

CONVERGENT FACTORS RELATED TO THE HOPELESSNESS OF SOME COLLEGE STUDENTS MAJORING IN HEALTH SCIENCE

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Abstract— We studied the convergence relationship of factors related to hopelessness among some college students majoring in health science. The investigation was performed during the period from October 1, 2018 to October 31, 2018 targeting randomly-selected 214 students from a college located in J area. The hopelessness of respondents according to general characteristics turned out to be significantly higher in following groups: low age, unsatisfactory family life, poor school record, bad relationships with friends, unsatisfactory school life, and poor subjective health status. The score of hopelessness are significantly higher in severe academic burnout group, severe anxiety group, and severe psychosocial stress group. And this indicates that the efforts to decrease academic burnout, anxiety, and psychosocial stress are required to decrease hopelessness among college students majoring in health science. These results can be used to guide college life counseling to lower hopelessness among college students majoring in health science.

Keywords— Convergence, College Student, Hopelessness, Academic Burnout, Anxiety, Psychosocial Stress

1. INTRODUCTION

Hopelessness is the thought that one cannot change the negative future, and when it is prolonged, it appears to be an important psychological determinant that can lead to mental and physical disabilities[1,2]. Hopelessness is a predictor of the occurrence of a serious mental problem, and as hopelessness increases, the will to solve difficult problems which individuals are facing will decrease, and it will give rise to negative emotions such as cynicism and pessimism, eventually leading to a lower quality of life[3]. For that reason, it is necessary to interact with the environment surrounding individuals, and put efforts on lowering the level of hopelessness so that one may develop social adaptability to lead a healthy life. College students majoring in health science are under increasing pressure with regard to their academic and career path to acquire professional qualifications and secure job competitiveness due to innovative development in healthcare, and increased demand for high-quality job competency in hospitals[4]. In line with the trend of internationalization of medical services, support and provision of more advanced practical English education to improve the ability to communication in foreign languages is also increasing the academic burden of college students in the health sector[5]. Excessive academic stress due to on-the-job training in hospitals and preparation for national exams

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can lead to mental problems such as depression, anxiety and valuelessness. However, there is a lack of voluntary efforts to overcome them, which can disrupt social life after graduation as well as in school, and there is a lack of social interest in them[6].

In previous studies, the hopelessness of college students majoring in health science was reported to be related to emotional problems such as depression, helplessness and valuelessness[7-9], and the association between academic burnout and anxiety of college students was analyzed[10-12], and college students are said to experience psychosocial stress, i.e. being exposed to physical and mental pressure, in the absence of a response suitable for unclear objects and threatening situations[4, 7, 10]. The association between the psychosocial stress and hopelessness of youths was suggested[2], and it was suggested that college students' hopelessness was linked to psychosocial stress and to serious emotional and psychological problems[1, 3, 13]. Previous studies suggest that individual factors, such as academic burnout, anxiety and psychosocial stress, are related to hopelessness, but there are few studies that analyzed the convergent relationship among these factors in college students' hopelessness.

Therefore, the purpose of this study is to identify the convergent relationship among academic burnout, anxiety, psychosocial stress and hopelessness of college students majoring in health science, and to provide basic data that can be used for college life and academic counseling and guidance to reduce the hopelessness of college students majoring in health science who are faced with such problems as anxiety and psychosocial stress due to increased academic burden and increased demands for employment competitiveness.

2. STUDY METHOD

The G*Power 3.1 program [14] was used to calculate the appropriate number of samples for analyzing factors related to hopelessness among CSHAE. In this program, significant levels of .05, effect size .15 and power .95 for t-test, ANOVA, and multi-regression analyses were calculated as critical F 1.68, and the minimum required number of samples was 208. The survey targets 300 people who exceed the appropriate number of samples calculated in case of poor response. At the randomly selected college located in J area, 300 randomly selected CSHAE were surveyed. The 241 questionnaires were retrieved(80.3%) and the data were analyzed by 214 people, with the exception of the 27 poorly responded questionnaires. The survey period was from Oct. 1, 2018 to Oct. 31, 2018.

The general characteristics were gender, age(yrs), religious status, family life satisfaction, school record, relationships with friends, school life satisfaction, drinking status, smoking status, regular eating, regular exercise, daily average sleep time, hobbies and leisure activities, and subjective health status.

As shown in Table I, the scale for measuring academic burnout was based on the MBI-SS(Maslach Burnout Inventory-Student Survey) of Schaufeli *et al.*, [15], and the Korean version 15 items[16] that were adapted, modified and validated were used. This scale consists of five items of exhaustion, four items of cynicism and six items of inefficacy. The score is from 15 to 75, and the higher the score, the higher the academic burnout. The Cronbach's α value, which is the internal reliability, was .902. The scale for measuring anxiety was based on Beck *et al.*, [17]'s Beck Anxiety Inventory (BAI), which was translated and validated using 21 questions[18, 19]. The score is from 0 to 63, and the higher the score, the higher the anxiety. The Cronbach's α value, which is the internal reliability, was .922. The psychosocial stress was based on GHQ(General Health Questionnaire)[20] and the PWI-SF(Psychosocial Well-being Index Short Form) was used as a scale that was reconstructed to fit the domestic situation and proved its validity. The score is from 0 to 54, and the higher the score, the higher the psychosocial stress. The total PWI score was divided into positive wellbeing group with 8 points or less, moderate distress group with 9 points or 26 points, and severe distress group with 27 points or more[21]. The hopelessness was compared in ANOVA. The Cronbach's α value, which is

the internal reliability, was .907. The hopelessness was measured by using 20 items[22] of the hopelessness scale which was reconstructed based on the BHOP(Beck Hopeness Scale)[23]. The score is from 0 to 20, and the higher the score, the higher the hopelessness. The Cronbach's α value, which is the internal reliability, was .884.

Table I. The Number of Questions, Range of Score, Cronbach' α and Explanation of Used Scale

Scale Sub-domains	Number of questions	Range of score	Cronbach' α	Explanation
Academic burnout	15	15-75	.902	
Exhaustion	5		.899	MBI-SS(Maslach Burnout Inventory-Student Survey)[15,16]
Cynicism	4		.920	
Inefficacy	6		.915	
Anxiety	21	0-63	.922	Becky Anxiety Inventory (BAI)[17,18,19]
Psychosocial stress	18	0-54	.907	PWI-SF(Psychosocial Well-being Index Short Form)[20,21]
Hopelessness	20	0-20	.884	BHOP(Beck Hopeness Scale)[22,23]

3. STUDY RESULT

As shown in Table II, the average hopelessness of the subjects was 5.13 ± 4.75 from 0 to 20 points, hopelessness by general characteristics was significantly higher for those with low age, unsatisfactory family life, poor school record, bad relationships with friends, unsatisfactory school life, and poor subjective health status. Other than that, gender, religion, drinking, smoking, regular meals, regular exercise, daily average sleep time, hobbies and leisure activities did not show significant difference with hopelessness.

Table II. Hopelessness According to General Characteristics

Variables	N(%)	Hopelessness(BHOP)
		Mean \pm SD
Age(yrs)		
<21	134(62.6)	5.77 \pm 4.79
21 \leq	80(37.4)	4.05 \pm 4.52
t(p-value)		2.593(.010)
Family life satisfaction		
Satisfied	206(96.3)	5.00 \pm 4.65
Dissatisfied	8(3.7)	8.38 \pm 6.48
t(p-value)		-1.984(.049)
School record		
Good	44(20.6)	3.32 \pm 3.90
Medium	142(66.4)	5.25 \pm 4.71
Bad	28(13.1)	7.36 \pm 5.24
F(p-value)		6.649(.002)
Relationship with the friend		
Good	201(93.9)	4.94 \pm 4.61
Bad	13(6.1)	8.90 \pm 6.24
t(p-value)		-2.606(.010)
School life satisfaction		
Satisfied	187(87.4)	4.60 \pm 4.49
Dissatisfied	27(12.6)	8.78 \pm 4.99
t(p-value)		-4.456(<.001)
Subjective health status		
Good	153(71.5)	4.23 \pm 4.30
Bad	61(28.5)	7.38 \pm 5.11
t(p-value)		-4.574(<.001)
Total	214(100.0)	5.13 \pm 4.75

Table III compared the hopelessness of the subjects according to their academic burnout, anxiety and psychosocial stress. The group with high academic burnout had significantly higher hopelessness, and the group with high exhaustion, cynicism and inefficacy in the sub-areas had significantly higher scores. The group with high anxiety had significantly higher hopelessness, and the group with high psychosocial stress had significantly higher hopelessness.

Table III. Hopelessness According to Academic Burnout, Anxiety and Psychosocial Stress

Variables(Total score)	N(%)	Hopelessness(BHOP)
		Mean±SD
Total Academic burnout(MBI-SS)		
Low group [§]	104(48.6)	3.09±3.54
High group	110(51.4)	7.06±4.96
t(p-value)		-6.766(<.001)
Exhaustion		
Low group	92(43.0)	3.72±4.25
High group	122(57.0)	6.19±4.85
t(p-value)		-3.888(<.001)
Cynicism		
Low group	98(45.8)	3.03±3.65
High group	116(54.2)	6.90±4.87
t(p-value)		-6.472(<.001)
Inefficacy		
Low group	107(50.0)	3.32±3.73
High group	107(50.0)	6.93±4.99
t(p-value)		-5.971(<.001)
Anxiety(BAI)		
Normal	195(91.1)	4.79±4.55
Mild anxiety	8(3.7)	7.50±5.16
Moderate anxiety	6(2.8)	6.17±5.46
Severe anxiety	5(2.3)	13.20±4.14
F(p-value)		6.340(<.001)
Psychosocial stress(PWI-SF)[¶]		
Positive wellbeing	22(10.3)	1.55±3.19
Moderate distress	118(55.1)	4.22±3.90
Severe distress	74(34.6)	7.62±5.21
F(p-value)		22.246(<.001)
Total	214(100.0)	5.13±4.75

[§]: Low and high group classified by the median score of each variable.

^{||}: Anxiety were divided into four groups, normal(<22 of BAI score), mild anxiety(22 ≤ BAI score ≤26), moderate anxiety(27 ≤ BAI score ≤31) and severe anxiety(32 ≤ of BAI score).

[¶]: Psychosocial stress were divided into three groups, positive wellbeing(<9 of PWI score), moderate distress(9 ≤ PWI score ≤26) and severe distress(27 ≤ of PWI score).

4. CONSIDERATION

The average score of the hopelessness of the college students majoring in health science was 5.13 ± 4.75 from 0 to 20 points, which was higher than the average score of 4.57 ± 4.58 of the middle school students[2], suggesting that the academic burnout, anxiety and psychosocial stress of the health college students increased the hopelessness and that the hopelessness of the college students majoring in health science was a desperate problem in psychological and emotional mental health. In general characteristics, the college students majoring in health science' hopelessness showed significant differences in age, family life satisfaction, school record, relationship with friends, school life satisfaction and subjective health status, but there was no difference in gender, religion, drinking, smoking, regular eating, regular exercise, daily average sleep time, hobby and leisure activities. The results of the previous studies[7] that the female health college students had emotional difficulties in unsatisfactory family life group, poor school record group, bad relationship with friends group, unsatisfactory school life group, and poor subjective health status group were similar to those of college students majoring in health science. The analysis [10] that the gap between ideal and reality of college students is confirmed in age, family life satisfaction, school record, relationship with friends, school life satisfaction and subjective health status is similar in the hopelessness of college students majoring in health science. The point that women's depression level is high in gender was not confirmed in the hopelessness, which means that women are highly sensitive to the difference between reality and ideal, but attitude and will to change that they see their future negatively are not related to gender. When the result of the high hopelessness of the group with low age or low satisfaction with family life was seen, it was necessary to support and mediate resources to manage hopelessness considering age and home environment. The group with low school record, relationship with friends, and school life satisfaction showed high hopelessness, so the hopelessness of college students majoring in health science was considered to be effective in professional intervention by educational counseling guidance of college. Health is closely related to hopelessness of college students majoring in health science, so it was shown that the joint efforts of home and college will be effective in the health management to lower hopelessness. Therefore, it was estimated that the development of counseling materials and active intervention to lower the hopelessness through the management of age, family life, school record, friendship, school life and health care of college students majoring in health science are required.

The results of this survey were similar to those of previous studies[10, 11, 12] on the relationship between academic burnout and hopelessness. The development of the health care field, the increase in job skills, the burden on academic and career[4], the strengthening of foreign language competence[5], the increasing academic burden[7] of the health-related curriculum, the cynicism and inefficacy of academic performance and the exhaustion of academic maladjustment seemed to be related to the hopelessness that weakens the will to change the future. The point that the higher anxiety, the higher the hopelessness[4, 10], was similar in the analysis of this survey, and the mental anxiety caused by inappropriate response to unclear objects and situations was linked to the hopelessness level. The lack of elastic defense against the dissonance of the surrounding environment caused psychological and physical symptoms, which were judged to increase the hopelessness of college students majoring in health science. The correlation between psychosocial stress and hopelessness was confirmed in this study. Psychosocial stress caused by physical and mental pressure of college students majoring in health science was considered to be linked to hopelessness. It was estimated that the academic burden and anxiety due to the development and changing employment conditions of healthcare technology increased psychosocial stress and increased the hopelessness of college students majoring in health science.

This study is based on a cross-sectional small sample of some college students majoring in health science at a specific point of time, so there is a limit to extend the results to the whole college students majoring in health science. Also, the measurements of academic burnout, anxiety, psychosocial stress and hopelessness used in this survey analysis were conducted by the self-based method of the subjects, so it is not possible to exclude the risk of response bias. However, this study has significance in that it combined individual factors related to the hopelessness of college students majoring in health science to examine the relationship between academic burnout, anxiety, psychosocial stress and hopelessness.

5. CONCLUSION

This study analyzed the relationship among the academic burnout, anxiety, psychosocial stress and hopelessness of some college students majoring in health science. The survey was conducted on 214 college students majoring in health science randomly selected from a college in J area from October 1, 2018 to October 31, 2018.

College students' hopelessness was significantly higher in the groups of lower ages, the groups dissatisfied with family life, the groups with poor school records, the groups with poor relationship with friends, the groups dissatisfied with school life, and the groups with poor subjective health. In the t-test and ANOVA, college students majoring in health science showed higher hopelessness when they had higher academic burnout, anxiety and psychosocial stress. Therefore, it is necessary to come up with a way to provide intervention and resources for the convergent factors of academic burnout, anxiety and psychosocial stress that affect hopelessness, and to use it for college life counseling and guidance to lower the hopelessness of college students majoring in health science.

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