

Employment Stress and the Happiness of Korean University Students: Multiple Mediating Effect of Growth Mindset, Grit and Hope

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ABSTRACT

Background/Objectives: The purpose of this study was to examine the multiple mediating effect of growth mindset, grit and hope on the effect of employment stress on happiness among 364 college students in Korea.

Method/Statistical Analysis: The data for the study were collected from 364 university students by using survey method. For the statistical analysis, frequency analysis, reliability analysis, correlation analysis and mediation analysis all were performed using SPSS Win.24.0 and PROCESS macro for SPSS version 3.2.

Findings: The results of the study are as follows. First, it is noted that the Pearson correlation analysis showed that happiness had a negative correlation with employment stress, and there was a significant positive correlation among growth mindset, grit and hope. Broadly speaking, employment stress showed a significant negative correlation with happiness, growth mindset, grit, and hope. Second, as a result of the PROCESS macro analysis, employment stress affects growth mindset, hope and happiness, and growth mindset has a positive effect on grit, hope and happiness. To this end, it is noted that grit has a positive effect on hope, happiness, and hope has a positive influence on happiness. Third, there was a multiple mediation effect of growth mindset, grit and hope in the identified relationship between employment stress and happiness.

Improvements/Applications: This result will be utilized as a new model in which growth mindset, grit and hope mediate the job-seeking stress of university students in the process of affecting happiness in the Korean society where the employment crisis is at serious proportions.

Keywords: *Employment stress, Growth mindset, Happiness, Hope, Mediating effect, Multiple mediating effect, Grit, PROCESS macro*

Introduction

Since the foreign exchange crisis has occurred, Korea has been suffering from a persistent recession and stagnation in the job market, and the unemployment rate of college students has grown to epic proportions. According to recent employment trends released by the National Statistical Office, the unemployment rate for young people is observed to be at the level of 7.9%¹. The employment rate of college graduates was also noted

as being down by 66.2%². In this way, college students experience anxiety due to the fact that they are not able to find or guarantee employment, even though they have received and completed a university education at a high educational level, and the stressors related to these students finding suitable employment after graduation is worsening. The university student experiences a period where the individual undergoes physical, mental and social changes due to transition from late adolescence to adulthood³. This developmental stage in the life of a student is a very important step in the preparation of a specific career path, which is the final stage of the school education to advance into adult society⁴. However, for college students, employment problems include both internal uncertainties such as uncertainty about the future and confusion of values in many cases. In some ways, it

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appears to be the most important concern as well as the greatest stress⁵, causing feelings of crisis, tension and anxiety due to the uncertainty of finding suitable future employment after graduation, and thus causing loss of balance both physically and psychologically in the lives of the students as they near adulthood.

The employment stress of college students is important to study and review, because it has a negative effect on happiness of the individual⁶. Happiness is the purpose and motive of life. Diener⁷ defined happiness as a subjective assessment of one's life, feeling satisfied with one's life, and experiencing fewer negative emotions. Generally speaking, the scholar's interest in the causal variables of happiness and enhancement measures has led to a positive psychology, and in recent years research has been expanding with a better understanding of a young adult's attitudes and behaviors manifesting of their growth mindset, grit and hope.

Bandura and Dweck⁸ classify their study into the categorization of entity and increment theory, depending on what beliefs students have about their abilities, as seen in various categories or situations. Dweck⁹ then named the entity theory as a fixed mindset, and went on to identify the increment theory as a growth mindset. In this context, the growth mindset is a belief that ability and intelligence can be improved through experience and effort, as noted on the part of an individual interested in making those changes⁹. For example, in the case of if a college student has the same level of employment stress, he or she may regard it as a challenging task, or accept it as a task to be avoided according to the mindset. This result and example is closely related to the theory of grit, and students with growth mindsets tend to be high in grit, thus devoting themselves to their goals and sustaining their endeavors¹⁰.

Since the introduction of the theory of an individual experiencing grit by Duckworth¹¹, research has been conducted in fields such as education, psychology, sociology and welfare. Grit can be referred to a stamina for long-term goals¹¹, a key concept that leads to the successful outcome of psychological development throughout life, and one of the key skills for an individual's healthy development task¹². On the other hand, hope is a positive motivation based on the successful interaction of goal-oriented energy, agency thinking and plan for achieving goals, pathways thinking¹³. Hope was understood as a vague belief, but scientific research was conducted by Snyder to further develop this theory¹⁴.

In previous studies, stress and happiness have been studied in various fields for a long period of time, but research on growth mindset, grit, hope has not been long researched. It has been reported that the daily stress of children and adolescents negatively affects the happiness of those individuals¹⁵, and the happiness is reduced as the person experiences more stress from the worries, conflict, and anxiety about work¹⁶⁻¹⁹. There was also a direct relationship between grit and growth mindset²⁰⁻²⁴, and stress was negatively associated with growth mindset²⁵, and hope had a statistically significant effect on an individual's psychological well-being²⁶. These previous studies suggest that employment stress, a stress experienced in preparation for employment, is a major factor that negatively affects happiness, and this relationship is likely to be closely related to growth mindset, grit, and hope.

However, research on mediating variables showed that grit mediated the relationship between growth mindset and academic achievement^{23,27}, that hope mediated the relationship between parenting stress and well-being²⁵ and that growth mindset mediated the relationship between stress and happiness in an individual²⁸. But studies using multiple mediators were rare and limited.

This study aimed to examine the multiple mediating effects of growth mindset, grit and hope in the effects of employment stress on happiness among university students in Korea, and to provide a new model for the happiness enhancement of college students.

Research Method

Research Model: The main analytical method of this study is the multiple mediating effect analysis of model 6 of PROCESS macro ver.3.2, and the conceptualized research model is shown in Figure 1.

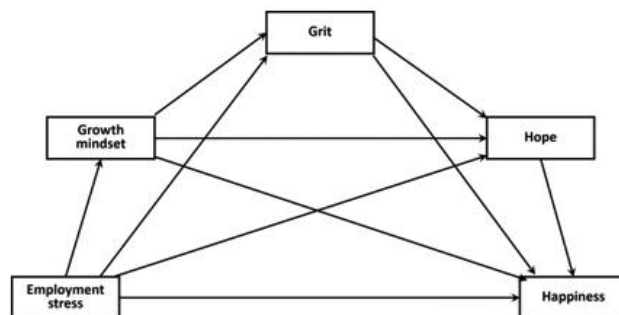


Figure 1: Conceptual Research Model

Survey Subject and Data Collection Method: The subjects of the survey, 364 college students were purposively selected from D city of Chungcheongnam-do and D metropolitan city. In this study, the results showed that 54.9% of male students and 45.1% of female students were surveyed.

Research Tools

Employment Stress: In order to measure the employment stress of college students, we used the Korean version testing as developed by Hwang²⁹ based on the Connell Medical Index and revised by Kang³⁰. The employment stress scale consists of 22 subscales and is a 5-point Likert scale. The higher the score, the higher the level of noted individual experienced employment stress. The reliability of employment stress in this study was .895 of Cronbach’s α value.

Happiness: We used the Happiness Scale which was developed by Lyubomirsky and Lepper³¹ using the Subjective Happiness Scale. The measurement consists of 4 questions and is a 7-point Likert scale. The higher the score, the higher the happiness. Cronbach’s α of Happiness is .782.

Growth Mindset: The growth mindset scale developed by Dweck³² and utilized by Ayers³³ was used in this study. The scale consists of 20 items and a 5-point Likert scale. The higher the score, the higher the growth mindset. The reliability of growth mindset in this study was Cronbach’s α = .833.

Grit: We used the grit (grit-O) scale developed by Duckworth & Quinn³⁴. The study questionnaire survey consists of a total of 12 questions. The measurement is made on a 5-score Likert scale, and the higher the score, the higher the grit. The grit reliability in this study was Cronbach’s α = .807.

Hope: To measure hope, we utilized a hope scale which was developed by Snyder et al.¹³ and was adapted to Korean Hope Scale by Choi et al.³⁵. The study questionnaire survey consists of a total of 8 questions. The measurement is made on a 4-points Likert scale. The higher the score, the higher the level of hope. The hope reliability in this study was Cronbach’s α = .754.

Data Analyses: In this study, for the data analysis we used SPSS Win. 24.0 and SPSS PROCESS macro proposed by Hayes³⁶. In a similar vein, the SPSS Win. 24.0 was used for the descriptive statistics, reliability analysis and average comparison analysis. The multiple mediation effect analysis was performed using SPSS PROCESS macro.

Results and Discussion

Correlation and Descriptive Statistical Analyses: Correlation analysis of Pearson was used to identify correlations between variables. The results are presented in Table 1. Happiness was negatively correlated with employment stress, but was positively correlated with growth mindset, grit, and hope. This is consistent with the results that a grit and growth mindset have a positive correlation with each other²⁰⁻²².

Table 1: Results of correlation and descriptive statistics

	Employment stress	Happiness	Growth mindset	Grit	Hope	M	SD
Employment Stress	1					2.30	.68
Happiness	-.509**	1				4.75	1.02
Growth mindset	-.353**	.401**	1			3.54	.47
Grit	-.154**	.344**	.329**	1		3.16	.52
Hope	-.382**	.591**	.414**	.414**	1	2.93	.40

** $p < .01$

Verification of Multiple Mediating Effects: The multiple mediating effects analysis results are shown in Figure 2 and Table 2.

Employment stress has been seen to have significant negative impacts on growth mindset (-.241, $p < .001$), hope (-.151, $p < .001$) and happiness (-.463, $p < .001$).

By the same token, growth mindset had a statistically significant effect on grit (-.353, $p < .001$), hope (.193, $p < .001$) and happiness (.211, $p < .05$). Additionally, grit had a statistically significant effect on hope (.231, $p < .001$) and happiness (.200, $p < .05$) and hope had a positive effect on happiness (.991, $p < .001$).

The total effect of the path between employment stress and happiness was $\beta = -.7600$ ($p < .001$), and the direct effect of the path between employment stress and happiness was $\beta = -.4633$ ($p < .001$). Therefore, the total effect was seen to have decreased. Accordingly, the relationship between employment stress and happiness was mediated by growth mindset, grit and hope.

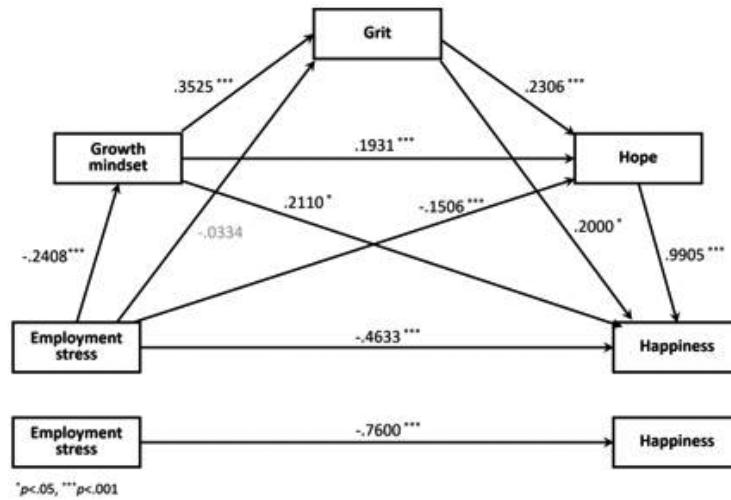


Figure 2: Effect size for each path

Table 2: Multiple mediating effects of growth mindset, grit, and hope in relation to employment stress and happiness

Mediating variable model 1 (DV: Growth mindset)								
Variables			β	SE	t value	p	LLCI*	ULCI**
Constant			4.0983	.0805	50.8797	.0000	3.9399	4.2567
Employment stress	→	Growth mindset	-.2408	.0336	-7.1736	.0000	-.3068	-.1748
Mediating variable model 2 (DV: Grit)								
Variables			β	SE	t value	p	LLCI*	ULCI**
Constant			1.9911	.2613	7.6186	.0000	1.4771	2.5050
Employment stress	→	Grit	-.0334	.0408	-8.187	.4135	-.1135	.0468
Growth mindset	→	Grit	.3525	.0597	5.9009	.0000	.2350	.4699
Mediating variable model 3 (DV: Hope)								
Variables			β	SE	t value	p	LLCI*	ULCI**
Constant			1.8664	.1892	9.8638	.0000	1.4943	2.2385
Employment stress	→	Hope	-.1506	.0274	-5.4926	.0000	-.2045	-.0967
Growth mindset	→	Hope	.1931	.0420	4.5935	.0000	.1104	.2757
Grit	→	Hope	.2306	.0354	6.5211	.0000	.1611	.3002
Dependent variable model (DV: Happiness)								
Variables			β	SE	t value	p	LLCI*	ULCI**
Constant			1.5276	.4802	3.1815	.0016	.5834	2.4719
Employment stress	→	Happiness	-.4633	.0643	-7.2091	.0000	-.5897	-.3369
Growth mindset	→	Happiness	.2110	.0974	2.1667	.0309	.0195	.4024
Grit	→	Happiness	.2000	.0842	2.3756	.0180	.0344	.3656
Hope	→	Happiness	.9905	.1187	8.3469	.0000	.7571	1.2239

*LLCI=The lower boundary of the indirect effect within the 95% confidence interval

**ULCI=The upper boundary of the indirect effect within the 95% confidence interval

Model 6 of PROCESS macro was used to verify the multiple mediating effects of growth mindset, grit, and hope. The results are shown in Table 3.

The total indirect effect size was significant at -0.2967. As a result of the mediating effect verification, first, the simple mediating effect of growth mindset was significant at -0. Second, the simple mediation effect of grit was not significant -0.0067. Third, the simple mediation effect of hope was significant at -0. The results showed that there were a simple mediation effect of growth mindset and hope, but no simple mediation effect of grit.

The double mediating effect of growth mindset and grit was significant at -0.0170 in relation to employment stress and happiness. The double mediating effect of growth mindset and hope in the relationship between employment stress and happiness was significant at -.0460.

The triple mediating effect of growth mindset, grit, and hope were significant at -0.0194 in the relationship between employment stress and happiness because there was no zero in the confidence interval of 95%. Therefore, the triple mediating effects were also subsequently verified.

Table 3: Verification of multiple mediating effects

Classification	Multiple mediating effect		
	Effect	BootSE	BC 95% CI
Employment stress → Growth mindset → Happiness	-.0508	.0247	-.1028 ~ -.0042
Employment stress → Grit → Happiness	-.0067	.0115	-.0329 ~ .0138
Employment stress → Hope → Happiness	-.1492	.0328	-.2192 ~ -.0892
Employment stress → Growth mindset → Grit → Happiness	-.0170	.0085	-.0363 ~ -.0031
Employment stress → Growth mindset → Hope → Happiness	-.0460	.0141	-.0773 ~ -.0216
Employment stress → Grit → Hope → Happiness	-.0076	.0122	-.0337 ~ .0146
Employment stress → Growth mindset → Grit → Hope → Happiness	-.0194	.0056	-.0320 ~ -.0099
A total indirect effect	-.2967	.0459	-.3925 ~ -.2123

Conclusion

The conclusion of the study is as follows. First, the happiness had a significant negative correlation with employment stress, and had a significant positive correlation with growth mindset, grit and hope.

Second, as a result of PROCESS macro analysis, employment stress negatively affects growth mindset, hope and happiness, but growth mindset has a positive effect on grit, hope and happiness. Third, as a result of bootstrapping, there was a multiple mediation effect of growth mindset, grit and hope in relation to employment stress and happiness.

Suggestions for further research are as follows.

First, this study examined the role of growth mindset, grit, and hope in the relationship between employment stress and happiness among college students. Follow-up studies should be followed to determine whether this model applies to other subjects. To this end, it is necessary to follow-up research using various stressors

and other variables, such as to utilize an expansion of study subjects, academic stress and job stress factors.

Second, growth mindset, grit, and hope were found to mediate in the relationship between employment stress and happiness. Therefore, it is urgent to develop and apply the growth mindset, grit, and hope enhancement program of college students.

Ethical Clearance: Not required

Source of Funding: Self

Conflict of Interest: Nil

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