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Abstract

Transition from high school to college can be a struggle for many students. To support the first-year college students during the transition, various factors can be taken into consideration. In this study, we focused on the role of resilience, social self-efficacy, college orientation, and student organization involvement in college adjustment among the first-year Turkish college students. Using snowball sampling, we distributed our online survey package across Turkey and recruited a total of 346 participants. To measure the concept of college adjustment, we developed and validated Turkish language version of the Inventory of New College Student Adjustment (INCA-T) due to the limitations of existing instruments. The confirmatory factor analysis results indicated that the 10-item INCA-T revealed a good fit with Turkish sample. Then, using INCA-T, we evaluated the relationship among college adjustment, resilience, social self-efficacy, attendance of a student orientation program, and involvement in student organizations. Multiple regression analysis results showed that resilience and social self-efficacy were significant predictors of college adjustment among the first-year students. Also, individuals participating in student orientation and student organizations reported significantly greater adjustment to college. Considering the findings of the present study, we discussed implications for faculty advisors and college counselors, then provided recommendations for future researchers.

Key words: College adjustment, Resilience, Social self-efficacy, Orientation, First-year student

Introduction

Higher education enrolments have increased globally (The World Bank, 2019) and the numbers are expected to grow continuously by 2030 (OECD, 2019). In 2017, 35% of individuals completing secondary education enrolled in higher education in OECD countries, while in 2018, this percentage increased from 35% to 44%. In the United States (USA) alone, 16.8 million students enrolled in an undergraduate program in 2017, and undergraduate enrolment is expected to increase by 3% (from 16.8 to 17.2 million students) between 2017-2028 (NCES, 2019). With numbers increasing each year, student retention and graduation rates become highly important for institutions (Haktanir et al., 2018). For instance, 40% of undergraduate students drop out of school at any time of their studies, and approximately 30% dropout within the first year in the USA (Bustamante, 2019). In order to prevent college dropouts and retain students, the concept of college adjustment has become a significant factor, not only in research, but also in practice through advising and counseling.

College adjustment is defined as a combination of an individual"s academic, social, personal emotional, and institutional adaptation experiences to an academic institution (Baker & Siryk, 1984; 1986). In other words, to develop a positive college adjustment experience, individuals need to meet academic requirements while enhancing social interactions in campus life and having a sense of attachment to the institution (Baker & Siryk, 1984). In a recent study, the Inventory of New College Student Adjustment (INCA) was developed to measure addressing salient issues related to adjustment experiences of contemporary college students (Watson and Lenz, 2018). Researchers reported that being a first-year student can be stressful and challenging (Berardi et al., 2019). Settling a new life away from home, dealing with a new set of academic expectations, having emotional and relational problems may overwhelm first-year students (Bowman et al., 2019; Credé & Niehorster, 2012;

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Karaman et al., 2019) and these challenges may put students at risk of lower academic functioning, lower wellbeing, and even dropouts (Bruffaerts et al., 2018; Credé & Niehorster. 2012).

Various factors can be taken into consideration in promoting transition to college. Researchers examined the role of generational status (i.e., first-generation vs. continuing-generation of college students) (Asperlmeier et al., 2012; Yang, 2020), social support (Berardi et al., 2019; Quan et al., 2014), parental attachment (Bishop et al., 2019), familial factors (Karaman & Sari, 2020), and orientation attendance (Martin & Dixon,1994; Perrine & Spain, 2008) in relation to college adjustment. Although freshman orientation programs have become a norm at academic institutions, researchers (e.g., Martin & Dixon, 1994; Perrine & Spain, 2008) found no significant relationship among freshmen‟s orientation attendance, college adjustment, and retention. However, the most recent of these studies were conducted more than a decade ago during which college student orientation might have drastically transformed.

Taken all together, the literature provides information regarding the relationship between college adjustment and conceptually related factors (e.g., Bishop et al., 2019; Haktanir et al., 2018; Karaman & Sari, 2020). However, research results should not be overlooked, as results may change across regions and countries. In the present study, we aimed to examine college adjustment and its relationship with resilience, social self-efficacy, student involvement in college orientation and student organizations among first-year undergraduate students in Turkey. To assess the concept of college adjustment, a proper instrument was needed due to the limitations of existing instruments, which are comprehensive and not theory driven. Thus, we decided to translate the INCA (Watson & Lenz, 2018), which is a 14-item scale, into Turkish language and evaluate its psychometric properties instead of developing a new instrument, as the INCA is a practical, reliable and cross culturally validated instrument. Then, we utilized the INCA-T in analysis.

Resilience and Social Self-Efficacy

The term resilience means bouncing back from a negative emotional experience and adapting a stressful and challenging situation well (Masten, 2014). As college is a particularly stressful time for many young adults with leaving home and transitioning into a new chapter of life, resilience becomes a critical concept for college students. Haktanir and colleagues (2018) conducted a study to assess the relationship between resilience, academic self-concept and college adjustment among first-year students. The study results showed that students reporting higher resilience tended to report higher college adjustment. Banyard and Cantor (2004) examined college adjustment among trauma survivors and found that individuals making positive meaning from traumatic experience tend to report higher resilience and positive adjustment. According to Kim and Lee (2018), being a resilient student not only made college adjustment easier but also helped with college to work transition. Further, the results indicated that resilient students were likely to use more emotion regulation strategies and had higher career satisfaction compared to maladaptive students (Kim & Lee, 2018).

Individuals‟ abilities to engage in social relationships and perceived social support are also positively related concepts to adjustment to college (Azmitia et al., 2013; Kingery et al., 2019; Medina, 2018). However, individuals' belief in their abilities to develop and maintain a social relationship is different from an actual social interaction, and this is called social self-efficacy (Wright el al., 2013). The term social self-efficacy is based on the self-efficacy theory of Albert Bandura, which asserts that the expected outcome of a situation is greatly associated with individuals‟ perceived ability about the situation (Wright el al., 2013, p. 219). In other words, when a college student is confident going out with others and communicating with them, this student will likely to believe that talking and going out with others will enhance their social relationship. Although researchers found that self-efficacy positively related with college and life satisfaction (DeWitz & Walsh, 2002; Wright & Perrone, 2010), and mediated the association between attachment anxiety and feelings of loneliness and depression (Wei et al, 2005), there is scant literature available in regard to the relation between social self-efficacy and college adjustment among first year students.

Higher Education in Turkey

Higher education enrolment numbers have been increasing since 2005 in Turkey (Our World in Data, 2014), and 7.2 million students enrolled in an undergraduate program in 2019, while 1.1 millions of whom were freshmen students (CHI, 2019). In Turkey, admission to an undergraduate program is determined based on the central university entrance exam and placement (CUEEP) results. The CUEEP, which is the only criterion determining the university and program admission results, takes place once a year and may cause students to get stressed about their academic and professional lives. Since the admission is based solely on the CUEEP scores, changing majors in Turkey is quite strenuous. In order to change a major, students need to retake the exam and

wait at least a year to apply to a different program. Consequently, many students who had different interests or dreams feel trapped in a program they selected only because they could not score higher in the CUEEP. Therefore, first-year students in Turkey may experience unique stressors in the transition and may need extra support to develop positive adjustment to retain and graduate on time (Bülbül & Acar-Güvendir, 2014; Dogan, 2012; Mercan & Yıldız, 2011). Nevertheless, there are not yet sufficient support mechanisms designed at universities. For instance, the office of student affairs and faculty advisors are two main support resources, but they only provide assistance to first-year students with course enrolment. Although counseling centers could be another resource for freshmen, only limited numbers of universities have well-established counseling centers in Turkey and many university counseling centers are understaffed (Ulus et al., 2019). Therefore, professionals working in these centers serve all students with numerous problems in the university with their limited time (Erkan et al., 2011). Ultimately, not all universities provide orientation programs for first-year students. Therefore, not only we believe that further investigation on the topic is warranted, but we also believe that first-year students‟ needs may be overlooked in such circumstances.

College Adjustment Research in Turkey

Several studies investigated the role of numerous variables (e.g., coping styles, resilience, social support, optimism, problematic internet usage, etc.) in relation to first-year college adjustment in Turkey (İkiz et al., 2015; Rahat & İlhan, 2016; Soncu Buyukiscan, 2018; Yalim, 2007). Researchers reported positive relationships with college adjustment, social support, coping style (Rahat & Ilhan, 2016), and resilience as well as optimism (Yalim, 2007). A qualitative study conducted by Sevinc and Cem (2014) examined common factors negatively affecting college adjustment, and findings indicated that lack of support from faculty, campus friends, and family were some of the main factors of negative college adjustment. In the same study, a sense of limited connection to an academic institution and participation in social activities were also listed as additional negative factors. Additionally, while a limited number of universities provide an orientation program for freshmen students in Turkey, to our knowledge, only one study examined the effectiveness of a brief orientation program in a Turkish university (Sevim & Yalcin, 2006). Although student participants reported finding the orientation somewhat useful, the results showed no difference in college adjustment scores between individuals attending the program and those who did not attend (Sevim & Yalcin, 2006). In a recent study, researchers developed an online orientation system for international students to cultural adjustment and evaluated its effectiveness (Coskunserce & Bedir Eristi, 2017). However, this program was designed for international students, and no recent study was conducted with first-year domestic students to facilitate their adaptation through an online orientation program.

During our examination of research findings on college adjustment in Turkey, we noticed a few shortcomings. First of all, most researchers recruited participants from one institution (e.g. Bülbül, & Acar-Güvendir, 2014; Mercan & Yıldız, 2011; Rahat & İlhan, 2015; Soncu Buyukiscan, 2018). Additionally, the instruments that were used in studies were flawed as they appear to be long with a large number of items, not providing an overall total score, and not being theory driven. Therefore, we decided to translate and adapt the *Inventory of New College Students Adjustment* (INCA; Watson & Lenz, 2018), which is a 14-item and 2 factor scale, into the Turkish language to contribute literature by providing an alternative college adjustment instrument. Since the INCA is cross culturally validated (Pester et al., 2018) and a brief instrument assessing students‟ college adjustment, this instrument can be an asset to Turkish college adjustment literature.

Additionally, considering our review of global and national literature on adjustment to college, we aimed to contribute to the knowledge base by examining the relationship between resilience and social self-efficacy with college adjustment among first-year students by recruiting participants across Turkey. First-year students describe the transition as a stressful situation, therefore we decided to use resilience as a predictive factor for college adjustment. Also, researchers reported the importance of social support for college students in many studies (Bakioglu, 2019; Ozkan & Yılmaz, 2010; Rahat & İlhan, 2015); however, the relation between college adjustment and social self-efficacy remains unexamined (Zorlu Yam & Tüzel İşeri, 2019). Thus, we included social self-efficacy, resilience, college orientation attendance, and student organization involvement as study variables and examined their relationship with adjustment to college.

Method

Participants

Participants of the study were first-year college students who were enrolled in higher education programs in Turkey during the 2019-2020 academic year. A total of 346 first-year undergraduate students across Turkey

participated in the study. The mean age of participants was 19.4 years, range between 17 and 42 years (SD = 2.87). Eighty-nine participants were male (25.7%) and 257 were female (74.3%). Twenty-eight (8.1%) reported that they completed a one-year of English preparatory class before starting their freshman year and 318 (91.9%) reported that they started their freshmen year without preliminary coursework. In terms of orientation, 150 participants (43.4%) indicated that they attended the first-year student orientation program and 196 (56.6%) did not attend any orientation program to ease their transition from high school to college. Eighty-three (24%) indicated as being involved and a member of a student organization at university, while 263 (76%) reported no involvement. Fifty-nine of the participants (17%) reported that they lived with their families and 287 (83%) reported that they lived in a dorm or an apartment with their friends.

Measures

Inventory of New College Student Adjustment

The INCA was developed by Watson and Lenz (2018) in order to help college student personnel and college counseling staff in assessing first-year college students‟ adjustment difficulties. Watson and Lenz (2018) conducted their study with 474 freshmen enrolled in a public university in the USA. The INCA has 14-items, using 4-point Likert scale as 1 *strongly disagree* and 4 *strongly agree*. Total scores of the INCA range from 14 to 56 with higher scores indicating higher college adjustment levels of the first-year students.

As a theory driven instrument, the INCA initially was developed based on Tinto‟s (1988) theory of student departure considering 10 domains of student adjustment including (a) psychological health, (b) family/social support, (c) financial support, (d) academic expectations, (e) positive realistic expectations, (f) resiliency and coping skills, (g) relationships, (h) connectedness, (i) career maturity, and (j) life experiences (Watson & Lenz, 2018, p.6.) with 113 items. After completing exploratory factor analyses (EFA) and confirmatory factor analyses (CFA), Watson and Lenz (2018) found that 14-items INCA had two subscales. The first subscale was labelled as *supportive network* because items were assessing relationships with peers and family. The second subscale was labelled as *belief in self* because items in this factor were assessing self-perceptions of an individual‟s achievement in college (Watson & Lenz, 2018). The reliability coefficient alpha score for the full-scale was .86. Moreover, convergent validity was completed by the researchers between INCA Supportive Network and Multidimensional Scale of Perceived Social Support (MSPSS; Zimet et al., 1988), and INCA Belief in Self and Academic Self-Concept Scale (ASCS; Reynolds et al., 1980). The validity analyses showed that subscales were valid, α = .83 for supportive network and α = .77 for belief in self (Watson & Lenz, 2018, p. 11). Two studies used the INCA and reported high levels of reliability. A study conducted with 514 freshmen students in the USA reported the reliability coefficient alpha score as .86 (Haktanir et al., 2018). Another study with 696 Ghanaian students in Ghana, Africa reported the reliability coefficient alpha score for both subscales as .74 (Pester et al., 2018). The reliability analyses of the current study showed that the Turkish version of INCA was reliable. The Cronbach‟s alpha reliability coefficient of the full-scale was .74.

Social Efficacy and Social Outcome Expectations Scale - Turkish

Social Efficacy and Social Outcome Expectation Scale (SEOES) is an 18-item 5-point Likert scale (1 *strongly disagree* and 5 *strongly agree*) instrument developed by Wright, Wright, and Jenkins-Guarnieri (2013) for the purpose of measuring (a) social expectations of people in their relationships via assessing how they perform tasks in social relationships and (b) outcome expectations in regard to engagement of relational tasks (p. 220). The instrument‟s theoretical background is based on Bandura‟s social-efficacy theory. The SEOES has two subscales, namely as follows: “social efficacy expectations” and “social outcome expectations” (Wright et al., 2013, p. 223). The reliability coefficient alpha score for the full-scale was .96, social efficacy expectations was .96, and social outcome expectations was .91. The SEOES was translated into Turkish (SEOES-T) by Akin and Akkaya (2015). They found that the instrument had a high level of reliability and reported the reliability coefficient alpha for the full scale as .94, social efficacy expectations as .93, and social outcome expectations as .88 (Akin & Akkaya, 2015, p. 209). The current study also found that SEOES-T had a high level of reliability and reliability coefficient alpha of the full-scale was .92.

Brief Resilience Scale - Turkish

Brief Resilience Scale (BRS) was developed in order to assess the level of resilience (Smith et al., 2008). The instrument development study was conducted with four different samples of participants in the USA. The six-item 5-point Likert scale (1 *strongly disagree* and 5 *strongly agree*) instrument had a high level of reliability with all four samples, .84, .87, .80, and .91 respectively (Smith et al., 2008). The BRS was translated into

Turkish (BRS-T) by Haktanir and colleagues (2016). The psychometric properties of the BRS-T showed that the instrument was reliable ($a \geq .70$). The present study"s reliability level was also sufficient for the full-scale ($a = .80$).

Procedure

Instrument Translation

The forward and backward translation methods were utilized during the translation process. The INCA was initially translated into Turkish by 2 experts in the field of counseling. After translating the instrument from English to Turkish, reverse translation was completed by 2 other experts in the field of education in order to compare the acceptability and accuracy of the Turkish translations. The final version of the instrument in Turkish was created by the lead researcher of the current study.

Data Collection and Participant Recruitment

The present study consists of four questionnaires including the demographic questionnaire, the Turkish version of INCA (INCA-T), the Social Efficacy and Social Outcome Expectations Scale - Turkish (SESOES-T), and the Brief Resilience Scale - Turkish (BRS-T). Upon receiving institutional review board approval from the first author"s institution, the data were collected by utilizing an online survey created through an online data collection website. Based on the snowball sampling method, we shared the survey link with first year college students as well as first-year course instructors with a request to disseminate the survey link to their students. Participation was voluntary and the online data collection method was used as the only method to obtain data for the current study.

Data Analysis

Statistical Power Analysis

For confirmatory factor analysis, we followed Steven"s (2009) criteria of $n/p \geq 15$ to determine the adequacy of the sample size. The INCA (Watson & Lenz, 2018) included a total of 14 items; thus, a minimum of 210 participants were required. Given that we obtained data from 346 freshmen, our n/p ratio was 24.71, indicating that our sample size was adequate for determining the quality of model fit. Additionally, we carried out a G*Power analysis to determine the minimum number of participants required to find a statistically significant difference for a multiple regression analysis with two predictor variables and a t-test when a medium effect size existed at .80 power and .05 alpha level. Our findings showed that we needed at least 82 participants to conduct these separate analyses. Considering our sample size of 346, our sample exceeds the minimum requirement.

Preliminary Analysis

After transferring survey data into SPSS, we inspected our data for any unusual entries. All participants completed the survey. There were no missing data and no outliers. Then we reverse coded items as needed. We inspected test assumptions, such as normality, Mahalanobis distance, Cook"s distance, linearity, and homoscedasticity to determine whether any data points influencing the results existed. The results showed that assumptions were met. The sample size was sufficient ($n = 346$). The relationship between dependent and independent variables was linear. Mahalanobis results and critical values were used, and no outliers were detected. There was no multicollinearity. Tolerance values less than .2 cause of concern (Menard, 1995). Tolerance values for SEOES-T and BRS-T were .959. Moreover, VIF value of greater than 10 indicates multicollinearity (Neter, Wasserman, & Kutner, 1989). VIF values for SEOES-T and BRS-T were 1.043. Skewness and kurtosis scores were -.421 and .937, respectively. We detected no unusual data points and proceeded with the primary analysis.

Primary Analysis

To conduct a confirmatory factor analysis, we used the SPSS Analysis of Moment Structures (AMOS) software. Additionally, we used SPSS to carry out a multiple regression analysis to discover the predictive roles of resilience and social self-efficacy on college adjustment. Finally, we ran two separate independent-samples t-test to compare groups based on their attendance in college student orientation and whether or not they were a member of a student organization.

Results

Study 1

In this study, we conducted a CFA for continuous data using a maximum likelihood (ML) estimation to investigate the psychometric properties of the Inventory of New College Student Adjustment (INCA; Watson & Lenz, 2018) among a first-year Turkish college student population from various universities. The ML was utilized due to the existence of evidence for multivariate normality as evidenced by Mahalanobis distance statistics. Widely accepted and researched CFA indices for assessing model fit were selected (Mvududu & Sink, 2013). We examined chi-square statistics as well as several goodness-of-fitness indexes, including comparative fit index (CFI), goodness of fit index (GIF), root-mean-square error of approximation (RMSEA), standardized root-mean square residuals (SRMR), Tucker-Lewis index (TLI), Akaike Information Criterion (AIC), and Expected Cross Validation Index (ECVI). The determine the adequacy of the values associated with each statistic, we used the proposed acceptable model fit values of above .90 for CFI, GFI, and TLI while an RMSEA value of below .08, and an SRMR value of below .06 (Dimitrov, 2012; Marsh et al., 2004; Mvududu & Sink, 2013). Though a rule of thumb is not proposed for AIC and ECVI, these values allow researchers to compare models and the lower these values are the better (Schermelleh-Engel & Moosbrugger, 2003; Schumacker & Lomax, 2010). The primary analysis of the model fit with no modifications on any of the items (n = 14) showed an unacceptable model fit, χ^2 (76) = 266.15, p < .05, RMSE = .09, SRMR = .08, CFI = .80, GFI = .90, TLI = .76, AIC= 324.15, and ECVI = .94 (CI90% .81-.1.10). In the final model, we eliminated four items from the original INCA instrument and paired error terms for items 2 and 3 as well as items 9 and 10. The items that were removed were not theoretically related to the two subscales we retrieved in this study, as they appeared to focus on challenging courses and the ability to be genuine with others. We re-ran the analysis with a total of 10 items. Overall, the 10-item model with two factors revealed good fit to the data and no more applicable modification recommendations existed, χ^2 (32) = 70.19, p < .05, RMSE = .06, SRMR = .05, CFI = .95, GFI = .96, TLI = .93, AIC = 116.19, and ECVI = .34 (CI90% .28-.42) (see Table 1). All indices in the final model demonstrated improvements over the first model. The CFA was carried out and a two-factor solution with 10-items was shown in Figure 1.

Table 1. Results of Confirmatory Factor Analysis for the INCA-T

Variable	χ^2	*df*	*GFI*	*CFI*	*RMSEA*	*AIC*	*ECVI*
INCA-T First Model	266.15	76	.90	.80	.09	324.15	.94
INCA-T Final Model	70.19	32	.96	.95	.06	116.19	.34

Note. CFI = Comparative Fit Index; GFI = The Goodness of Fit Index RMSEA = Root-Mean-Square Error of Approximation; AIC = Akaike Information Criterion; ECVI = Expected Cross Validation Index.

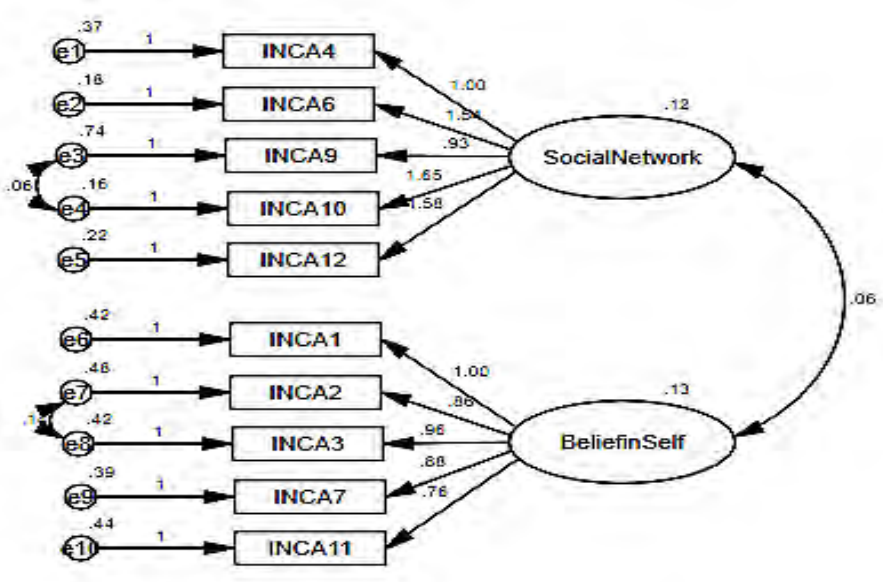

Figure 1: INCA-T Final Model in CFA

Study 2

In the second study, we tested the assumptions of multiple regression analysis (see the preliminary analysis section for details). The analysis results showed that all assumptions were met. After that, we ran a multiple regression analysis to understand the relationship among college adjustment, resilience, and social self-efficacy. We also carried out several group comparison tests to ascertain whether college adjustment differed across subgroups, such as attendance to college student orientation and involvement in student organizations.

Table 2. Summary of Multiple Regression Analysis

Variable	*B*	*SE B*	*β*	*t*	sr^2	*F*	R^2
						60.71	.26
Resilience	.31	.04	.35	7.39	.12		
Social Self-Efficacy	.12	.02	.31	6.50	.09		

A simultaneous multiple regression analysis investigating the predictive role of resilience and social self-efficacy in estimating college adjustment was conducted. Results suggested that both predictor variables (i.e., resilience and social self-efficacy) significantly predicted college adjustment among freshmen, $F(2, 343) = 60.71$, $p < .001$, $R^2 = .26$ (adjusted $R^2 = .26$). This effect size value (i.e., .26) indicates a large effect size (Field, 2013). When the predictor variables were examined individually, resilience scores uniquely explained 12% of the variation in college adjustment scores $B = .31$, $p < .001$, while social self-efficacy scores made a unique contribution of 9%, $B = .12$, $p < .001$ (see Table 2).

Additionally, we examined our data across two specific demographic variables that may be related to college adjustment. First, we ran an independent-samples t-test to compare the degree of college adjustment based on participation in a college orientation at the beginning of the year. During our analysis we discovered that freshmen students who attended to student orientation reported significantly greater adjustment to college, $t(344) = 2.11$, $p = .04$, Cohen"s $d = .23$ (see Table 3), indicating a small effect size (Cohen, 1992). Second, we compared college adjustment based on membership to a student organization. Our data revealed that freshmen students who were a member of a student organization reported higher levels of adjustment to college, $t(344) = 3.58$, $p < .001$, Cohen"s $d = .47$ (see Table 3), indicating an approximately medium effect size (Cohen, 1992).

Table 3. Summary of Independent-samples T-test Analysis

	Yes		No		*t*(344)	*p*	Cohen"s *d*
	M	*SD*	*M*	*SD*			
Attended Freshmen Orientation	29.32	3.79	28.40	4.18	2.11	.04	.23
Member of a Student Organization	30.16	3.58	28.37	4.08	3.58	.001	.47

Discussion

The present study had two purposes. The first one was to translate the INCA into Turkish language and evaluate the psychometric properties with Turkish first-year college student sample. The second purpose was to assess the relationship between college adjustment and related concepts such as resilience, social self-efficacy, participation in college orientation and involvement into a student organization. We believe that the findings of the present study fill a gap in the literature as well as provide implications for practitioners and future researchers.

Study 1

The original version of the INCA is a 14-item instrument and developed with first-year students in the USA to assess college adjustment struggles (Watson & Lenz, 2018). Then, Pester and colleagues (2018) used the INCA with Ghanaian college students, evaluated and reported the validity evidence for Ghanaian sample after

modifications and removing 1 item. In the current study, collecting data from the first-year college students in Turkey, our results also confirmed a two-factor scale after modifications and removing 4 items from the original instrument. It was important to note that 3 of the deleted items (5 [*Challenging courses make me a better student*], 8 [*I always see the good in situations*], and 13 [*I know what I will do after graduation*]) were belonged to belief in self subscale. Since individuals participating in the present study live in a collectivistic culture in Turkey, necessary item removal from the belief in self subscale can be interpreted in relation to the meaning „belief in self" in this culture. Researchers stated that individuals from individualistic cultures tend to value self-esteem while individuals from collectivistic cultures tend to value self-criticism rather than self-esteem (Konrath, 2012). It can also be interpreted that participants might find supportive network items more relatable since previous research results indicated a positive relationship between social support and college adjustment among Turkish first-year students (Rahat & Ilhan, 2016; Sevinc & Cem, 2014). Additionally, after carrying out factor analyses, one item from each subscale yielded under the other subscale (4 [*My classmates value my opinion*] and 11 [*My family's support makes me feel stronger*]). This change might be related to differences in cognitive processes in different cultures (Lenz, Soler, Dell"Aquila, & Uribe, 2017). The final version of the INCA-T consists of a total of 10 items including 5-items per subscale. Thus, we conclude that the INCA-T is a brief, practical, and valid instrument with a capacity to contribute to evidence-supported practices in Turkey. It is important to note researchers tend to use following instruments to measure the concept of adjustment to college in Turkey; the Adjustment to University Scale (Akbalık, 1997), the University Life Scale (Aladağ et al., 2003) and the Adjustment to University Life Scale (Aslan, 2015). However, some of these instruments are impractical due to the number of items included. Additionally, some of these instruments consist of various subscales and were not necessarily developed based on a theory. However, the INCA (Watson & Lenz, 2018) was initially developed using Tinto"s (1988) theory of student departure as a framework. Therefore, as a practical and brief instrument, the INCA-T can be an option for practitioners and researchers working on adjustment to college issues.

Study 2

In the present study, we found that resilience and social self-efficacy together predicted 26% variance in college adjustment scores of the first-year students. Individually, resilience predicted 12% and social self-efficacy predicted 9% variance in college adjustment. Our findings were consistent with the extant literature (e.g. Haktanir et al., 2018; Yalim, 2007) meaning that individuals with higher resilience reported higher college adjustment. Previous researchers examined the level of social self-efficacy among undergraduate students (e.g. Bakioglu, 2019; Zorlu Yam & Tüzel İşeri, 2019); however, the relation between college adjustment and social self-efficacy was unexamined. Therefore, we believe that we closed a gap in literature with our findings claiming that social self-efficacy is a significant predictor of college adjustment.

Researchers reported no correlation between orientation attendance and adjustment to college and retention among the USA freshmen students (Martin & Dixon, 1994; Perrine & Spain, 2008). However, the present study results showed that participants attending college orientation reported significantly greater adjustment to college. Our result also contradicted with another study which was conducted with Turkish samples, as their findings indicated no difference in college adjustment scores between individuals attending the orientation program and those who did not attend (Sevim & Yalcin, 2006). Since the previous research studies conducted almost two decades ago, the content of college student orientation programs might have changed, and this could be the reason for contradiction between previous and present findings.

Theory behind adjustment to college includes several aspects, however both Baker and Siryk (1986) and Tinto (1988) stated that social support is one of the most important aspects of adjustment to college. Moreover, previous studies reported that receiving social support predicted college adjustment with Turkish samples (Sevinc & Cem, 2014; Rahat & İlhan, 2016). The results of the present study showed that freshmen students engaging in student organizations reported higher college adjustment than their peers. Therefore, it is possible to infer that individuals participating in student organizations may receive social support. Additionally, freshmen students engaged in student organizations can develop new relationships on campus, and student organization membership may give students a sense of belonging to their institution. Both these interpretations can also positively contribute to college adjustment. In conclusion, our results asserted the importance of attending orientation and participating in student organizations during the first year of college for a smooth adjustment to a new academic and social environment.

Implications, Recommendations and Conclusion

Considering the existing literature and the current study results, individuals working with first-year students (e.g. faculty advisors, college counselors, and researchers) can utilize the present study results in various ways. For instance, faculty advisors continuously work with a large number of students on top of their coursework and research practices in Turkey. The INCA-T can be a practical tool to assess college adjustment scores of first-year students. Considering the results, advisors may arrange individual or group meetings with struggling students and subsequently utilize the INCA-T to monitor students‟ college adjustment status. As the present study results suggest, faculty advisors may encourage students to become involved with student organizations. We also suggest that each university should design an orientation program for first-year students to ease student adaptation. The orientation programs may provide information about student organizations and ways to support students to overcome adjustment to college issues. Additionally, faculty advisors can work with the office of student affairs to ensure that all first-year students participate in the orientation program.

As discussed earlier, most university counseling centers are understaffed in Turkey (Ulus et al., 2019), yet students still seek help for various issues including adjustment difficulties (Muezzin & Kaya, 2018). To use time and energy effectively, college counselors may utilize the INCA-T with the first-year students on campus in order to identify struggling students with adjustment to college. Then counselors may develop appropriate interventions for those in need. These strategies may include individual or group interventions focusing on fostering resilience, social self-efficacy and support, as we found these variables significantly contribute to college adjustment. College counselors may also design materials such as brochures and handouts for freshmen. These materials may provide information related to student orientation, available student organizations, and suggestions to enhance students‟ college network. Such materials and resources can be shared with students online. College counselors may also educate faculty members and advisors about the ways to support first-year students.

Our study findings suggested that resilience and social self-efficacy are significant predictors of college adjustment, yet continued research is needed with these variables to better understand individuals‟ personal experiences. Therefore, researchers may design qualitative studies to explain first-year students college adjustment experiences in relation to resilience, social self-efficacy, orientation and student organization involvement through interviews. Additionally, researchers conducting experimental or longitudinal studies can utilize the INCA-T to monitor college adjustment over time or across treatments.

Although the present study contributes to the literature and provides implications in many ways, it is not free of limitations. For instance, we recruited more participants than the minimum required numbers; however, there was still a risk of selection bias by selecting known people and friends due to snowball sampling procedure. Another limitation of the study could be social bias. The freshmen students might have discomfort if they were inexperienced in participating in a research study or they might be enthusiastic during the first semester of their college life. Therefore, participants' discomfort or comfort might affect the honesty of their responses.

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