

## The Effects of Depression and Stress on College Life Adjustment of Ophthalmic Optics Students

<sup>1</sup>Seonahr Cho, <sup>2</sup>Jinkyu Kwak

<sup>1</sup>Assistant Professor, Dept. of Visual Optics, Kyungdong Univ, Korea

<sup>2</sup>Associate Professor, Dept. of Leisure&Resort, Kyungdong Univ, Korea

<sup>1</sup>[csa@kduniv.ac.kr](mailto:csa@kduniv.ac.kr), <sup>2</sup>[jkduck@kduniv.ac.kr](mailto:jkduck@kduniv.ac.kr)

### Abstract

*This study is intended to look into the effects of depression and stress on college life adjustment of ophthalmic optics students. To achieve this, a survey was empirically carried out to 142 male and female students majoring in ophthalmic optics at colleges in Gangwon-do. The findings are as follows: Depression had a significant effect on academic adjustment and social adjustment, but no significant effect on emotional adjustment and college satisfaction. Stress also had a significant effect on academic adjustment, but no significant effect on social adjustment, emotional adjustment and college satisfaction. The above results showed that depression and stress were major factors affecting academic and social adjustments, and academic adjustment, respectively. Which means that depression restricted the activities of academic adjustment and social adjustment, and did not have a close relationship with psychological mechanisms – emotional adjustment and college life satisfaction. Stress also had a significant effect on academic adjustment, but did not have a direct relationship with social adjustment, emotional adjustment and college satisfaction.*

**Keywords:** Depression, Stress, College Life Adjustment, Ophthalmic Optics Students

## 1. INTRODUCTION

In the developmental stage, college students achieve basic developmental tasks such as psychological independence from their parents by heteronomy until high school. Unlike the regular middle and high school days, this period of first entry into the ranks of adults is when they are having difficulties in adjusting to college life, leading to irregular life by much free time given suddenly[1].

During this period, they form their sense of identity to achieve independent life, and decide their career in search of various knowledge and interest areas for the future to prepare for employment. In this process, they not only feel financial, social, academic and emotional burdens, but also have difficulties in adjusting to college life[2]. Failure to adjust well college life is likely to lower academic abilities, create problems in social relations, and cause problems such as job selection and lack of social competence after graduation. Therefore, the college life adjustment is very important to college students, but it is a problem[3]. In addition, it is a very important task for college because it leads to an increase in dropout rates, which lower the competitiveness of education and further threaten the competitiveness of college and nation[4]. Therefore, colleges need to identify the major factors of their college life adjustment and come up with solutions[5].

---

Manuscript received: August 21, 2019/ revised: September 02, 2019 / Accepted: October 11, 2019

Corresponding Author: [jkduck@kduniv.ac.kr](mailto:jkduck@kduniv.ac.kr)

Tel:+82-33-639-0264, Fax: +82-33-639-0270

Author's affiliation

Associate Professor, Dept. of Leisure&Resort, Kyungdong Univ, Korea

To improve the college life adjustment at the college level, colleges need an attachment and bond to their school and students so that students can adjust to their learning, personal relationship and social life and cope with psychological stress appropriately[6]. The college life adjustment refers to a process in which college students actively interact with college members and college environments and feel high satisfaction in college life. Stress is likely to have a negative effect on this satisfaction. Stress is a mental and psychological reaction to harmful stimuli in the external environment[7]. A lot of stress can lower ego-resilience, active response and social support, making it difficult to adjust to college life and having a negative effect on college life adjustment and college satisfaction[8].

Therefore, the college life adjustment can be seen as a coping process of adjusting to or changing the school environment to satisfy academic and social needs[9].

In particular, college students majoring in ophthalmic optics are members of society who will be engaged in professional health and medical jobs in the future, which it is necessary for them to check the depression and stress they experience during the college life adjustment.

Factors affecting the college life adjustment include a number of variables such as learning, interpersonal relationship, stress and depression.

College students are suffering from psychological difficulties due to a lot of exposure to academic and environmental depression and stress situations, which is an important concept in adjusting to college life.

It is expected that college students are more likely to experience a number of maladjusted behaviors due to the weakened support of their families and the stress they experience in college life, but it is hard to find studies of the relationship between their school-related stress, depression and college life adjustment. The purpose of this study is to figure out the relationship between stress, depression and college life adjustment of college students, and provide basic data for implications that can reduce their stress and depression and improve their college life adjustment.

## 2. ANALYSIS METHOD

### 2.1. Composition of Measurement Variables

**Depression.** The Korean version of CES-D in this study - which had been adapted and developed by Kyum Koo Chon et al.(2001) - was modified and supplemented for the research purpose to rate depression experienced over the past week on the Likert 5-point scale.

**Stress.** The global assessment of recent stress(GARS) - which had been developed by Linn et al. - was modified and supplemented for the assessment of personal subjective stress experience to rate stress perceived over the past week on the Likert 5-point scale.

**College Life Adjustment.** The student adjustment to college questionnaire(SACQ) - which had been produced by Baker and Siryk(1984), adapted by Jin Won Hyun(1992), and readapted by Bum Hyeok Park(2006) - was modified and supplemented to use for the scale of college life adjustment. This scale is composed of 4 sub-scales as shown in <Table 1>.

Table 1. Variable Composition

| Variable Classification | Variable Name | Item Number | Remarks |
|-------------------------|---------------|-------------|---------|
| Independence            | Depression    | 14          | [10]    |
|                         | Stress        | 8           | [11]    |

|            |                         |                      |   |                      |
|------------|-------------------------|----------------------|---|----------------------|
| Dependence | College Life Adjustment | Academic Adjustment  | 8 | [12]<br>[13]<br>[14] |
|            |                         | Social Adjustment    | 8 |                      |
|            |                         | Emotional Adjustment | 8 |                      |
|            |                         | College Satisfaction | 8 |                      |
| Demography |                         |                      | 2 |                      |

## 2.2 Research Model

This study reflected college life adjustment in academic adjustment, social adjustment, emotional adjustment and college life satisfaction to figure out the effects of depression and stress on college life adjustment of ophthalmic optics students, and selected a research model as shown in <Figure 1> below to look into the relationships using AMOS structural equation.

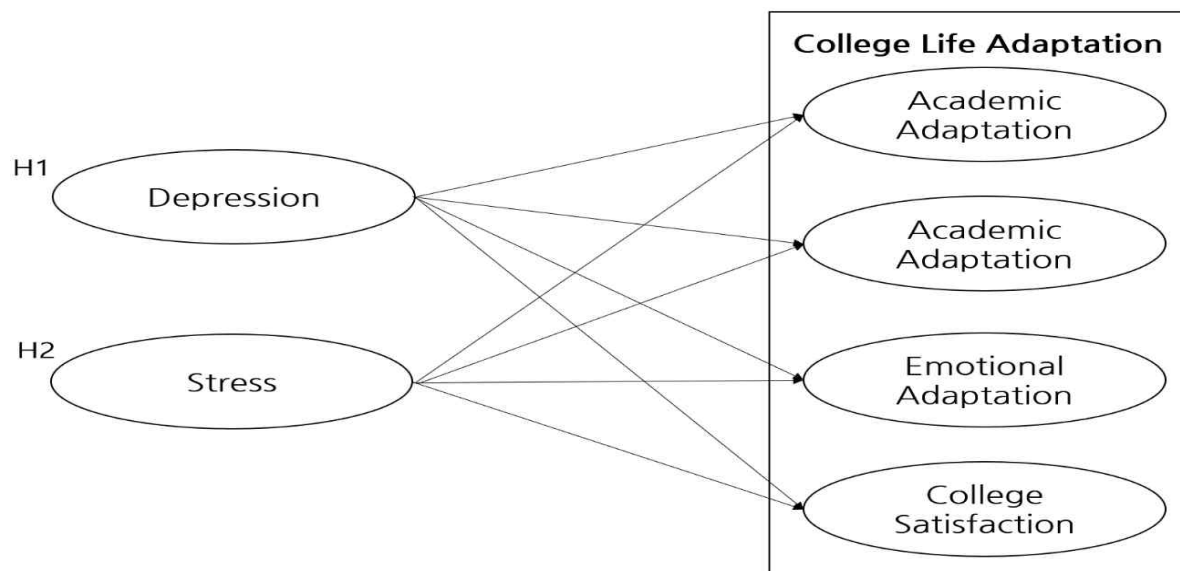


Figure 1. Research Model

## 2.3 Hypothesis Establishment

Based on the above research model, the hypotheses to be, in priority, verified in this study are as follows.

- H1 Depression will have an effect on college life adjustment.
- H1-1 Depression will have an effect on academic adjustment.
- H1-2 Depression will have an effect on social adjustment.
- H1-3 Depression will have an effect on emotional adjustment.
- H1-4 Depression will have an effect on college satisfaction.

- H2 Stress will have an effect on college life adjustment.

H2-1 Stress will have an effect on academic adjustment.

H2-2 Stress will have an effect on social adjustment.

H2-3 Stress will have an effect on emotional adjustment.

H2-4 Stress will have an effect on college satisfaction.

## 2.4 Research Target

The subjects of this study were 150 male and female college students majoring in ophthalmic optics at colleges in Gangwon-do who agreed to participate in the research after explaining the purpose of this study, but 142 questionnaires except for 8 copies of uncollectible and insincere responses were used for analysis.

## 2.5 Analysis Method

In this study, statistical data processing was performed using SPSS ver 23.0 and AMOS after the coding process of questionnaire, and the following analysis was conducted:

First, Frequency analysis was conducted to determine the demographic characteristics of samples, and reliability analysis was conducted to verify the reliability of the measured variables.

Second, Confirmatory factor analysis was conducted to verify the validity of the measured variables.

Third, The structural equation model was used to verify the effect of the independent variables on the dependent variables.

## 3. ANALYSIS RESULT

### 3.1 Demographic Characteristics

**Table 2. Frequency Analysis Result**

| Classification |              | Frequency | %    |
|----------------|--------------|-----------|------|
| Gender         | Male         | 86        | 60.6 |
|                | Female       | 56        | 39.4 |
| Grade          | First Grade  | 37        | 26.1 |
|                | Second Grade | 44        | 31.0 |
|                | Third Grade  | 37        | 26.1 |
|                | Fourth Grade | 24        | 16.9 |
| Total          |              | 142       |      |

The demographic characteristics of those surveyed showed that 86(60.6%) were male and 56(39.4%) female by gender. By grade, 37(26.1%) were in first grade, 44(31.0%) in second grade, 37(26.1%) in third grade, and 24(16.9%) in fourth grade.

### 3.2 Reliability Analysis

**Table 3. Reliability Analysis Result**

| Classification          |                     | Cronbach's Alpha | Item Number |
|-------------------------|---------------------|------------------|-------------|
| Depression              |                     | 0.944            | 14          |
| Stress                  |                     | 0.848            | 8 → 6       |
| College Life Adjustment | Academic Adjustment | 0.906            | 8           |

|  |                      |       |       |
|--|----------------------|-------|-------|
|  | Social Adjustment    | 0.887 | 8     |
|  | Emotional Adjustment | 0.902 | 8 → 7 |
|  | College Satisfaction | 0.862 | 8 → 6 |

The <Table 3> shows the results of the reliability of each variable. The depression index met the Cronbach's  $\alpha$  value of 0.8 or more, indicating satisfactory reliability. The stress index was used for analysis after meeting the Cronbach's  $\alpha$  value of 0.8 or more by deleting two items that undermine the reliability.

Academic adjustment and social adjustment were used as sub-factors of college life adjustment, indicating that the Cronbach's  $\alpha$  value was 0.8 or more. But emotional adjustment and college satisfaction were used for analysis after meeting the Cronbach's  $\alpha$  value of 0.8 or more by deleting items that undermine the reliability.

### 3.3 Confirmatory Factor Analysis

**Table 4. Concentration Validity Result**

| Classification       |     | Standardized Coefficient | S.E.  | C.R.   | Concept Reliability | AVE   |
|----------------------|-----|--------------------------|-------|--------|---------------------|-------|
| Academic Adjustment  | A1  | 0.786                    |       |        | 0.942               | 0.672 |
|                      | A2  | 0.806                    | 0.095 | 10.515 |                     |       |
|                      | A3  | 0.583                    | 0.134 | 7.12   |                     |       |
|                      | A4  | 0.644                    | 0.118 | 7.986  |                     |       |
|                      | A5  | 0.829                    | 0.094 | 10.898 |                     |       |
|                      | A6  | 0.855                    | 0.116 | 11.344 |                     |       |
|                      | A7  | 0.842                    | 0.100 | 11.123 |                     |       |
|                      | A8  | 0.654                    | 0.134 | 8.135  |                     |       |
| Emotional Adjustment | E1  | 0.787                    |       |        | 0.910               | 0.595 |
|                      | E2  | 0.804                    | 0.093 | 10.518 |                     |       |
|                      | E4  | 0.589                    | 0.109 | 7.225  |                     |       |
|                      | E5  | 0.601                    | 0.122 | 7.393  |                     |       |
|                      | E6  | 0.749                    | 0.12  | 9.614  |                     |       |
|                      | E7  | 0.917                    | 0.116 | 12.481 |                     |       |
|                      | E8  | 0.835                    | 0.096 | 11.052 |                     |       |
| College Satisfaction | Sa2 | 0.543                    | 0.132 | 6.049  | 0.898               | 0.601 |
|                      | Sa3 | 0.591                    | 0.176 | 6.57   |                     |       |
|                      | Sa4 | 0.881                    | 0.142 | 9.489  |                     |       |
|                      | Sa5 | 0.838                    | 0.193 | 9.12   |                     |       |
|                      | Sa7 | 0.789                    | 0.211 | 8.643  |                     |       |
|                      | Sa8 | 0.699                    |       |        |                     |       |
| Social Adjustment    | So1 | 0.708                    | 0.074 | 9.651  | 0.933               | 0.639 |
|                      | So2 | 0.747                    | 0.071 | 10.447 |                     |       |
|                      | So3 | 0.788                    | 0.067 | 11.349 |                     |       |
|                      | So4 | 0.745                    | 0.07  | 10.406 |                     |       |

|            |     |       |       |       |       |       |
|------------|-----|-------|-------|-------|-------|-------|
|            | So5 | 0.667 | 0.095 | 8.88  |       |       |
|            | So6 | 0.584 | 0.099 | 7.461 |       |       |
|            | So7 | 0.599 | 0.084 | 7.709 |       |       |
| Stress     | ST1 | 0.639 | 0.149 | 6.305 | 0.905 | 0.617 |
|            | ST4 | 0.591 | 0.144 | 5.925 |       |       |
|            | ST5 | 0.812 | 0.158 | 7.482 |       |       |
|            | ST6 | 0.826 | 0.172 | 7.557 |       |       |
|            | ST7 | 0.662 | 0.156 | 6.473 |       |       |
|            | ST8 | 0.624 |       |       |       |       |
| Depression | D1  | 0.668 | 0.258 | 6.101 | 0.955 | 0.609 |
|            | D2  | 0.703 | 0.274 | 6.293 |       |       |
|            | D3  | 0.744 | 0.276 | 6.504 |       |       |
|            | D4  | 0.68  | 0.268 | 6.168 |       |       |
|            | D5  | 0.835 | 0.264 | 6.917 |       |       |
|            | D6  | 0.84  | 0.253 | 6.941 |       |       |
|            | D7  | 0.838 | 0.247 | 6.931 |       |       |
|            | D8  | 0.861 | 0.257 | 7.027 |       |       |
|            | D9  | 0.686 | 0.251 | 6.198 |       |       |
|            | D10 | 0.813 | 0.266 | 6.826 |       |       |
|            | D11 | 0.79  | 0.252 | 6.722 |       |       |
|            | D12 | 0.759 | 0.252 | 6.577 |       |       |
|            | D13 | 0.542 | 0.209 | 5.303 |       |       |
|            | D14 | 0.545 |       |       |       |       |

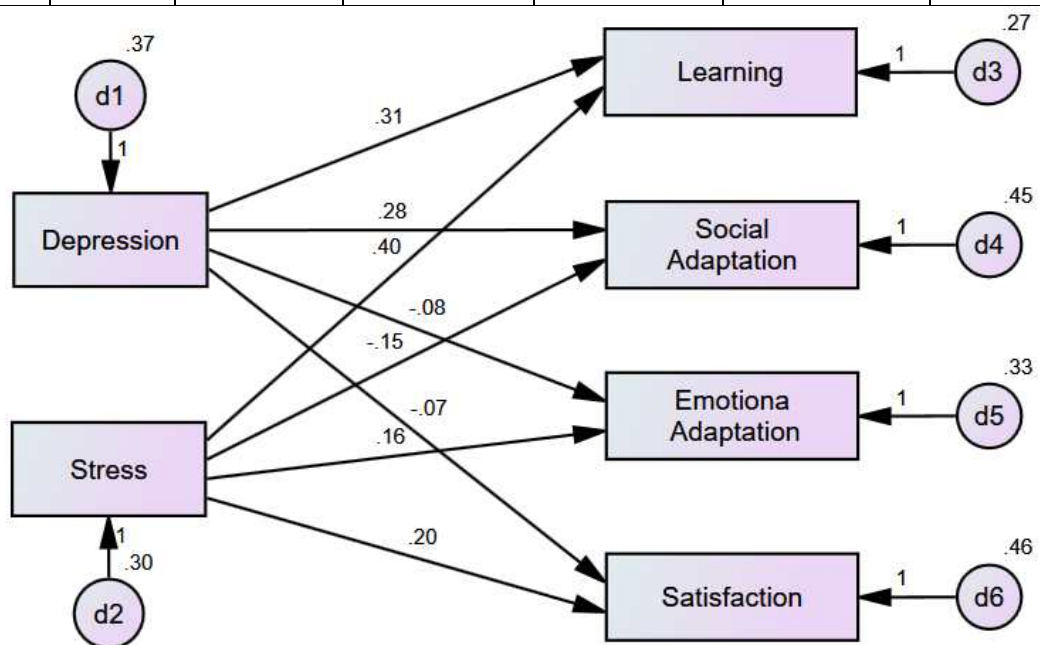


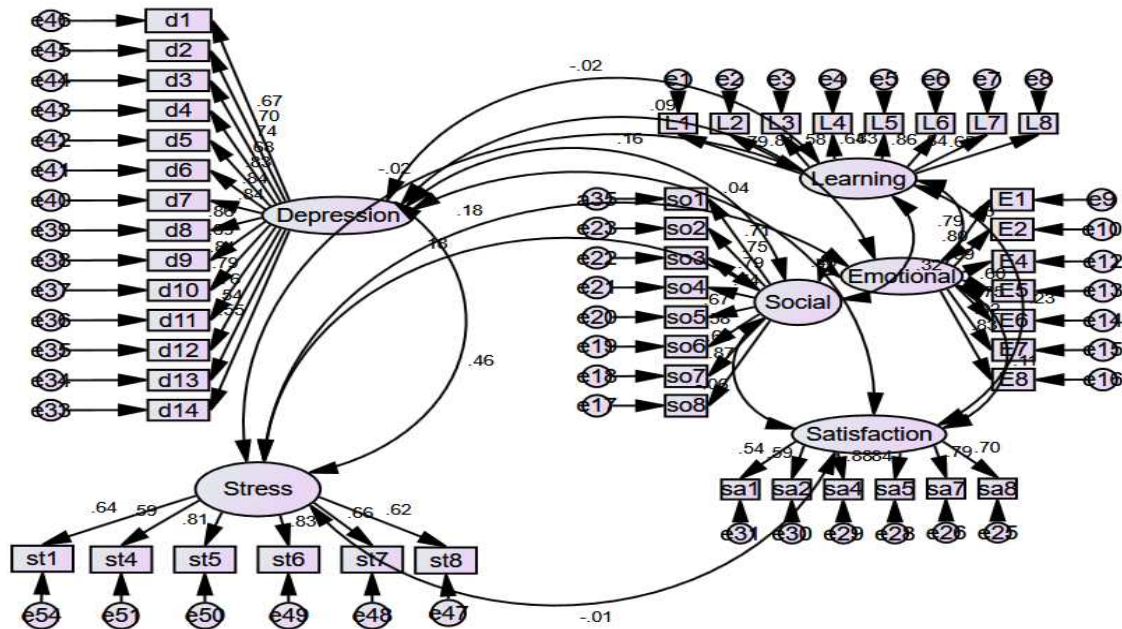
Figure 2. Confirmatory Factor Analysis

The <Table 4> shows the results of the concentration validity of each variable. It is considered to have the concentration validity only when the standardized factor load is 0.5 or more, the C.R is 1.965 or more, the AVE is 0.5 or more, and the concept reliability is 0.7 or more. In this study, all three methods were used to verify the concentration validity, and they were used for analysis without modification as the criteria of concentration validity was met in all variables.

### 3.4 Path Analysis

**Table 5. Final Path Analysis Result**

| Path       |   |                      | Standardized Coefficient | Nonstandardized Coefficient | S.E.  | C.R.   | P     | Hypothesis Adoption or Rejection |
|------------|---|----------------------|--------------------------|-----------------------------|-------|--------|-------|----------------------------------|
| Depression | → | Schoolwork           | 0.322                    | 0.313                       | 0.071 | 4.386  | ***   | Adoption                         |
| Depression | → | Social Adjustment    | 0.249                    | 0.284                       | 0.092 | 3.076  | 0.002 | Adoption                         |
| Depression | → | Emotional Adjustment | -0.087                   | -0.084                      | 0.079 | -1.054 | 0.292 | Rejection                        |
| Depression | → | Satisfaction         | -0.058                   | -0.065                      | 0.094 | -0.696 | 0.486 | Rejection                        |
| Stress     | → | Schoolwork           | 0.37                     | 0.4                         | 0.079 | 5.034  | ***   | Adoption                         |
| Stress     | → | Social Adjustment    | -0.119                   | -0.15                       | 0.103 | -1.465 | 0.143 | Rejection                        |
| Stress     | → | Emotional Adjustment | 0.151                    | 0.16                        | 0.088 | 1.818  | 0.069 | Rejection                        |
| Stress     | → | Satisfaction         | 0.157                    | 0.198                       | 0.105 | 1.891  | 0.059 | Rejection                        |



**Figure 3. Final Path Model**

The fit index of research model was Chi-square = 16.075, degree of freedom = 6, GFI = 0.964, AGFI = 0.908, CFI = 0.916, and RMR = 0.030. Since the GFI, AGFI, and CFI of 0.9 or more, and the RMR of 0.05 or less can be appropriate, the model of this structural equation has been verified and the fit of path coefficient has been also verified.

Hypothesis 1-1 The path coefficient of 'depression will have an effect on academic adjustment' was 0.322(C.R.=4.386,  $p<.05$ ), which depression had a significant effect on academic adjustment, adopting hypothesis 1-1.

Hypothesis 1-2 The path coefficient of 'depression will have an effect on social adjustment' was 0.249(C.R.=3.076,  $p<.05$ ), which depression had a significant effect on social adjustment, adopting hypothesis 1-2.

Hypothesis 1-3 The path coefficient of 'depression will have an effect on emotional adjustment' was -0.084(C.R.=-1.054,  $p>.05$ ), which depression had no significant effect on emotional adjustment, rejecting hypothesis 1-3.

Hypothesis 1-4 The path coefficient of 'depression will have an effect on college satisfaction' was -0.058(C.R.=-0.696,  $p>.05$ ), which depression had no significant effect on college satisfaction, rejecting hypothesis 1-4.

Hypothesis 2-1 The path coefficient of 'stress will have an effect on academic adjustment' was 0.37(C.R.=5.034,  $p<.05$ ), which stress had a significant effect on academic adjustment, adopting hypothesis 2-1.

Hypothesis 2-2 The path coefficient of 'stress will have an effect on social adjustment' was -0.119(C.R.=-1.465,  $p>.05$ ), which stress had no significant effect on social adjustment, rejecting hypothesis 2-2.

Hypothesis 2-3 The path coefficient of 'stress will have an effect on emotional adjustment' was -0.151(C.R.=-1.818,  $p>.05$ ), which stress had no significant effect on emotional adjustment, rejecting hypothesis 2-3.

Hypothesis 2-4 The path coefficient of 'stress will have an effect on college satisfaction' was 0.157(C.R.=1.891,  $p>.05$ ), which stress had no significant effect on college satisfaction, rejecting hypothesis 2-4.

## 4. CONCLUSION

The overall findings are as follows. First, Depression was adopted as it had a significant effect on academic adjustment.

Second, Depression was adopted as it had a significant effect on social adjustment.

Third, Depression was rejected as it had no significant effect on emotional adjustment.

Fourth, Depression was rejected as it had no significant effect on college satisfaction.

Fifth, Stress was adopted as it had a significant effect on academic adjustment.

Sixth, Stress was rejected as it had no significant effect on social adjustment.

Seventh, Stress was rejected as it had no significant effect on emotional adjustment.

Eighth, Stress was rejected as it had no significant effect on college satisfaction.

The above results demonstrated that depression had a significant effect on academic adjustment and social adjustment, and stress was also a major factor affecting schoolwork. Which means that depression restricts the activities of academic adjustment and social adjustment, and does not have a close relationship with psychological mechanisms – emotional adjustment and college life satisfaction. Stress had also a significant effect on academic adjustment, but did not have a direct relationship with social adjustment, emotional adjustment and college satisfaction. In other words, public depression and personal subjective stress - not the effects of mental stress from learning on depression in many of the previous studies – mean that college life had a close relationship with academic adjustment, but no significant relationship with social adjustment, emotional adjustment and college satisfaction.

Most Korean college students were affected by psychological pressure from various certificates and language proficiency tests and anxiety about future employment rather than the results of special factors for



only ophthalmic optics students or their clinically and psychologically high academic demands, which means that ophthalmic optics students who were not free from depression and stress also had the same experience. Consequently, it is required to reduce the psychological burden of academic and social adjustments through wide-ranging human exchanges by participation in social networks, participation in volunteer activities, which can escape from depression and stress beyond the eagerness to get a stable job with many specs.

In addition, the subject of this study was limited to students majoring in ophthalmic optics at colleges in some regions. Consequently, it necessary for follow-up studies to expand the research subject, and look into if depression and stress affect college life adjustment since they can occur in various areas.

## REFERENCES

- [1] J. H. Gong, C. B. Sim, S. M. Oh, E. Y. and Kim, S. H. Kim, "Effects of depression and thoughts of suicide everyday stress on the metropolitan university students", *Journal of medical administration*, Vol.3, No.2, pp. 67-77, 2016.  
DOI: <https://doi.org/10.8080/1020160138830>
- [2] J. S. Lee, "Effect of Self-Leadership and Resilience on College Adjustment in Nursing Students", *Journal of the Korea Academia-Industrial cooperation Society*, Vol.17, No.10, pp. 253-260, 2016.  
DOI: 10.5762/kais.2016.17.10.253
- [3] H. Y. Lee, "Parenting Behavior and Adjustment to College : Moderating effect of Cultural Dispositions", *Journal of North-east Asian cultures*, Vol.14, pp. 337-355, 2008.  
DOI :10.17949/jneac.1.14.200803.015
- [4] W. H. Jeon, M. J. Cho & H. J. Na, "Relationships between Anger Expression, Social Supports and Adjustment to College Life among Nursing Students", *Journal of Korean Contents* Vol.3, pp. 219-230, 2015.  
DOI :10.5392/jkca.2015.15.03.219
- [5] K. H. Kim, "Correlation of Stress-coping, Humor Sense, and Adaptation to College of Baccalaureate Nursing Students", *Journal of Korean Contents*, Vol.14, No.3, pp. 301-313, 2014.  
DOI :10.5392/jkca.2014.14.03.301
- [6][12] R. W. Baker, B. Siryk, "Measuring adjustment to college", *Journal of Counseling Psychology*, Vol. 31, pp. 179-189, 1984.  
DOI : <https://doi.org/10.1037/0022-0167.31.2.179>
- [7] H. Selye, "A syndrome produced by diverse nocuous agents", *Nature*, 138, 32, 1936.  
DOI :10.1038/138032a0
- [8] M. K. Kim, "Relationship between Depression and Suicidal Ideation of College Students", *Korea Youth Research Association*, Vol.18, No.12, pp. 101-129, 2011.  
DOI : G704-000387.2011.18.12.002
- [9] S. H. Kim, "Factors Associated with Students' Adaptation to College", *Journal of Daegu Science University*, 2018.
- [10] K. K. Chon, S. C. Choi, B. C. Yang, "Integrated Adaptation of CES - D in Korea", *Korean journal of health psychology*, Vol.6 No.1, pp. 59-76, 2001.
- [11] Linn M.W, "A global assessment of recent stress(GARS)scale", *The International Journal of Psychiatry in Medicine*, Vol.15, No.1, pp. 47-59, 1985.  
DOI : <https://doi.org/10.2190/xp8n-rp1w-ye2b-9q7v>
- [13] J. W. Hyun, *The Effects of Perfectionism Tendency and Evaluation Level on Task Performance*, Master's Thesis from Graduate School at Yonsei University, 1992.
- [14] B. H. Park, *Individual Psychological Characteristics, Parent Attachment and College Life Adjustment*, Doctoral Thesis, Chungbuk National University, 2006.