

# The relationship between personality traits and affect with students' adaptation to student life during the COVID-19 pandemic

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## Abstract

*Transition to higher education is stressful for many students, and the success of adaptation to college is related to personality traits and affective experience. Also, the COVID-19 pandemic has brought changes to everyday life and the learning environment. The aim of this study was to examine the contribution of personality traits and affective experience in explaining adaptation to college among first-year students during the COVID-19 pandemic. The research was conducted on students (N = 119) in Croatia who were in their first year of studies during the pandemic. Participants filled in the Big Five Inventory–2 Short Form, Student Adaptation to College Questionnaire and the Croatian adaptation of the short form of the Positive and Negative Affect Schedule. Results showed that personality traits and affective experience were significant predictors of adaptation to college, explaining 50% of the academic adjustment variance, 46% of the emotional adjustment variance and 40% of the social adjustment variance. Students who experienced more positive affect had better academic adjustment, those who experienced less negative affect had better emotional adjustment, while students with higher extraversion and those who experienced more positive affect had better social adjustment. Results of this study confirm the importance of individual characteristics in adaptation to college during the pandemic.*

**Keywords:** *personality traits; positive affect; negative affect; student adaptation to college; COVID-19*

## Introduction

A novel coronavirus (SARS-CoV-2) appeared in December 2019 (Zhu et al., 2020), and because of its wide distribution and high prevalence, the World Health Organization declared the outbreak

of COVID-19 a pandemic in March 2020 (Cucinotta & Vanelli, 2020). In order to reduce the spread of COVID-19, preventive measures were taken by governments, such as closure of public spaces and educational institutions (European Centre for Disease Prevention and Control, 2022). Therefore,

faculties had to switch to online learning. Students had difficulties in adapting to the online learning environment, and the greatest challenges were interaction and technology (Elshami et al., 2021; Pavin Ivanec, 2022). Under such circumstances, freshmen college students had to face an additional challenge – adaptation to the new academic environment.

According to Tinto (1975), individual and social characteristics will influence students' integration into higher education. In line with Tinto's integration model, Baker and Siryk (1984) developed the Student Adaptation to College Questionnaire (SACQ). They included academic and social adjustment, but also two additional categories: emotional and institutional adjustment. Academic adjustment is a degree of students' adaptation to academic demands (e.g., compatibility of invested effort and academic results). Social adjustment is a degree of students' adaptation into the social environment of the college (e.g., they participate in college activities and meet new friends). Emotional adjustment refers to a degree of students' experience of psychological or physical symptoms (e.g., stress and anxiety) in response to a new academic environment. Finally, institutional adjustment refers to a degree of students' identification with the university community (Credé & Niehorster, 2012).

Previous research has shown that personality traits, which are mostly stable characteristics throughout life (Lönqvist et al., 2007; Robins et al., 2001; Soldz & Vaillant, 1999), are correlated with adaptation to college. In general, research has shown that extraversion, neuroticism and conscientiousness are related to adaptation to college (Abood et al., 2020; Araújo et al., 2019; Feldt et al., 2011; Puher, 2009), while some research has also found correlations with openness to experience (Abood et al., 2020) and agreeableness (Feldt et al., 2011; Puher, 2009). More precisely, extraversion is correlated with social adjustment, neuroticism with personal adjustment, and conscientiousness with study experiences (Araújo et al., 2019). Furthermore, positive and negative affectivity correlate with adjustment to college (Halamandaris & Power, 1997). Students who experience more positive and

less negative emotionality have better overall adjustment to college (Credé & Niehorster, 2012).

In this research, the context of pandemic could play a role in the above mentioned associations. There was a high prevalence of anxiety, depression and stress symptoms among students (Talapko et al., 2021). Also, higher levels of neuroticism were associated with higher levels of perceived stress, while high levels of conscientiousness and agreeableness were associated with better mood over time (Rettew et al., 2021). The aim of this study was to examine the contribution of personality traits and affective experience to the adaptation to college among freshman students during the COVID-19 pandemic. Our hypotheses were that students higher on extraversion, conscientiousness, openness to experience and positive affect and lower on negative emotionality and negative affect will have better overall adjustment to college. Students with higher extraversion and positive affect will have better social adjustment, students with higher conscientiousness will have better academic adjustment, and students with higher positive and lower negative affect will have better emotional adjustment.

## Method

### Participants and procedure

Participants in this study were students ( $N = 119$ ) from different studies of the Universities of Zagreb, Rijeka, Osijek, Zadar and Split, who were in their first year of studies during the academic year 2020/2021. Most of the participants were women (83.2%) and students of the University of Zagreb (71.4%). The average age of the sample was 20.1 (range: 19-27 years;  $SD = 0.95$ ). The majority of students had lectures mostly online (58.8%), while 27.7% of students had lectures completely online. Data were collected using the Google Forms whose link was shared in Facebook groups for students (e.g., *Students of Croatia, University Campus Rijeka, Students from Split*) between 7th February and 7th March 2022, after the study was approved by the Ethical Committee of the Department of Psychology at the Faculty of Social Sciences and Humanities, University of Zagreb.

## Measures

The Big Five Inventory–2 Short Form (BFI-2-S; Soto & John, 2017) was used for measuring five personality dimensions: open-mindedness (*I am someone who is original, comes up with new ideas.*), agreeableness (*I am someone who is compassionate, has a soft heart.*), negative emotionality (*I am someone who worries a lot.*), conscientiousness (*I am someone who keeps things neat and tidy.*) and extraversion (*I am someone who is outgoing, sociable.*). The inventory consists of 30 items, and each personality dimension is measured with 6 items on a 5-point Likert scale, from 1 (*I strongly disagree*) to 5 (*I strongly agree*). Cronbach's alphas were adequate for all five scales, .78 for extraversion and agreeableness, .73 for open-mindedness, 0.81 for negative emotionality and .81 for conscientiousness.

The Croatian adaptation of a shortened form of the Positive and Negative Affect Schedule (PANAS-X; Križanić, 2013; Waston & Clark, 1994) consists of eight adjectives reflecting positive affect (e.g., inspired, enthusiastic), and eight adjectives reflecting negative affect (e.g., irritable, nervous). Participants rated to what extent they had experienced each emotion in the past year (academic year 2020/2021) on a 7-point Likert scale ranging from 1 (*not at all*) to 7 (*extremely*). Cronbach's alpha coefficients were .88 for negative affect and .89 for positive affect.

Student Adaptation to College Questionnaire (SACQ; Baker & Siryk, 1984) consists of 67 items and four subscales: academic adjustment, social adjustment, personal-emotional adjustment and institutional attachment. For this research, we used three subscales: Academic adjustment scale which measures how students cope with different educational demands, Social adjustment scale which measures how students adapt to new social environment, and Emotional adjustment scale which measures a student's psychological state, and the extent to which a student is experiencing psychological distress. Institutional adjustment was not used in this study because its factor structure was not confirmed in some studies, and many

items overlap with items on other scales (Taylor & Pastor, 2007; Živčić-Bećirević et al., 2007). Participants were asked to rate to what extent items referred to their study experience in the academic year 2020/2021 during the COVID-19 pandemic, on a 5-point scale ranging from 1 (*does not apply to me at all*) to 5 (*completely applies to me*). Cronbach's alpha coefficients were .84 for academic adjustment, .80 for emotional adjustment and .90 for social adjustment.

## Results

Descriptive statistics and intercorrelations between study variables are presented in Table 1. All results were distributed normally, with skewness and kurtosis values being in the range from -1 to +1.

A t-test and a one-way ANOVA were used to compare the scores across different groups. Females reported lower scores on emotional adjustment than males ( $t=3.12, p<.01$ ). Also, females reported higher scores on negative affect ( $t=-2.94, p<.01$ ). With regard to the way lectures were conducted during the pandemic ("completely online", "mostly online", "mostly onsite" or "completely onsite"), there is a significant difference in social adjustment ( $F=15.32, p<.001$ ).

In order to examine the relationship between variables, the Pearson correlation coefficients were calculated. Academic and emotional adjustments correlated positively with positive affect, and negatively with negative affect and negative emotionality. Students who experienced more positive and less negative affect and had lower scores on negative emotionality have higher results on academic and emotional adjustment to college. Social adjustment was correlated positively with positive affect and extraversion, and negatively with negative affect and negative emotionality. Therefore, these correlations indicate that students who experienced more positive and less negative affect and had higher extraversion and lower negative emotionality scores might have had better social adjustment to college.

**Table 1.** Descriptive parameters and Pearson correlation coefficients between three subscales of SACQ, positive affect, negative affect and five personality dimensions ( $N = 119$ )

Subscale	$M (SD)$	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Academic adjustment	27.62 (6.76)	-									
2. Emotional adjustment	20.88 (5.85)	0.54*	-								
3. Social adjustment	25.08 (8.39)	.32*	.39*	-							
4. Positive affect	3.88 (1.16)	.69*	.52*	.55*	-						
5. Negative affect	4.24 (1.29)	-.53*	-.67*	-.42*	-.56*	-					
6. Extraversion	3.17 (0.88)	.07	.24	.41*	.16	-.17	-				
7. Agreeableness	3.84 (0.75)	.20	.06	.16	.11	-.15	.20	-			
8. Conscientiousness	3.36 (0.87)	.12	.04	.13	.11	.01	.40*	.37*	-		
9. Negative emotionality	3.30 (0.90)	-.42*	-.48*	-.45*	-.43*	.58*	-.39*	-.19	-.25*	-	
10. Open-mindedness	3.59 (0.83)	.09	.06	.22	.12	.03	.49*	.09	.27*	-.12	-

Note. \* $p < .01$ .

**Table 2.** Results of the hierarchical regression analysis

Type of adaptation to college	Academic $\beta$	Emotional $\beta$	Social $\beta$
Step 1			
extraversion	-.19	.12	.27
agreeableness	.14	-.01	.07
conscientiousness	.00	-.11	-.11
negative emotionality	-.45**	-.47**	-.35**
open-mindedness	.11	-.02	.07
$R^2$	.18**	.21**	.25**
Step 2			
extraversion	-.17	.11	.28*
agreeableness	.10	-.07	.05
conscientiousness	.04	-.02	-.09
negative emotionality	-.11	-.08	-.14
open-mindedness	.08	.00	.04
positive affect	.54**	.19	.41**
negative affect	-.18	-.50**	-.05
$R^2$	.50**	.47**	.40**
$\Delta R^2$	.32**	.25**	.15**

Note.  $\beta$  – standardized regression coefficient,  $R^2$  – coefficient of multiple determination,  $\Delta R^2$  – change in the coefficient of multiple determination, \* $p < .01$ , \*\* $p < .001$

To further understand the associations of personality and affect with adjustment to college, we ran a series of hierarchical regression analysis, predicting each of adjustment domains with personality traits entered in the first step, and positive and negative affect entered in the second step. Results are presented in Table 2. The results from step 1 mirrored the results from the correlational analysis. Negative emotionality was a significant predictor of all three adjustment domains. However, when affective experience was added in the second step, negative emotionality was not a significant predictor any more. For social adjustment, extraversion and positive affect were significant predictors, positive affect was the only significant predictor for academic adjustment, while for emotional adjustment the only significant predictor was negative affect. Personality traits and affective experience explained 50% of the academic adjustment variance, 47% of the emotional adjustment variance, and 40% of the social adjustment variance. Estimated regression coefficients could be inflated and unreliable indicators due to multicollinearity (VIF values are between 1.19 and 1.99). Negative emotionality and negative affectivity have the highest VIF value, which means there is an overlap between these two variables.

## Discussion

Results of this study confirmed the importance of personality traits and affective experience for the adaptation to college during the pandemic among first-year students. Correlational analysis indicated that personality traits, negative emotionality and extraversion, as well as positive and negative affect are important for adaptation to college. The results of regression analyses indicate that students who experienced more positive affect might have had better academic and social adjustment, while those who experienced less negative affect might have had better emotional adjustment. Although negative emotionality was a significant predictor in the first step, it was not a significant predictor in the second step, when positive and negative affect were added to the analysis.

Findings of this study are partially consistent with previous research. Positive and negative affect, as well as neuroticism, extraversion and conscientiousness have been found to correlate with adjustment to college (Araújo et al., 2019; Halamandaris & Power, 1997). Positive affect has been found to predict academic and social adjustment, and could have an important role because of its 'undoing-effect' on negative affect (Moneta et al., 2012). Furthermore, according to the 'broaden-and-build theory', positive emotions broaden individuals' thought-action repertoires, leading to strengthened intellectual, social and psychological resources, which are important in coping and resilience (Fredrickson, 2004). Therefore, positive affectivity could have relevant role in coping with a stressful situation such as adapting to new environment. Also, higher levels of positive affectivity and lower levels of negative affectivity are related to fewer emotional and behavioral difficulties, while fewer emotional and behavioral difficulties are related to better academic achievement (Sánchez-García et al., 2018). Therefore, positive affect, as one form of personal resource and protective factor, could contribute to better adaptation to college.

It seems that students higher in extraversion may have better social adjustment in specific circumstances such as the COVID 19 pandemic as well. Previous research has also shown that extraversion is correlated with social adjustment (Araújo et al., 2019; Kurtz et al., 2012), and students who have not developed relationships with other students have worse overall adjustment to college (Halamandaris & Power, 1997). Students higher in extraversion report better social experiences throughout college, they are more socially connected than less extraverted students, feel more like belonging to university, and they are therefore more satisfied with college and life (Harris et al., 2017). Also, research has shown that social connection in adolescence is associated with better well-being in adulthood, and is a better predictor of well-being than academic achievement (Olsson et al., 2013).

Implications of this study findings are that students may have some predispositions that determine how successfully they will adapt to a new

environment. Therefore, it is necessary to identify students that might not adapt well, facilitate their adaptation by educating them about this transition period, and provide them with psychological support at the beginning of their studies.

This research has some limitations that should be mentioned. Firstly, the sample is not representative – it consists mostly of women and students of the University of Zagreb. The non-probability sample in this research is probably biased, which could distort results and lead to unreliable conclusions. It represents a threat to external validity, and the results may therefore not generalize to the population. Also, due to a relatively small sample size, statistical power may be small, which may undermine true associations and cause inflation of obtained results. Also, research was conducted two years after the COVID-19 pandemic and online education started, so students reported about their experiences retrospectively, which may not be the most accurate reflection of the actual experiences. Because of these retrospective ratings, the predictor and criteria are not located in the same space in time. Therefore, the results of the regression analysis should be taken with caution. Another limitation is that the only method that was used is the self-report method, and the results could be inflated due to method variance. Furthermore, adjustment to college, a construct that can change over time, was examined at a single point in time. Future research should conduct a longitudinal study in order to examine whether students have better adjustment in the higher years of study, and which factors contribute to better adaptation.

## Conclusions

In conclusion, our results confirm the relevance of personality traits and affective experience in adapting to college in the first-year students during the COVID-19 pandemic. Experiencing more positive and less negative affect during the pandemic helped students to better adjust to college. More extraverted students reported that they adapted more successfully to new social environments, even when

circumstances did not enable much socializing of students due to COVID-19 restrictions. Our findings emphasize the importance of taking into consideration individual characteristics during assessments and interventions with students in the transition to higher education.

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