool was developed by Park Jee-won (1985) [14] and modified by Moon Jae-young (2018) [15], and validated. A total of 12-items consisted of three subscales: parent support, teacher support, and friendship support. It is composed of 5-point Likert scale from 'not at all' to 'very agree' 5 points. The possible score is 12-60, which means that the higher the score, the higher the degree of social support. In this study, Cronbach's α was .94 ~ .97.

3.2.2. Stress Coping

Stress coping is all cognitive and behavioral effort to address the threats that threaten individual capacity, as a key mechanism to mediate stress events and adaptation, it refers to behavior that appears relatively consistently according to individual tendency in various stress situations [16]. In this study, the Korean version of the Stress Coping Strategies Test (K-CSI) that developed by Amirkhan (1990) [17] and verified the validity by Shin & Kim (2002) [16] was used to test the stress coping. The tool is made up of 33-items, divided into the following: 11-items for 'seeking social support', 11 items of 'problem solving', and 11 items of 'avoidance', and total 33 items. Recalling one of the stress events that had during the last six months and responding to the extent to which they have used the response they actually took, the three items of "I did not use it at all" from 1 point to "I used a lot" and the 3-point Likert scale, the 11 items of 'avoidance' were reversed to negative items, and the higher the score, the higher the level of stress coping. Cronbach's α was .84 in the study of Shin & Kim (2002), and in this study, it was .82.

3.2.2. Major Satisfaction

The degree of satisfaction with the major refers to the degree of satisfaction with the major [10]. The major satisfaction was measured by using the major satisfaction tool of 18 items developed by Ha (2000) [18] and modified by Lee (2004) [19]. It consisted of 18-items divided into subscales: 6-items of 'general satisfaction', 6-items of 'awareness satisfaction', 3-items of 'satisfaction of the curriculum', and 3-items of 'satisfaction of the relationship between the professor and the student'. It is measured on a 5 point scale as 'very agree' with 5 points and 'not at all' as 1 point. Each item is measured from a minimum of 1 point to a maximum of 5 points, and the higher the score, the higher the satisfaction of the major. Cronbach's alpha was .90 in the study of Lee (2004) and Cronbach's alpha was .90 in this study.

IV. RESULT

4.1. General Characteristics of the Subject

The general characteristics of the subjects are shown in Table 1. There were 57 male students (42.2%) and 78 female students (57.8%). The average age was 21.04 years, 26 (26.7%) in the first year, 78 (57.8%) in the second year and 21 (15.6%) in the third year. 57 (42.2%) were the most selected choice considering the aptitude for the department selection

motive and 43 (31.9%) were selected considering the employment rate, 20 (14.8%) were advised by the family, 6 (4.4%) were recommended by teachers, seniors and friends, and 3(2.2%) selected the department by considering their score. 100 students (74.1%) were satisfied with major majors, 15 students (11.1%) were very satisfied, 19 students (14.1%) were dissatisfied and one student (0.7%) was very dissatisfied.

Table 1. The Composition of Measurement Tools for Each Variable

Variables	Category	n	%	M(SD)
Gender	Male	57	42.2	
	Female	78	57.8	
Age(Years)				21.04(2.558)
Grade	Freshman	36	26.7	
	Second	78	57.8	
	Senior	21	15.6	
Reason to Choose Department	Consideration of Aptitude	57	42.2	
	Consideration of Employment Rate	43	31.9	
	Consideration Score	3	2.2	
	Recommendation by Family	20	14.8	
	Recommendation by Teachers, Seniors and Friends	6	4.4	
	Etc.	6	4.4	
Major Satisfaction	Very Dissatisfied	1	0.7	
	Dissatisfied	19	14.1	
	Satisfied	100	74.1	
	Very Satisfied	15	11.1	

4.2. Correlation between Subject's Social Support, Major Satisfaction, and Stress Coping

The correlation between social support of participants, major satisfaction, coping of the respondents is shown in Table 2. The correlation between all the variables showed a significant relationship at 0.01 level. The correlation

coefficient between stress coping and social support showed a somewhat higher correlation with $r=.519$, Social support and major satisfaction were found to have a somewhat higher correlation with $r=.576$ and Stress coping and majors' satisfaction showed a correlation of $.391$.

Table 2. The Composition of Measurement Tools for Each Variable

Unit	Mean	SD	Correlation among Between Configuration Concepts		
			1	2	3
1. Stress Coping	70.21	7.24	1.00		
2. Social Support	44.98	11.50	.519**	1.00	
3. Major Satisfaction	69.56	12	.391**	.576**	1.00

4.3 Moderating Effect of Major Satisfaction in Social Support and Stress Coping

Moderating Effects of Major Satisfaction in social support and coping relationships are as Table 3

Table 3. Moderating Effect of Major Satisfaction in Social Support and Stress Coping

Model	R	R ²	Adjusted R ²	SE of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
1	.519	.269	.263	6.21141	.269	48.920	1	133	.000
2	.531	.281	.271	6.18109	.013	2.308	1	132	.131
3	.566	.320	.304	6.03690	.038	7.381	1	131	.007

As a result of testing the hypothesis that majors' satisfaction would have a moderating effect in the relationship between perceived social support and stress coping, $n = 51.9\%$ for model 1, 53.1% for model 2, 56.6% for model 3, as well as the increasing number of students. The significance level of the third stage was $.007$ ($p < .01$), indicating that major satisfaction has moderating effect on the relationship between

perceived social support and stress coping by nursing college students

4.4 Moderating Effect of Major Satisfaction in Parents' Support and Stress Coping

More specifically, we examined whether parents' support, professor's support, friend's support and stress



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coping relationship, which are sub - factors of social support, relationships are as Table 4. have a moderating effect on major satisfaction. Moderating effects of major satisfaction in parents' support and coping

Table 4. Moderating Effect of Major Satisfaction in Parents' Support and Stress Coping

Model	R	R ²	Adjusted R ²	SE of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
1	.404	.163	.157	6.64683	.163	25.866	1	133	.000
2	.478	.228	.217	6.40614	.065	11.182	1	132	.001
3	.523	.274	.257	6.23874	.045	8.179	1	131	.005

As a result of examining the hypothesis that majors 'satisfaction would have a moderating effect in the relationship between parent support and stress coping among nursing students' perceived social support, R2 was 40.4% for model 1, 47.8% for model 2, 3 increased to 52.3%. The significance of the third step is .005 (p <.01), which can be interpreted as having a moderating effect. In other words, the major satisfaction of nursing college students showed a moderating effect on perceived parental support and stress coping.

4.5 Moderating Effect of Major Satisfaction in Professors' Support and Stress Coping

Moderating Effects of Major Satisfaction in professors' support and coping relationships are presented in Table 5. As a result of examining the hypothesis that majors' satisfaction would be have a moderating effect in the relationship between the support of the professor and the coping of the stress among the social support perceived by nursing college students, R2 was 43.6% for Model 1, 46.5% for Model 2, 3 was increased to 51.7%.The significance of the third stage is .003 (p <.01), which could be interpreted as having a moderating effect. In other words, the major satisfaction of nursing college students was found to be moderating in the relationship of perceived professors' support and stress coping

Table5. Moderating Effect of Major Satisfaction in Professors' Support and Stress Coping

Model	R	R ²	Adjusted R ²	SE of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
1	.436	.190	.184	6.53867	.190	31.166	1	133	.000
2	.465	.216	.204	6.45609	.026	4.424	1	132	.037
3	.517	.268	.251	6.26354	.052	9.240	1	131	.003

4.6 Moderating Effect of Major Satisfaction in Professors' Support and Stress Coping

Moderating Effects of Major Satisfaction in professors' support and coping relationships are presented in Table 6.As a result of testing the hypothesis that majors' satisfaction with social support of nursing students would affect the

relationship between support of friends and coping of stress, R2 was 51.9% for model 1, 53.1% for model 2, 3 increased to 56.6%. The significance of the third stage is .007 (p <.01), which could be interpreted as having a moderating effect. That is, the major satisfaction of nursing college students showed a moderating effect in the relationship of perceived friends' support and stress coping

Table6. Moderating Effect of Major Satisfaction in Friends' Support and Stress Coping

Model	R	R ²	Adjusted R ²	SE of the Estimate	Change Statistics				
					R ² Change	F Change	df1	df2	Sig. F Change
1	.467	.218	.212	6.42447	.218	37.054	1	133	.000
2	.503	.253	.242	6.30129	.035	6.251	1	132	.014
3	.557	.310	.294	6.08098	.057	10.738	1	131	.001

college students, where social support is a representative element of the environmental aspect that helps solve the psychological and social problems of college students and the better the social support, the better the adaptation of college life by improving the ability to deal with stress through academic achievement, interpersonal relationship through positive family identity formation and support. In other words, social support weakens the negative effects of psychological and physiological aspects that an individual experiences in a stress situation and increases the adaptability of the individual to the environment[21]. This can be seen as a result of enhancing adaptation to university life and increasing adaptation and satisfaction of the nursing students.

V. DISCUSSION

The purpose of this study was to examine the correlation between social support and stress coping as perceived by nursing students and to examine the moderating effect of major satisfaction in the relation between social support on stress coping. The main results are discussed below.

First, social support and stress coping showed a somewhat higher correlation coefficient of .519, and higher social support showed higher stress coping ability. Also, stress coping and majors' satisfaction also showed a somewhat higher correlation coefficient of .576. The above results are consistent with the study of Frenlander (2007)[20]for



Second, the relationship between stressors coping with sub-factors (parents, professors, and friends' support) of social support showed that all of them had a moderating effect. Dissatisfaction with the major field is an obstacle to the formation of the right beliefs and attitudes in order for the nursing college students to perform effectively when they become nurses in the future and this leads to confusion and negative views on their profession, which in turn hinders the formation of a positive professional intuition [22]. A positive professional intuition allows you to better perform career preparation behaviors [23] and this leads to active problem solving through more aggressive stress coping strategies. Therefore, there is a need for continued interest in ways to increase nursing students' satisfaction with their major.

VI. CONCLUSION

This study suggests that the higher the social support perceived by nursing students, the more actively they cope with stress and satisfaction with the major was positively affected by social support and positive stress coping. In particular, students with a high degree of satisfaction in the major field would be able to participate in class lessons, act more actively in school life and curriculum, help build positive professional intuition, and implement career preparation more efficiently. Therefore, there is a need for continuing interest in ways to improve social support and major satisfaction so that students can adapt well to successful college and postgraduate life.

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