

Relationship between Depression from Self-esteem, Stress, and Verbal Anger Behavior in Korean University Students

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Abstract

Objectives: This study is a research carried out to confirm the influences of the stress, self-esteem, and verbal anger behavior as the factors to impact on depression of Korean university students. **Methods/Statistical Analysis:** In order to get data, a survey was conducted to 180 college students in a city. Scales of Beck's depression, Rosenberg's self-esteem, perceived stress, and Chambers' verbal anger behaviors were used. In order to verify the correlations among variables were tested utilizing Pearson's correlation coefficients, and multiple linear regression analyses were performed using the SPSS/PASW 22.0 program. **Findings:** Findings from the analyses are as follows; (1) Depression had a very strong positive correlation with stress ($r=.881$, $p<.001$), while having a very strong negative correlation with self-esteem ($r=-.715$, $p<.001$) and a weak negative correlation with constructive verbal anger behavior ($r=-.337$, $p<.001$). But, depression was no correlation with destructive verbal anger behavior ($r=.080$, $p>.050$). (2) The high impact variable affecting the depression was stress ($\beta=0.589$), with the R squared of the model being 69.5 ($F=102.505$, $p<.001$). Depression among university students had a very strong positive correlation with stress. And self-esteem was identified as having the most negative impact on depression. **Improvements/Applications:** These findings will give useful information for constructing an intervening and preventative program focused on anger, stress, self-esteem and depression in the university students.

Keywords: Depression, Self-esteem, Stress, University Students, Verbal Anger Behavior

1. Introduction

Depression in the mental health area is one of the common experiences in the healthy people during the daily life, and it is described as the basic symptom of the major psychological disease. Also, it is considered as the most important symptom in the psychiatry. Beck who explained the depression as the results of negative perception on his or her surrounding environment and future claimed that the university students had experienced the depression from very mild up to the severe status. While college students are mature physically, they are still not fully developed socially or psychologically¹. The complex stress and conflict as well as difficult problems take up a large

part of the adjustment process of their college life. This period is also the time when they prepare for future life after graduation²⁻⁴.

Although depression occurs in every age group, the university students who are in late adolescent or early adult period should be exposed to the society right after the graduation, and they experience the conflicts on the psychological independence and the performance achievement due to various interpersonal relationships so that they get stressed with study, value determination, career path, interpersonal relationship, employment, and so on²⁻⁵.

The stress occurred in this process to be adapted in the new environment can cause the emotional symptoms of

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the university students such as depression²⁻⁵. Considering the previous studies on the anger expression methods and depression, it does not seem to have the consistency among the study results⁶. However, it was confirmed that inhibition of anger was the variable to explain the depression the most and proper anger control could be fundamental to develop the positive social behaviors and healthy interpersonal relationships of the people in a sense to emphasize the autonomy and emotional control^{6,7}.

In fact,⁵ reported that perceived social support and anger expression methods were the important variables to explain the depression of the university students in Korea. The depression level in the university students who were the subjects in her study was lower as they perceived the social support higher and controlled the anger better. On the other hand, it was confirmed their depression level were higher as they perceived the social support lower and expressed the anger to be inhibited or uncontrolled. Therefore, it was claimed that the efforts to induce the perception on the social support higher and to express the anger in a healthy way could work to control the depression of the university students successfully, by anger control training program or assertiveness training program in dealing with their depression^{3,5}.

However, the resistance or aggressiveness which is the external matter of the university students were related to the emotion, and the behaviors not to control the anger well but to suppress or express it have the tendency to be developed as the socio cultural way. Without learning proper anger expression method, they encounter the external environment inefficiently and relate to the depression strongly so as to express it by inappropriate way.

In⁶ with adolescent subjects, it was reported that the people who could express the anger properly showed low level of depression demonstrating the anger expression way of the adolescents to be the predictor of the depression. Referring to the studies on the relationship between depression and the anger expression method, the people who experience the anger so frequently felt the depression on the negative experiences easier while the people who experience the depression so frequently had the tendency of anger to blame themselves on the negative experiences⁶.

Therefore, the studies are required to confirm the influences of the verbal anger behavior as well as self-esteem and perceived stress as the factors to impact on the depression of the university students. As such, this

study was conducted to identify the factors that affect depression among Korean university students.

2. Materials and Methods

2.1 Study Design

This study was a causal research, used as stress, self-esteem, and constructive/destructive verbal anger behavior as independent variables, and depression as the dependent variable.

2.2 Subjects

We explained the purpose of the study, and 188 college students gave us their consent to the survey. The survey was conducted with a structured questionnaire. The total number of study subjects was 180 except 8 cases that the answers were incomplete.

2.3 Measurements

As for the reliability (Cronbach's α) of the instrument, all of variables were tested. The Cronbach's α for reliability were .85~.93 in all the factors as seen in Table 1.

For measuring depression, the 21 question survey of Korean version^{8,9} of Beck Depression Scale¹⁰ was used. With a 4-point Likert scale (0-3), it means the higher the score is, the higher the depression is. In this study, Cronbach- α value was .93. The distribution of Korean version of Beck Depression Inventory (K-BDI) scores was from 0 to 63 points, which classified as normal for 0 – 9 points, mild depression for 10 – 18 points, and severe depression for 19 points or more.

For self-esteem, the 10 question survey of Rosenberg's Korean version¹¹ was used. It consisted of 4-point scale and had positive self-esteem (5 questions) and negative self-esteem (5 questions). It means the higher the score is, the higher the self-esteem is. As the reliability, Cronbach- α value was .87 in this study.

For measuring stress, the 30 question scale of perceived stress¹² was used. With a 5-point Likert scale (0-4), it means the higher the score is, the higher the perceived stress is. The Cronbach- α value was .93 in this research.

And for verbal anger behavior, the 23 question survey that was developed by¹³ and translated to Korean version by¹⁴ was used. With a 4-point Likert scale (0-3), it means the higher the score is, the higher the verbal anger behavior is. It consists of two categories; the 12 items of constructive and the other 11 items of destructive

verbal anger behaviors which Cronbach- α value was each .88, and .85 in this research. This destructive verbal anger behavior consists of two categories; the 6 items of justification and the 5 items of rumination.

2.4 Data Analysis Method

The mean and standard deviation of depression, self-esteem, perceived stress, and verbal anger behaviors of university students was verified using descriptive statistics. For differences of self-esteem, stress, and verbal anger behaviors according to the depressive levels were verified using the ANOVA. The relationships among variables were tested with Pearson's correlation coefficients, and multiple regression analysis was done using the SPSS/PASW 22.0 program.

3. Findings

As the mean score of depression was 12.51 ± 7.11 , the level of depression was mild on average in the university students who participated in this study. The average score of self-esteem was 29.51 ± 5.12 , perceived stress was 87.31 ± 17.20 , constructive verbal anger behavior was 27.66 ± 6.91 , and the average score of destructive verbal anger behavior was 21.50 ± 5.65 as seen in Table 1. The Cronbach- α values and number of items which were used as for measuring tool in this research were as follows. (Table 1)

Table 2 shows the statistical analysis results on the mean differences of self-esteem, stress, and verbal anger behaviors by the depression levels. First, 37.2% (N=67) among the subjects were normal, 45.6% (N=82) had mild depression, and 17.2% (N=31) had severe depression. The mean score of stress in the higher group of the depression level was 109.19 ± 9.72 which was significantly higher than that in the normal group, 72.88 ± 11.56 ($F=113.918$, $p=.000$). The mean scores of self-esteem were 22.94 ± 4.63 and 32.37 ± 3.05 , respectively, demonstrating significant inferiority in the higher group of the depression level ($F=60.344$, $p=.000$).

With respect to the mean scores of constructive verbal anger behavior, they were 29.60 ± 6.25 , 28.00 ± 6.88 , and 22.58 ± 5.99 in the normal group, mild depression group, and severe depression group, respectively, demonstrating statistically significant difference ($F=12.533$, $p=.000$). On the other hand, there were no significant differences with respect to the mean scores of destructive verbal anger behavior, 21.74 ± 5.20 , 21.43 ± 5.65 , 21.24 ± 6.23 in the mild depression group, the severe depression group, and the normal group, respectively ($F=0.149$, $p=.862$).

Correlation coefficient was very high in the relationship between depression and stress ($r=.881$, $p=.000$). Meanwhile, there was a very strong negative relationship between depression and with self-esteem ($r=-.715$, $p=.000$). There was a weak negative relationship between depression with constructive verbal anger

Table 1. Depression, self-esteem, perceived stress, and verbal anger behaviors of university students (N=180)

Variables	Number of Items	Cronbach's α	Minimum	Maximum	Mean	SD
Depression	21	.93	0	43	12.51	7.11
Self-esteem	10	.87	12	39	29.1	5.12
Stress	30	.93	44	127	87.31	17.20
Constructive verbal anger behavior	12	.88	1	46	27.66	6.91
Destructive verbal anger behavior	11	.85	12	37	21.50	5.65

Table 2. Difference of self-esteem, stress, and verbal anger behaviors from depressive levels (N=180)

Variables	Normal		Mild depression		Severe depression		F	P
	(n=67)		(n=82)		(n=31)			
	Mean	SD	Mean	SD	Mean	SD		
Self-esteem	32.37	3.05	28.76	4.36	22.94	4.63	60.344	.000
Stress	72.88	11.56	90.83	11.92	109.19	9.72	113.918	.000
Constructive verbal anger behavior	29.60	6.25	28.00	6.88	22.58	5.99	12.533	.000
Destructive verbal anger behavior	21.24	6.23	21.74	5.20	21.43	5.65	0.149	.862

behavior ($r=-.337, p=.000$). All of these results were statistically significant as shown in Table 3. But, there was not a statistically significant correlation ($r=.080, p=.228$) with destructive verbal anger behavior as follows. (Table 3)

Table 3. Relationship between depression, self-esteem, perceived stress, and verbal anger behaviors (N=180)

Variables	Pearson Correlation			
	a)	b)	c)	d)
a) Depression	1			
b) Self-esteem	-.715**	1		
c) Stress	.881**	-.654**	1	
d) Constructive verbal anger behavior	-.337**	.432**	-.360**	1
e) Destructive verbal anger behavior	.080	-.069	.129	.180*

*: $p<.05$, **: $p<.01$

Among all the variables, self-efficacy ($\beta=-0.339, p=.000$), stress ($\beta=0.589, p=.000$), constructive verbal anger behavior ($\beta=0.023, p=.000$), and destructive verbal anger behavior ($\beta=-0.023, p=.218$) had effects on depression with the total explanatory power of 69.5 ($F=102.505, p=.000$) as follows. (Table 4)

Table 4. Influencing factors on depression (N=180)

Variables	B	SE	B	AdjustedR ²	F(p)
(Constant)	5.160	4.021			
Self-esteem	-.478	.079	-.339		
Stress	.243	.023	.589		
Constructive verbal anger behavior	.025	.050	.023	.695	102.505 (.000)
Destructive verbal anger behavior	-.029	.054	-.023		

4. Conclusion

The university students who participated in this study had experienced the depression with 45.6% mild level and 17.2% severe level. These results are consistent with Beck's report that the university students experienced the depression from very mild up to severe level. On the contrary, the mean score of depression level was analyzed to be mild in this study subjects. This is consistent with the study result by¹⁵ that the level of the depression in

the university students was high since they suppressed their angers a lot unlike children. In addition, this could be explained that the university students in the oriental culture had the tendency to hesitate to express their negative feelings such as anger in the interpersonal relationship according to the cultural characteristics to value the face issue unlike the students in the western countries⁶.

The self-esteem was demonstrating significant inferiority in the higher group of the depression level. This result is similar to findings of¹⁶ that the higher self-esteem was, the better mental health maintained in the university students. From this study, it was confirmed that the normal university students perceived high level of self-esteem and low level of stress with high constructive verbal anger behavior. However, destructive verbal anger behavior was not related with depression.

Especially, depression among university students had a very strong positive relationship with perceived stress. Also the variable that had the largest positive impact on depression was perceived stress. And self-esteem was identified as having the most negative effect on depression. To prevent the depression among university students, it is necessary to promote the self-esteem and to manage the stress and the anger. Proper experiences and expressions of the anger can play a positive role to maintain or change the social relationships in various ways. In facts, the improper expression of the anger to the others or to themselves may cause not only the physical or psychological damage but also difficulties in the relationship with others. Furthermore, this anger not to be resolved may cause another problematic behavior.

In order to prevent depression disturbance among college students, this study suggests that programs that will promote self-esteem and stress management be developed. To prevent the depression in the university students, the development and operation of anger expression or self-assertiveness training programs are required to train them with constructive verbal anger behavior. And self-esteem should be verified as mediating effects between depression and stress.

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6. References

1. Coffman DL, Gilligan TD. Social Support, Stress and Self-efficacy: Effects on Student's Satisfaction. *Journal of College Student Retention*. 2002; 4(1):53–66.
2. Moon WH. A Study on Student's Stress, Coping, and Emotional Experiences in College Life, *Journal of Daejeon Health Sciences College*. 2011; 32:429–50.
3. Relationships between Self-efficacy, Stress, Depression and Adjustment of College Students. <http://www.indjst.org/index.php/indjst/article/view/86802/66575>. Data accessed: 04/05/2016.
4. Lee HE. Testing for Moderating Effects of Coping Style with Structural Equations = Life Stress and Depressive Symptoms among College Students, *Korean Journal of Health Psychology*. 2004; 9(1):25–48.
5. Seo SY. The relationships among social support, anger expression style, and depression of college students (Unpublished master's thesis). University of Hong-Ik in Korea. 2001.
6. Lee MH. Effects of Parental Attachment and Depressive Mood on Anger Expression Style– Focused on the Middle School Student (Unpublished master's thesis). University of Dong-A in Korea. 2011.
7. Kopper BA, Epperson DL. The Experience and Expression of Anger: Relationships with Gender, Gender Role Socialization, Depression, and Mental Health Functioning. *Journal of Counseling Psychology*. 1996; 43(2):158–65.
8. Chung YC, Rhee MK, Lee YH, Park SH, Sohn CH, Hong SK, Lee BK, Chang PL, Yoon AR. A Standardization Study of Beck Depression Inventory 1-Korean version (K-BDI) : Reliability and Factor Analysis, *The Korean Journal of Psychopathology*. 1995; 4(1):77–95.
9. Rhee MK, Lee YH, Jung HY, Choi JH, Kim SH, Kim YK, Lee SK. A Standardization Study of Beck Depression Inventory 2-Korean version (K-BDI): Validity, *The Korean Journal of Psychopathology*. 1995; 4(1):96–104.
10. The Beck Depression Inventory. http://www.ibogaine.desk.nl/graphics/3639b1c_23.pdf. Date Accessed: 1978.
11. Won HT, Lee HJ. Exploratory Study of the Relationship between Paranoid Tendency, Self-concept, and Self-consciousness. *Proceedings of KPA Conference, Seoul, Korea*. 1995. p.277–90.
12. Lee PS, Han KS. The Comparative Study on Perceived Stress, ways of Coping, Stress Symptoms of Peptic Ulcer Patients and Healthy Person. *The Korean Journal of Psychiatric and Mental Health Nursing*. 1996; 5 (6):39–50.
13. Chambers L. The Relation among Self-reported Constructive and Destructive Anger Verbal Behavior and Resting Blood Pressure (Unpublished doctoral dissertation). University of Dalhousie in Canada. 1999.
14. Seo SG. Validation Study of the Korean Version of the Anger Behavior-verbal Scale. *The Korean Journal of Clinical Psychology*. 2007; 26(1):239–50.
15. Jeon HK. The Effect of Anger Expression as Medium on the Correlation between Attachment and Depression of College Students. *The Korea Journal of Youth Counseling*. 2014; 22(1):173–99.
16. Jang HJ, Jeon MK. Relationship between Self-esteem and Mental Health according to Mindfulness of University Students. *Indian Journal of Science and Technology*. 2015 Sept; 8(21):1–5.