# The contribution of personality traits and academic and social adjustment to life satisfaction and depression in college freshmen

*Sanja Smojver-Ažić, Ivanka Živčić-Bećirević\* and Ines Jakovčić*
*Department of Psychology, Faculty of Humanities and Social Sciences, University of Rijeka, Croatia*

**Abstract:** The aim of this study is to investigate the role of personality traits and student academic and social college adjustment to their overall life satisfaction and depression. Sample of 492 freshmen completed a battery of measures. Hierarchical regression analyses are applied to analyze the contribution of predictor variables on life satisfaction and depression in the group of male and female students. After controlling for the personality traits, college adjustment had a significant contribution to student depression and life satisfaction. Optimism has a significant protective role only with male, but not with female students.

**Key words:** life satisfaction, depression, optimism, adjustment, students

# Prispevek osebnostnih potez in akadamske ter socialne prilagojenosti k zadovoljstvu z življenjem in depresivnostjo univerzitetnih novincev

*Sanja Smojver-Ažić, Ivanka Živčić-Bećirević\* in Ines Jakovčić*
*Oddelek za psihologijo, Fakulteta za družbene vede, Univerza v Rijeki, Hrvaška*

**Povzetek:** Želeli smo raziskati vlogo osebnostnih potez ter študentske akademske in socialne prilagojenosti študiju, splošno zadovoljstvo z življenjem in depresivnost. 492 novincev je izpolnilo baterijo vprašalnikov. Za analizo doprinosa napovednih spremenljivk na zadovoljstvo z življenjem in depresivnost smo uporabili hierarhične regresijske analize. Po kontroli osebnostnih potez, prilagoditev študiju pomembno prispeva k pojavu depresije in zadovoljstvu z življenjem pri študentih. Optimizem ima pomembno zaščitno vlogo samo pri študentih, ne pa pri študentkah.

**Ključne besede**: zadovoljstvo z življenjem, depresija, optimizem, prilagojenost, študenti

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[*]Naslov / Address: Ivanka Živčić-Bećirević, Sanja Smojver-Azic, Department of Psychology, Faculty of Humanities and Social Sciences, University of Rijeka, Slavka Krautzeka bb, 51000 Rijeka, Croatia, tel: +385 51 228 803, fax: +385 51 403 736, email: izivcic@ffri.hr

College transition is recognized as a critical developmental period accompanied by a variety of challenges that impact on several spheres of adolescent adjustment. Students make new social contacts and modify existing relations with parents, family and peers. They are supposed to develop new habits for academic environment and make new plans for the future. Because it requires adjustment to a variety of demands, adjustment to university is usually viewed as multifaceted. Baker and Siryk (1984) assumed four different types of adjustment: academic, social, emotional adjustment and institutional attachment. Academic adjustment depends on how well the adolescent manages the educational demands of the university experience. Social adjustment relates to interpersonal experience at the university, emotional adjustment indicates whether the student experiences general psychological distress or shows somatic symptoms of distress. Institutional attachment indicates the degree of commitment that the adolescent feels toward the university. Academic adjustment is a critical aspect of adolescent and young adult adaptation, related to academic perseverance and mental health problems during adulthood. Successful adjustment, particularly during the first year, predicts academic success (Deroma, Leach, & Leverett, 2009), and withdrawal from college is often linked to adjustment difficulties (Rickinson & Rutherford, 1996).

Based on several recent studies Roussis and Wells (2008) conclude that university students are nowadays struggling to cope with more severe psychological problems than in the past. A survey of approximately 13000 students in USA demonstrated that there has been an increase in the number of students manifesting severe symptoms of stress and anxiety in the last fifteen years (Benton, Robertson, Tseng, Newton, & Benton, 2003). In a large sample of Turkish university students Bayram and Bilgel (2008) found an alarmingly high prevalence of depression, anxiety and stress symptoms. The incidence of major depression among students has doubled from 1994 to 2003 and the incidence of suicide attempts has tripled in the same period (Benton et al., 2003).

Depressive symptoms and life satisfaction are important indicators of emotional adjustment in college student population. Life satisfaction as a global judgment of one's life is an aspect of subjective well-being and it is supposed to be different from ill-being usually measured as depression (Diener, Oishi, & Lucas, 2003). Psychological well-being and psychological distress are usually regarded as almost orthogonal dimensions of mental health (Headey, Kelley, & Wearing, 1993). The life satisfaction of college students has usually been examined as a precursor of withdrawal or drop-out with the common assumption that global life satisfaction depends on a specific experience in student's life (Lounsbury, Saudargas, Gibson, & Leong, 2005). Frisch et al. (2005) and Kjeldstadli et al. (2006) stress that life satisfaction predicts academic failure and retention at college.

Higher incidence of depressive symptoms in females is consistently confirmed in cross-cultural literature while gender differences in life satisfaction are frequently mixed and contradictory (Dorahy et al., 2000). The causes of such results are still not

completely understood and researchers are still trying to explain correlates, risk and protective factors related to gender differences in depression and life satisfaction.

Subjective well-being is defined as a person's cognitive and affective evaluation of life, which includes emotional reactions to events as well as cognitive judgments of satisfaction and fulfillment (Diener, Lucas, & Oishi, 2005). Life satisfaction is the cognitive component of subjective well being and means subjective evaluation of life according to subjective criteria (Pavot & Diener, 1993). Research of subjective well-being shows it's stability over time and it's correlation with stable personality traits, especially extraversion and neuroticism. Diener, Oishi and Lucas (2003) stressed that focusing solely on these two dimensions may oversimplify the complicated pattern of associations between personality and subjective well-being. Traits such as self-esteem and dispositional optimism are also related to subjective well-being (Lucas, Diener, & Suh, 1996), although it is not clear enough whether these narrower traits uniquely predict subjective well-being once the shared variance with traits such as extraversion and neuroticism is controlled. Optimism and pessimism, defined as generalized positive and negative outcome expectancies, are believed to represent important predictors of adjustment (Scheier & Carver, 1985). Scheier and Carver (1992) have studied dispositional optimism as global expectation that good things will be plentiful in the future and bad things scarce. According to their perspective of how people pursue goals, optimism leads to continued efforts to attain the goal, whereas pessimism leads to giving up.

Optimism was already confirmed as one of the significant predictors of adjustment to college as well as psychological well-being (Aspinwall & Taylor, 1992). Optimists displayed smaller increase in stress and depression during their first semester of college compared to pessimists. Besides its direct effects, optimism is related to lower usage of avoidant coping strategies, which is in turn related to fewer reports of depressive symptoms (Mosher, Prelow, Chen, & Yackel, 2006). Dispositional optimism is associated with active coping, effective problem solving and resilience in the presence of stressful life events and college settings, and with academic success (Peterson, 2000). Adjustment to university can be related to evaluations and expectations which influence feelings and understanding of events (Chemers, Hu, & Garcia, 2001; Jackson, Pancer, Pratt, & Hunsberger, 2004). According to Karademas (2006), optimism partially mediates the relation of self-efficacy and perceived social support to well-being.

The way in which students cope with adjustment difficulties depends on whether they perceive this new life situation as a challenge through which they can realize their potentials or as a threat to self-esteem and personal integrity. According to several researches, transition to university may affect men and women differently (Wintre & Yaffe, 2000), although it is not confirmed in all studies. Our previous results stress gender differences in adjustment to college. Female students are better academically and more socially adapted, but have poorer emotional adjustment comparing to male students (Živčić-Bećirević, Smojver-Ažić, Kukić, & Jasprica,

2007). We have also found that different big five personality factors are correlated with specific aspects of college adjustment in female and male students and that optimism is positively correlated with all aspects of college adjustment (Smojver-Ažić, Živčić-Bećirević, Milanović, & Sutlić, 2007).

The aim of this study was to identify predictors of life satisfaction and depression for male and female students. The contribution of student college adjustment (academic and social) to their overall life satisfaction and depression was examined after controlling the contribution of personality factors, the big five personality traits and optimism and pessimism as narrow traits. We have hypothesized that neuroticism will have the greatest contribution to depression and student wellbeing, while optimism, pessimism and college adjustment will also have additional contribution. Our hypothesis was that academic adjustment will be more important for female and social adjustment for male students' life satisfaction and depression.

## Method

### Participants and procedure

This study was a part of a longitudinal study concerning risk and protective factors of student college adjustment. In the first part of the study, a representative and randomized sample of 492 (297 females and 195 males) freshmen from University of Rijeka, Croatia, completed a battery of measures. The unbalanced distribution of gender in this sample mirrors the distribution in the student population of the University. Participants` age ranged from 18 to 24 with the mean age of 19.12. 55.3% students moved from home in order to study at this university. Group testing was organized on each faculty.

### Instruments

*The Student Adaptation to College Questionnaire* (SACQ; Baker and Siryk, 1999) is a 67 item self-report questionnaire that is widely used to measure the quality of adaptation to university life. The SACQ provides an overall index of adjustment as well as scores on four aspects of students` adjustment to university: academic, social and personal-emotional adjustment, and institutional attachment. We used 65 items because two of them were not interpretable in our sample. Factor analyses extracted three factors: emotional, academic and social adjustment to college, explaining 36.72 % of variance. Final version consists of 59 items. In this study we have used only academic and social adjustment subscales with good internal consistency (Cronbach`s alpha for academic adjustment of .90, and .83 for social adjustment). The correlation between subscales is .58.

*Beck Depression Inventory–Second Edition* (BDI-II; Beck, Steer and Brown, 1996) is a 21-item self-report measure evaluating depression symptoms. Each item is rated on a scale from 0 to 3, resulting in a total score between 0 and 63. Cronbach alpha in this sample is .90. The results vary from 0 to 44, with the mean of 7.44. Even if the average result is within normal range, 16.5% of all students have BDI above cut-off of 13.

*Big Five Inventory* (BFI; John, Donahue and Kentle, 1991) is a self-report measure of five broad personality traits: extraversion, agreeableness, conscientiousness, neuroticism, and openness to experience. Using a five-point Likert scale, from 1 (*strongly agree*) to 5 (*strongly disagree*) participants rate themselves on 44 descriptive phrases, such as, "is talkative" or "is sometimes rude to others." The BFI is an internationally well established instrument for assessment of the Big Five and its reliability and validity have been proven in numerous studies (e.g. John and Srivastava, 1999). Internal consistency in this study ranged from acceptable to excellent: 0.80 for Neuroticism, 0.78 for Extraversion, 0.75 for Openness, 0.72 for Agreeableness, and 0.83 for Conscientiousness.

Optimism was assessed using *Life Orientation Test* (LOT; Scheirer and Carver, 1985). The LOT is eight-item plus four filler items self-report measure assessing generalized expectancies for positive versus negative outcomes. Responses on a 5 point Likert-type scale range from 0 (*strongly disagree*) to 4 (*strongly agree*). We have used LOT as a two-dimensional scale. The Cronbach alpha for optimism is .69 and for pessimism .72.

*Life satisfaction*. A single item survey question with an 8-point Likert type scale (0-7) was used. Students had to assess how satisfied they were with their life at the moment. The average assessment of 5.2 indicates that students are relatively satisfied with their life in general.

## Results

Gender difference in all variables were tested by *t*-test for independent samples. The results are presented in Table 1.

Females have more depressive symptoms and show higher neuroticism and openness. They are also better academically adjusted to college compared to males, while there is no sex difference in social adjustment.

Hierarchical multiple regression analyses (method enter) were performed to answer our main research question. Big five traits were entered in the first step, optimism and pessimism in the second step and academic and social college adjustment in the third step. Separate analyses have been done for life satisfaction and depression as criteria, in the sample of females and males. First, we calculated the correlation among all the variables included in the regression analysis. The results are shown in Table 2 and Table 3.

Table 1. *Differences between male and female students (t-test)*

|  | Males ($N = 167$) | | Females ($N = 262$) | | |
|---|---|---|---|---|---|
|  | *M* | *SD* | *M* | *SD* | *t* |
| Neuroticism | 10.43 | 4.92 | 12.65 | 5.52 | 4.23*** |
| Extraversion | 20.89 | 4.78 | 21.13 | 5.22 | 0.47 |
| Openness | 25.52 | 5.57 | 27.12 | 5.83 | 2.83** |
| Agreeableness | 24.17 | 5.23 | 24.64 | 4.83 | 0.96 |
| Conscientiousness | 22.20 | 6.00 | 22.47 | 5.50 | 0.49 |
| Optimism | 10.74 | 2.84 | 10.44 | 3.08 | 1.10 |
| Pessimism | 5.91 | 3.24 | 5.86 | 3.16 | 0.17 |
| Academic adjustment | 123.07 | 23.63 | 131.65 | 23.79 | 3.65*** |
| Social adjustment | 64.32 | 14.89 | 66.19 | 15.39 | 1.25 |
| Depression | 6.24 | 5.98 | 8.29 | 7.96 | 2.85** |
| Life satisfaction | 5.30 | 1.28 | 5.10 | 1.31 | 1.58 |

**$p < .01$, ***$p < .001$

The Pearson coefficients indicate significant correlation between all the predictor variables, besides openness, and both criteria of student adjustment (life satisfaction and depression). The direction of the correlations is as expected (Lounsbury et al., 2005).

The variables entered in each step significantly contribute to life satisfaction and depression. All included predictors explain 43% variance of life satisfaction in females and 34% in males. Personality traits accounted for the most part of the variance, but when college adjustment was entered in the third step, only neuroticism had a significant contribution to life satisfaction in females, while optimism is a significant predictor in males. The social adjustment is the significant predictor of life satisfaction in the last step in both groups of students and the academic adjustment only in females.

The predictors altogether explain 45% variance of depression in females and 49% in males. Again personality traits accounted for the most part of the variance. Neuroticism and pessimism have a significant individual contribution to depression in both groups, while optimism stays a significant predictor of depression only in males. Both aspects of college adjustment are significant negative predictors of depression in both groups of students.

## Discussion

The results of the present study confirm our previous findings about gender differences in some aspects of students' adjustment at the beginning of college

Table 2. *Correlations between all included variables, separately for males and females*

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) | (11) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| (1) Life satisfaction | | -.54** | .06 | .27** | -.43** | .36** | .18** | -.41** | .51** | .47** | .47** |
| (2) Depression | -.51** | | -.02 | -.34** | .50** | -.31** | -.17** | .45** | -.47** | -.47** | -.41** |
| (3) Openness | .08 | -.13 | | .02 | -.13* | .29** | .16** | .31** | -.22** | .16** | .27** |
| (4) Conscientiousness | .21** | -.33** | .05 | | -.34** | -.13 | .29** | .31** | -.25** | .42** | .25** |
| (5) Neuroticism | -.39** | .54** | -.19* | -.32** | | -.39** | -.36** | .23** | .47** | -.28** | -.27 |
| (6) Extraversion | .32** | -.31** | .30** | .36** | -.45** | | .09 | -.36** | -.43** | .34** | .35** |
| (7) Agreeableness | .21** | -.29** | .14* | .36** | -.45** | .28** | | .31** | -.46** | .27** | .27** |
| (8) Optimism | .43** | -.35** | .28** | .17* | -.39** | .44** | .32** | | -.57** | .33** | .24** |
| (9) Pessimism | -.34** | .50** | -.12 | -.36** | .52** | -.33** | -.35** | -.35** | | -.38** | -.29** |
| (10) Academic adjustment | .27** | -.45** | .11 | .53** | -.30** | .29** | .32** | .19** | -.38** | | .63** |
| (11) Social adjustment | .38** | -.40** | .17* | .24** | -.30** | .37** | .24** | .27** | -.17* | .49** | |

*Note.* Correlations for females are presented above diagonal. Correlations for males are presented below diagonal.

*p < .05, **p < .01

Table 3. *Regression analysis (method enter) for depression and life satisfaction in the group of male and female students*

| Step | Predictors | Depression | | | | | | Life satisfaction | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Males | | | Females | | | Males | | | Females | | |
| | | β | $\Delta R^2$ | $R^2$ | β | $\Delta R^2$ | $R^2$ | β | $\Delta R^2$ | $R^2$ | β | $\Delta R^2$ | $R^2$ |
| 1 | Personality | | | .32*** | | | .29*** | | | .18*** | | | .25*** |
| | Neuroticism | .47*** | | | .42*** | | | | | | | | |
| | Extraversion | | | | | | | -.32*** | | | -.30*** | | |
| | Conscientiousness | -.18* | | | -.15** | | | | | | .24*** | | |
| 2 | Optimism–pesimism | | .08*** | .40*** | | .06*** | .35*** | | .10*** | .27*** | | .04*** | .29*** |
| | Neuroticism | .33*** | | | .29*** | | | -.20* | | | -.19** | | |
| | Extraversion | | | | | | | | | | .17** | | |
| | Openness | | | | .11* | | | | | | | | |
| | Conscientiousness | -.16* | | | -.14* | | | | | | | | |
| | Optimism | -.18* | | | | | | .33*** | | | | | |
| | Pessimism | .27*** | | | .25*** | | | | | | -.20** | | |
| 3 | Adjustment to college | | .09*** | .49*** | | .09*** | .45*** | | .07*** | .34*** | | .13*** | .43*** |
| | Neuroticism | .29*** | | | .31*** | | | | | | -.21*** | | |
| | Openness | | | | .16** | | | | | | | | |
| | Optimism | -.15* | | | | | | .31*** | | | -.12* | | |
| | Pessimism | .26*** | | | .17** | | | | | | | | |
| | Academic adjustment | -.16* | | | -.20** | | | | | | .24*** | | |
| | Social adjustment | -.25*** | | | -.21*** | | | .30*** | | | .25*** | | |

*$p < .05$, **$p < .01$, ***$p < .001$

(Živčić-Bećirević, Smojver-Ažić, Kukić, & Jasprica, 2007). Females are better academically adjusted to college compared to males, but they have more depressive symptoms. Larose and Roy (1995) found that females have better learning strategies from early school age and are more persistent in their academic strivings. The higher incidence of depressive symptoms found in female compared to male students is well known. With just a few exceptions, the prevalence, incidence and morbidity risk of depressive disorders are higher in females than in males, beginning at mid-puberty and persisting through adult life (Piccinelli & Wilkinson, 2000).

Still, the results on gender differences in student adjustment to college are not always consistent. Enoch and Roland (2006) found that male freshmen are better in all aspects of college adjustment. Similar to findings of other authors (Kjesldstadli et al., 2006; Penezic, 2006; Haring, Stock, & Okun, 1984) we did not find any gender difference in students' life satisfaction.

The high negative correlation between life satisfaction and depression is expected and in accordance to other studies (Headey et al.,1993). We have also found that life satisfaction and depression have very similar correlations with personality and adjustment variables. This result may lead to a possible conclusion that lack of life satisfaction can result in depression and that life satisfaction can be a protective factor in the development of depression. On the other side, our results also suggest that these two aspects of well-being are specific and explained by different predictors in the samples of male and female students. Optimism significantly contributes to life satisfaction only in males and it seems to protect them from depressive symptoms. Both aspects of college adjustment significantly contribute to females' life satisfaction, while just social and not academic adjustment is important for males' life satisfaction. Benjamin and Hollings (1997) also found that male and female students derive satisfaction on different bases.

Personality traits accounted for the most part of the variance of life satisfaction and depression in all students. Lounsbury et al. (2005) confirmed that life satisfaction was best predicted with the Big Five traits and suggested that who students become in college and how satisfied they are with different aspects of college experience may be primarily determined by who they are when they enter college.

According to our results extraversion and neuroticism were significant predictors of life satisfaction only for females although, when variables of adjustment to university were entered, extraversion was no longer a significant predictor. It might be that it's significance shows through the facet of warmth and friendliness which are expressed in social adjustment to university. The relation between personality traits and life satisfaction may vary depending on information used in it's evaluation (Schimmack, Oishi, Furr, & Funder, 2004). In our study life satisfaction was measured as a cognitive component of well-being where subjects evaluate their life through information they find relevant for them.

As it was found in other studies (Finch & Graziano, 2001), the role of personality in explaining depression is confirmed. According to our results, Neuroticism and

Conscientiousness explained one third of the variance in the first step of the analysis but, when social and academic adjustment were entered, Conscientiousness was no longer a significant predictor of depression. It is possible that this trait is expressed through inadequate academic adjustment which significantly contributes to depression.

The role of optimism and pessimism in college adjustment is confirmed as we have found in our previous study (Smojver-Azic, Zivcic-Becirevic, Milanovic, & Sutlic, 2007). Optimism was significantly associated with social, academic, personal adjustment measures and goal commitment, similar to the results in the study of Montgomery, Haemmerlie and Ray (2003). Our finding that optimism and pessimism are significant predictors of well-being after controlling the broader personality traits confirms the predictive power of these narrower personality traits. Vickers and Vogeltanz (1998) also stressed the role of dispositional optimism in the prediction of future depressive symptoms over and above the initial level of depression and variables of positive and negative affect.

In addition to their significant role in explaining different aspects of adjustment, results of our study confirmed optimism and pessimism as partially independent measures (Chang, Maydeu-Olivares, & D'Zurilla, 1997) with different roles in mental health of male and female students. While pessimism is a significant predictor of depression for all students, low optimism significantly contributes to depression only in male students. The role of pessimism in explaining depression is confirmed in many studies (i.e. Chang et al., 1997) and it is in accordance with the commonly accepted view that pessimism (rather than lack of optimism) is an important vulnerability factor associated with psychological adjustment. Optimism plays important role in life satisfaction again only in male students. Brisette, Scheier, and Carver (2002) confirmed the role of optimism in better adjustment to stressful life events for students. In their research greater optimism at the beginning of the first semester was associated with smaller increases in stress and depression and greater perceived social support. Chang and Sanna (2003) have found that optimism, but not pessimism, exacerbated the association between accumulated negative life stress and poor psychological outcomes. These results support the hypothesis that optimism is not simply the absence of pessimism and vice versa.

Our results suggest that, besides personality, quality of student college adjustment has an additional effect in explanation of students' life satisfaction and depression. Lent, Taveira, Sheu and Singley (2009) stressed that domain satisfaction is one of the precursors of overall life satisfaction, because it is related to different social cognitive mechanisms such as goal-directed activity, outcome expectations and environmental support and resources. The feeling of pursuing personally valued goals in an important life domain is an important predictor of well-being (Brunstein, 1993).

Social adjustment as an important domain for all students' well-being is significant predictor both for life satisfaction and depression. Students who perceived

themselves as well integrated in social activities, involved in satisfactory relations with others and who are in general satisfied with social aspects of university environment are more satisfied with their overall life, while students who don't have good relations with others are more depressed.

On the other side, we have found some gender differences in the role of the academic adjustment. Poor academic adjustment can contribute to depression in all students, but good academic adjustment predicts life satisfaction only in females. It seems that they place more stress on academic achievements in their assessment of life satisfaction, while male students rely more on other things, such as their social functioning. In a predominantly female sample Lent et al. (2009) also found that positive academic adjustment predicted overall life satisfaction. Students who perceived success in coping with the various academic demands, with positive attitudes toward academic goals and work, who are motivated and meet well academic requirements, who feel successes and are satisfied with the academic environment, are generally satisfied with their life.

One of the limitations of this study is that we have used only self-report measures, even if adjustment could also be measured in objective terms (e.g. grade performance, persistence at college). Even if we have measured global life satisfaction with just one-item, our results, as well as other studies, prove it's validity through correlations with other subjective well-being scales (Kjeldstadli et al., 2006).

In conclusion, results of our study confirm contribution of student academic and social adjustment to their overall life satisfaction and depression after controlling the contribution of personality factors, the big five personality traits and optimism and pessimism as narrow traits. We also confirmed our hypothesis that different factors predict life satisfaction and depressive symptoms in male and female students. All these results can be used for enhancing subjective well-being through student counseling services and programs for promoting optimism and better academic and social adjustment of our students. We plan to further follow the same group of students for the next three years to get more prospective data and see how some aspects of student adjustment at the beginning of college contribute to later adjustment, measured by some subjective, as well as objective measures.

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