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COPING STRATEGIES AND PSYCHOSOCIAL WELL-BEING

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by
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Abstract

For young adults, the college environment provides exposure to a variety of challenges and stressors. The way students appraise stressors (controllable vs. uncontrollable) and cope with these stressors can alleviate or intensify their stress. Previous studies also showed that cultural differences can influence the appraisal of the stressor and shape coping strategies. Thus, the aim of this study was to explore the functionality of coping strategies depending on the appraisal of a specific stressor and further investigate the association between coping subtypes and psychosocial outcomes of U.S. and Turkish college students. Data were collected from a sample of 344 university students through self-report measures (The Ways of Coping Questionnaire, The Utrecht Work Engagement Scale-Student Survey, The World Health Organization Quality of Life-Brief Version, and Triandis and Gelfand's Individualism-Collectivism Scale). The findings revealed significant associations between stressor controllability, coping strategies, and psychosocial well-being. Escape-avoidance strategies showed significant negative correlations with all the psychosocial well-being factors and problem-solving strategies showed significant positive correlations with academic engagement, and psychological and social well-being. Results of the study validated the previous findings on the associations between stressor controllability, problem-solving strategies, and adjustment. The relationships among coping, stressor controllability, and psychosocial well-being are discussed within a cross-cultural perspective.

Table of Contents

LIST OF TABLES.....	Error! Bookmark not defined.
LITERATURE REVIEW	1
METHOD	7
RESULTS	14
DISCUSSION	34
REFERENCES	43
APPENDIX A. MEASURES.....	56

List of Tables

1. Bivariate Correlations and Descriptive Statistics Among the Variables.....	16-17
2. Multiple Regression Analysis Predicting Academic Engagement for Coping Strategies When Stressor is Controllable.....	20
3. Multiple Regression Analysis Predicting Physical Health for Coping Strategies When Stressor is Controllable	21
4. Multiple Regression Analysis Predicting Environment for Coping Strategies When Stressor is Controllable.....	22
5. Multiple Regression Analysis Predicting Physical Health for Coping Strategies When Stressor is Uncontrollable.....	23
6. Significant Univariate Effects of Nationality for Individualism-Collectivism.....	25
7. Significant Univariate Effects of Nationality for Coping Strategies.....	26
8. Multiple Regression Analysis Predicting Academic Engagement for Coping Strategies When Stressor is Controllable for Turkish Students.....	27
9. Multiple Regression Analysis Predicting Physical Health for Coping Strategies When Stressor is Controllable for Turkish and U.S. Students	30
10. Multiple Regression Analysis Predicting Environment for Coping Strategies When Stressor is Controllable for Turkish and U.S. Students.....	31
11. Multiple Regression Analysis Predicting Physical Health for Coping Strategies When Stressor is Uncontrollable for U.S. Students.....	32
12. Significant Univariate Effects of Nationality for Quality of Life Domains.....	33

Literature Review

The age group of young adult college students (18-24 years old) from a developmental perspective has been described as *emerging adulthood*. Arnett (2004) describes emerging adulthood as a transitional developmental phase between late adolescence and adulthood. This transition is considered stressful and anxiety-provoking as it requires young adults to develop skills to maintain autonomy and self-reliance, and to handle new responsibilities with regard to interpersonal relationships (Hurst, Baranik, & Daniel, 2013; Mahmoud, Staten, Hall, & Lennie, 2012; Meadows, Brown, & Elder, 2006; Zirkel, 1992). Additionally, the transition to college brings a number of new challenges, including diminished contact with family, increased academic demands, increased interpersonal stressors, and financial stress for college students (Eisenberg, Gollust, Golberstein, & Heffner, 2007). Large-scale surveys conducted by American College Health Association (2013) showed that 87% of college students felt overwhelmed in college during the past year and 25% of the students reported that stress had impacted their academic performance. These academic, financial, social, and developmental stressors that young adult college students struggle with may impact their mental health as well (Arnett, Žukauskienė, & Sugimura, 2014; Dusselier, Dunn, Wang, Shelley, & Whalen, 2005).

Researchers assert that investigating coping is fundamental to understand how stress affects individuals as the way people deal with stress can intensify or reduce the effects of adverse life events and conditions (Skinner, Edge, Altman, & Sherwood, 2003). Additionally, coping is not only influential on short-term functioning and emotional distress, but also long-term development of physical and psychological well-being or distress (Skinner et al., 2003). Considering the impact of stress on the lives of many

college students, the ways that students cope with stress may be a critical factor in identifying individuals who are negatively affected and may serve as a target for intervention to enhance resilience and minimize mental health disorders (Coiro, Bettis, & Compas, 2017).

Definition of Coping

Researchers have defined and categorized *coping* differently. Historically, some researchers who have taken a trait approach, defined coping as problem-solving thoughts and behaviors (such as Haan, 1969; Vaillant, 1977). In this view, individuals are categorized based on their stable coping styles that are assessed through questionnaires or clinical interviews (e.g., Goldstein, 1973; Menninger, 1963). Other researchers who have taken a process approach described coping as a transactional phenomenon. According to the process approach, coping efforts are not stable and are constantly changing to match the demands of a stressful situation (Penley, Tomaka, & Wiebe, 2002). Supporting this approach, Folkman and Lazarus (1980) described coping as “the cognitive and behavioral efforts made to master, tolerate, or reduce external and/or internal demands and conflicts created by the stressful transaction” (p. 223). In general psychology, transactional theory has been well supported by researchers (e.g., Kuo, 2013; Pearlin & Schooler, 1978; Terry, 1991) and there are consistent findings that suggested the situation as appraised by the individual is an important factor that shapes the process of coping (Lazarus & Folkman, 1987; Martinent, & Nicolas, 2016; Miller, & McCool, 2003). The series of studies conducted by Lazarus & Folkman (1987) demonstrated that when coping is conceptualized as a process with the emphasis on a specific situation and dynamicity,

rather than a trait or state approach, provided more advantages as the functional value of coping is closely connected with contextual factors.

Lazarus and Folkman (1984) presented two main coping processes, problem focused coping which is used to lessen the stressor or change the stressful situation by vigorously dealing with the stressor (planning, information seeking, and taking-action) and emotion focused coping which is aimed to manage emotional distress associated with the stressor (seeking emotional support, mental or behavioral disengagement). Unlike the trait approach, the process approach of coping suggests that knowing an individual's general way of coping with stress informs little about how this individual will cope with a specific stressful event. Instead, strategies that individuals use rely both on situational factors, such as controllability and changeability of the stressor, and individual factors, such as self-confidence and perceived resources (Lazarus & Folkman, 1984; Pearlin & Schooler, 1978). Thus, in relation to coping strategies and their psychological outcomes, the role of controllability of the stressor is critical to evaluate the effectiveness of a coping strategy.

Stressor Controllability

Similarly, a goodness of fit model proposes that the effectiveness of the coping strategy relies on the suitability of coping responses to the specific appraisal and situation (Forsythe & Compas, 1987; Vitaliano, DeWolfe, Maiuro, Russo, & Katon, 1990). In a meta-analysis, Clarke (2006) explained the role of stressor controllability by asserting that the normative reaction to a situation which is within one's control is to attempt to directly deal with the stressor. However, if the situation is not controllable by the person, the normative reaction is to try to avoid or accept the problem or adapt to the situation.

When the individual does not respond to the stressors according to their controllability, the individual is expected to have a poor 'person-environment fit' and eventually maladjustment.

Although controllability is often asserted as an important factor in understanding the association between coping and psychosocial functioning, only a few studies (e.g., Coiro, Bettis, & Compas, 2017; Compas, Malcarne, & Fondacaro, 1988) directly examine the efficacy of coping in different situations that differ in controllability (Clarke, 2006). The findings of the meta-analysis conducted by Clarke (2006) suggested that the association between problem-focused coping (efforts to establish personal control over the stressful situation) and psychosocial well-being differs depending on the controllability of the stressor. In the meta-analysis, Clarke (2006) concluded that use of active coping for young people without assessing the controllability of the situation is ill-advised because in order to assess the efficacy of active coping, it is necessary to evaluate whether the individual can sensibly eliminate or prevent the stressor. Similarly, studies investigating the association between controllability appraisal of the situation suggested that when the stressor was appraised as controllable, problem-focused coping led to more positive outcomes. In contrast, when the stressful situation was appraised as uncontrollable, problem-focused coping was associated with relatively negative outcomes (Forsythe & Compas, 1987; Göral, Kesimci, & Gençöz, 2006; Vitaliano et al., 1990). Additionally, Clarke (2006) asserted that when exploring the relation between coping and health outcomes, examining the external ratings of stressor controllability and individual's perceptions may provide more accurate conclusions than solely examining the external ratings. An effective intervention program to promote well-being should

include teaching individuals a framework to assess the controllability of the stressor in addition to educating them about particular coping strategies (Clarke, 2006). It is important to understand which coping strategies are more or less effective, their association with specific stressors, and the appraisal of the individual to design more efficacious intervention programs for young adults when coping with stressors.

Culture's Role in Coping

Furthermore, culture is an important factor influencing the appraisal of the stressor and shaping coping strategies (Lam & Zane 2004; Lazarus & Folkman 1984). Aldwin (2007) acknowledged coping as a social process and that there should be cultural differences in the way individuals cope with stress. She also noted that the way the individual evaluates stressors is dependent on situational demands and individual resources both of which are influenced by cultural resources and demands. Additionally, Aldwin (2007) explained that cultural background shapes the types of the stressors that individual is likely to experience and affects the appraisal of the stressfulness of an event in turn impacts the degree of control that individuals have over the stressor (Lazarus & Folkman, 1984). In other words, one's cultural framework may alter how controllable a stressor is perceived to be, thereby leading to different effective coping strategies across cultures.

However, coping research seems to be defined by Western values. In the coping literature, coping and stress paradigms are more based on interpersonal and individualistic characteristics than culture-specific or collective behaviors (Chun et al., 2006; Kuo, 2011; Kuo 2013; Wong & Wong 2006). Recent studies introduced collectivistic approaches as a challenge to predominant individualistic approaches in the

coping research (Anshel & Si, 2008; Kuo, 2011; Kuo, 2013). These studies indicated that integrating collectivism-individualism theories into coping research is helpful to better understand the coping variations within and between cultures (Anshel & Si, 2008; Lee, & Mason, 2014; Kuo, 2011; Kuo, 2013). Therefore, examining the association between coping strategies and appraisal of the stressful situation from a cross-cultural perspective can be more informative to understand the relation between coping and psychosocial well-being.

The purposes of the study are (a) to investigate the association between coping strategies and psychosocial well-being among U.S. and Turkish college students and (b) to explore the impact of the individual's perceptions and external (objective) ratings of stressor controllability in this association. Additionally, (c) to examine the group differences between Turkish and U.S. samples.

Method

Participants

A total of 785 people took the online survey. Of those participants, 293 were removed for not fully completing the survey, 23 were removed for being international students relative to either U.S. or Turkey, 116 were removed for leaving the stressor question blank (“Identify a stressful encounter that occurred recently, where it took place and what happened?”), and another 9 were removed for completing the survey under 4 minutes, presumed the data was invalid. The remaining sample ($N = 344$) of students aged between 18 and 29 years ($M = 20.41$, $SD = 2.21$) met the criteria to participate in this study.

Participants consisted of United States (U. S.) students ($N = 216$) from a mid-sized public college in the Mid-Atlantic United States and Turkish students ($N = 128$) from a non-profit college in Istanbul, Turkey. Turkish students’ sex consisted of 58.6% female, followed by 40.6% male, 0.8% other, and 0.3% chose not to answer, and gender consisted of 58.6% cis-women, followed by 40.6% cis-men, 0.8% agender/nonbinary. U.S. students’ sex consisted of 52.8% female, followed by 46.7% male, and 0.5% chose not to answer, and gender consisted of 52.3% cis-women, followed by 46.3% cis-men, 0.9% agender/nonbinary, 0.5% chose not to answer. Majority of U.S. students (58.3%) were first years, 25% second years, 8.8% third years, 6.9% fourth years, 0.5% fifth years, 0.5% other. Turkish students consisted of 10.2% first years, 16.4% second years, 20.3% third years, 28.1% fourth years, 15.6% fifth years, and 9.4% other.

Majority of the Turkish students (82.0%) were not employed and 43.7% of U.S. students were not employed. More than half of the U.S. students (50.7%) were employed

part-time. Majority of Turkish students (84.4%) had a monthly personal income¹ between 0 TL² and 4,999 TL and U.S. students (88.4%) had a yearly personal income between \$0 and \$19,999. Turkish students identified as 92.2% White followed by 4.7% Asian, 1.6% Hispanic/Latinx, 0.8% Jewish, and 0.8% chose not to answer. U.S. students identified as 61.6% White followed by 17.6% Asian, 9.3% Black/African American, 7.4% Hispanic/Latinx, 2.3% bi/multi-racial, 1.2% Middle Eastern/North African, and 0.7% Caribbean American.

Procedure

Students from the U. S. were recruited through e-mails and offering extra credit (SONA subject pool) in psychology classes and Turkish participants were recruited through emails and the university's closed Facebook page. U.S. and Turkish participants were given identical questionnaires in English. An informed consent form that explains the aim and procedure of the study was included in the beginning of the survey. In the consent form, it is emphasized that participation is voluntary, responses are anonymous, and participants have a right to withdraw from the study at any time. Surveys were administered electronically through Qualtrics software. The participants who were part of the SONA subject pool, received one course credit for their class. No compensation was offered to the other respondents for completion of the surveys.

Measures

Demographic Questionnaire. In the beginning of the survey, participants answered ten questions that assessed their school, education level, age, race/ethnicity, gender, sex, income level, nationality, and work status (see Appendix). For U.S

¹ In Turkey, employment contracts are made based on monthly salary, thus Turkish participants were asked to provide monthly personal income.

²TL= Turkish Lira, 1 US Dollar = 5.72 TL

participants, income was assessed based on yearly personal income. For Turkish participants, income was assessed based on monthly personal income².

Stressful/upsetting Event. Participants were asked to write the most “stressful/upsetting” event that they have experienced recently.

Controllability of the Stressor.

Subjective rating of the stressor controllability (perceived controllability), participants answered the question, “Do you think you have control over this stressful/upsetting event?”. If participants perceived the stressor as controllable, they selected “yes” and if they perceived the stressor as uncontrollable, they selected “no”.

Objective (external) rating of the stressor controllability, two investigators rated each specific stressor according to its controllability. Twenty-five percent of the sample (86 items) was selected at random to assess inter-rater reliability. Percent agreement was 87.21 and the kappa value was 0.79. Kappa values between 0.61–0.80 are interpreted as substantial (McHugh, 2012). Raters separately coded the rest of the items. The stressors were coded as controllable, if it was believed that objective conditions of a stressful situation can be prevented, eliminated or lessen by the abilities, resources, or actions of a typically developing individual (e.g. university exams). Objective conditions do not refer to person’s emotional state or responses to a stressor, but instead refer to observable events or experiences. The stressors coded as uncontrollable, if it was believed that objective conditions of a stressful situation cannot be prevented, eliminated or lessen by the abilities, resources, or actions of a typically developing individual (e.g., natural disaster). Lastly, when there was insufficient information to assess stressor

controllability, it was coded as unclear. When participants indicated that they did not experience any stress, it was coded as no stressor.

Coping Strategies. The Ways of Coping Questionnaire (WOCQ; Folkman & Lazarus, 1980) assesses participants' coping processes with accordance to a self-identified stressor. This questionnaire consists of 66 items, each item describes a means of coping with stressful situations. The participants rated 66 items (e.g., "I tried to analyze the problem in order to understand it better"), in terms of how extensively they used these approaches using a 4-point Likert scale (0 = *not used*, 3 = *used a great deal*). Responses were summed to obtain scores for each of eight WOCQ subscales: Confrontive Coping, Distancing, Self-Controlling, Seeking Social Support, Accepting Responsibility, Escape Avoidance, Planned Problem Solving, and Positive Reappraisal (Folkman & Lazarus, 1988). The reliability scores of the subscales are 0.64, 0.65, 0.65, 0.75, 0.64, 0.71, 0.70, 0.77, respectively (Rexrode, Petersen, & O'Toole, 2008). In the current study, the Cronbach's alpha coefficients were Confrontive Coping $\alpha = 0.68$, Distancing ($\alpha = 0.63$), Self-Controlling ($\alpha = 0.60$), Seeking Social Support ($\alpha = 0.76$), Accepting Responsibility ($\alpha = 0.59$), Escape Avoidance ($\alpha = 0.73$), Planned Problem Solving ($\alpha = 0.66$), and Positive Reappraisal ($\alpha = 0.70$), which indicated questionable to acceptable reliability.

Academic engagement. The Utrecht Work Engagement Scale-Student Survey (UWES-S) consists of 14 items used to assess academic engagement (Schaufeli, Salanova, González-Romá, & Bakker, 2002). Participants were asked to indicate the frequency with which they believed various experiences associated with academic engagement (e.g., "when I'm doing my work as a student, I feel bursting with energy") on a 7-point Likert

scale (0 = *never*, 7 = *every day*). The UWES-9 and UWES-17 were found to have good construct validity (Seppala et al., 2009). The validation of the UWES-S has been done internationally (Schaufeli et al., 2002). In the current study, the Cronbach's alpha coefficient was 0.91 which indicated strong reliability (Taber, 2018).

Quality of Life. The World Health Organization Quality of Life-Brief Version (WHOQOL-BREF, WHOQOL Group, 1998) is used to assess participants' subjective judgement on their health-related quality of life. It is a cross-culturally valid questionnaire developed by the World Health Organization. This self-report measure consists of 26 items and includes four separate domains to assess quality of life. There are seven items for physical health (domain1), six items for psychological well-being (domain2), three items for social relationships (domain3), and eight items for environment (domain4). There are also two additional items related to general quality of life ("How would you rate your quality of life?") and general health ("How satisfied are you with your health?"). Item responses are rated on a 5-point Likert-type scale, where low scores indicated low and negative perceptions and high scores indicated high and positive expectations for health, (1= *very dissatisfied* or *very poor*, 5 = *very satisfied* or *very good*). Three items are negatively worded and therefore reverse scored. The reliability scores of the subscales are 0.82, 0.75, 0.66, 0.80, respectively (WHOQOL-BREF, WHOQOL Group, 1998). In the current study, the Cronbach's alpha coefficients were physical health ($\alpha = 0.74$), psychological well-being ($\alpha = 0.54$), social relationships ($\alpha = 0.74$), and environment ($\alpha = 0.76$). These coefficients indicated acceptable reliability for physical health, social relationships, and environment domains, and poor reliability for psychological domain.

Collectivism-individualism. In order to assess group differences between U.S. and Turkish participants, Triandis and Gelfand's (1998) Individualism-Collectivism (IND-COL) scale was used. It is a 16-item scale is used in this study. This scale measures four dimensions of individualism and collectivism: Vertical Individualism, "seeing the self as fully autonomous, but recognizing that inequality will exist among individuals and that accepting this inequality" (e.g., "Winning is everything"); Horizontal Individualism, "seeing the self as fully autonomous, and believing that equality between individuals is the ideal." (e.g., I often do my own thing); Vertical Collectivism, "seeing the self as a part of a collective and being willing to accept hierarchy and inequality within that collective" (e.g., I would do what would please my family); and Horizontal Collectivism, "seeing the self as part of a collective but perceiving all the members of that collective as equal" (e.g., I like sharing little things with my neighbors). All items are answered on a 9-point Likert scale (1= *never or definitely no*, 9= *always or definitely yes*). Cronbach's Alpha for subscales are 0.74, 0.67, 0.68, and 0.74, respectively. In the current study, the Cronbach's alpha coefficients were vertical individualism ($\alpha = 0.73$), horizontal individualism ($\alpha = 0.73$), vertical collectivism ($\alpha = 0.73$), and horizontal collectivism ($\alpha = 0.66$), respectively which indicated acceptable reliability.

Analysis

Analyses were conducted using SPSS software. The predictor variables were stressor controllability and nationality and the outcome variables were coping strategies, quality of life domains, academic engagement, and individualism-collectivism. Scores of quality of life domains and academic engagement were computed separately as indicators of psychosocial well-being. First, Pearson correlations were conducted to assess the

associations between different coping strategies and psychosocial well-being (Research Question 1). Then, a one-way analysis of variance (ANOVA) was conducted to determine the differences between perceiving a stressor to be controllable or uncontrollable on choice of coping strategies, quality of life domains, and academic engagement (Research Question 2). Multiple regressions were conducted to assess which specific coping strategies were most highly associated with psychosocial well-being based on stressor controllability (Research Question 2). Finally, ANOVAs were conducted to explore group differences between Turkish and U.S. students on collectivism and individualism measures and assess group differences for coping strategies and psychosocial well-being. Multiple regressions were conducted to assess the relationship between coping and well-being based on stressor controllability for Turkish and U.S students (Research Question 3).

Results

Pearson correlations were conducted to assess the relationship between coping strategies and quality of life domains, and academic engagement. The results indicated that there is a significant positive correlation between academic engagement and problem-solving strategies and negative correlation between academic engagement and escape-avoidance strategies. The results showed significant correlations between coping strategies and quality of life domains. Physical health domain was negatively correlated with confrontive coping, self-controlling, seeking social support, accepting responsibility, and escape avoidance strategies. Psychological domain was negatively correlated with accepting responsibility and escape avoidance strategies and positively correlated with planful problem solving strategies. Social domain was negatively correlated with escape avoidance and positively correlated with problem solving strategies. Lastly, environment domain was negatively correlated with confrontive coping, self-controlling, seeking social support, accepting responsibility, and escape avoidance strategies. Moreover, the results indicated that academic engagement variable was significantly correlated with all quality of life domains as anticipated. Please refer to Table 1 to see all correlations.

Stressor controllability and coping strategies

Majority of the students across both countries (61.1 %) rated the stressor they have experienced as controllable. Majority of the identified stressors (66.8 %) were rated as controllable by the raters. There was a significant association between objective and subjective rating of the stressors, $\chi^2(1, N = 268) = 20.28, p = .00$. Given the similarity between ratings, the perceived (subjective) rating of the stressors was used as an indicator of controllability in the analyses.

A one-way ANOVA was conducted to assess the difference between students who rated their stressors as uncontrollable compared to students who rated them as controllable and their use of coping strategies. The results indicated that there was a statistically significance effect for the controllability of the stressor on escape-avoidance $F(1, 329) = 18.94, p < .05$, and planful problem-solving strategies $F(1, 330) = 6.28, p < .05$.



Table 1.

Bivariate correlations and descriptive statistics among the variables

	1	2	3	4	5	6	7	8	9	10	11	12	13
1 Confrontive Coping	--												
2 Distancing	.32**	--											
3 Self-controlling	.50**	.51**	--										
4 Seeking social support	.52**	.19**	.40**	--									
5 Accepting Responsibility	.31**	.25**	.43**	.26**	--								
6 Escape avoidance	.48**	.39**	.58**	.32**	.45**	--							
7 Planful problem solving	.34**	.19**	.34**	.40**	.24**	.17**	--						

8 Positive Reappraisal	.50**	.41**	.60**	.48**	.46**	.49**	.43**	--					
9 Academic engagement	-0.02	-0.06	0.00	0.02	0.02	-.16**	.22**	0.05	--				
10 Physical health	-.18**	-0.06	-.18**	-.19**	-.21**	-.35**	0.10	-0.07	.38**	--			
11 Psychological	0.03	0.04	-0.06	-0.02	-.16**	-.25**	.19**	0.05	.39**	.61**	--		
12 Social relationships	0.05	0.07	-0.00	0.11	-0.10	-.166**	.21**	0.07	.21**	.42**	.46**	--	
13 Environment	-.11*	-0.08	-.20**	-.12*	-.17**	-.27**	0.10	-0.08	.31**	.61**	.53**	.41**	--
Mean	1.94	2.16	2.14	2.21	2.20	2.04	1.95	4.18	14.96	12.91	14.02	15.05	
(SD)	(0.62)	(0.60)	(0.58)	(0.76)	(0.71)	(0.62)	(0.66)	(1.70)	(2.51)	(2.26)	(3.80)	(2.44)	

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

0.05. Students reported using more escape-avoidance strategies ($M = 2.22$, $SD = 0.62$; $M = 1.92$, $SD = 0.60$) when they perceived the stressor as uncontrollable and using more planful problem solving strategies ($M = 2.56$, $SD = 0.63$; $M = 2.38$, $SD = 0.59$) when they perceived the stressor as controllable.

Stressor controllability and psychosocial well-being

A one-way ANOVA was conducted to assess the differences between quality of life domains by stressor controllability. The results indicated that there was a statistically significance effect of stressor controllability on physical health, $F(1, 327) = 6.88$, $p < .05$ ($M = 15.25$, $SD = 2.49$; $M = 14.50$, $SD = 2.50$), psychological health, $F(1, 329) = 5.35$ ($M = 13.15$, $SD = 2.24$; $M = 12.55$, $SD = 2.27$), $p < .05$, and environment domains $F(1, 327) = 10.65$, $p < 0.05$ ($M_c = 15.40$, $SD_c = 2.33$; $M_u = 14.51$, $SD_u = 2.53$). Students who perceived the stressor as controllable had higher scores on these domains. Moreover, students who perceived the stressors as controllable rated higher on questions for overall perception of quality of life $F(1, 329) = 7.19$, $p < .05$ ($M = 4.07$, $SD = 0.83$; $M = 3.82$, $SD = 0.55$) and overall perception of health $F(1, 329) = 11.90$, $p < .05$ ($M = 3.84$, $SD = 0.98$, $M = 3.45$, $SD = 1.03$). One-way ANOVA was conducted to assess differences in academic engagement by stressor controllability. The results indicated no significant difference between students who perceived the stressor as controllable and students who perceived the stressor as uncontrollable on academic engagement.

Controllability, coping, and well-being

In order to explore the role of stressor controllability in the relation between coping and psychosocial well-being multiple linear regressions were conducted. A multiple linear regression was conducted to assess which coping strategy was most highly associated with academic engagement when students perceived the stressor as controllable. The following coping strategies

were entered into the equation: confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape avoidance, planful problem solving. A significant regression equation was found $F(8, 193) = 3.27, p < .001$, with an R^2 of .12. This indicates that 12% of the variance in academic engagement was explained by coping strategies when the stressor is controllable (See Table 2). Another multiple regression was conducted to assess which coping strategy was most highly associated with quality of life domains when the stressor was controllable. Significant regression equations were found for coping strategies on physical health and environment domains. $F(8, 193) = 6.81, p < .001$, with an R^2 of .22 and $F(8, 193) = 4.09, p < .001$, with an R^2 of .14. This indicates that 22% of the variance in physical health and 14% of the variance in environment was explained by coping strategies when the stressor was controllable (See Tables 3 and 4).

When the stressor was perceived as uncontrollable, there was no significant effect of coping strategies on academic engagement and environment domain. A significant regression equation was found for coping strategies on physical health domain. $F(8, 118) = 2.28, p < .05$, with an R^2 of .13. This indicates that 13% of the variance in physical health was explained by coping strategies when the stressor is uncontrollable (See Table 5)

Table 2

Multiple regression analysis predicting academic engagement for coping strategies when Stressor is controllable

Variable	<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	R^2
Coping Strategies							
Overall model				3.27	8	.00	0.12
Confrontive coping	-.67	.50	-.62				
Distancing	.37	.71	.31				
Self-controlling	.82	.41	.08				
Seeking social support	-.49	.62	-.04				
Accepting responsibility	-.12	.90	-.01				
Escape avoidance	-3.57	.00	-.33				
Planful problem solving	2.78	.00	.22				
Positive reappraisal	.64	.52	.06				

Table 3

Multiple regression analysis predicting physical health for coping strategies when stressor is controllable

Variable	<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	R^2
Coping Strategies							
Overall model				6.81	8	.00	0.22
Confrontive coping	-.86	.39	-.07				
Distancing	1.21	.23	.09				
Self-controlling	-.27	.79	-.03				
Seeking social support	-2.01	.04	-.17				
Accepting responsibility	-1.10	.27	-.08				
Escape avoidance	-4.37	.00	-.39				
Planful problem solving	2.85	.00	.21				
Positive reappraisal	1.49	.14	.14				

Table. 4

Multiple regression analysis predicting environment for coping strategies when stressor is controllable

Variable	<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	R^2
Coping Strategies							
Overall model				4.09	8	.00	0.14
Confrontive coping	-1.10	.27	-.10				
Distancing	1.29	.20	.11				
Self-controlling	-1.55	.12	.16				
Seeking social support	-1.12	.26	-.10				
Accepting responsibility	-1.08	.28	-.09				
Escape avoidance	-2.08	.04	-.19				
Planful problem solving	2.97	.00	.23				
Positive reappraisal	1.15	.25	.11				

Table. 5

Multiple regression analysis predicting physical health for coping strategies when stressor is uncontrollable

Variable	<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	R^2
Coping Strategies							
Overall model				2.28	8	.03	0.13
Confrontive coping	.04	.97	.00				
Distancing	.07	.94	.01				
Self-controlling	-.65	.52	-.08				
Seeking social support	-2.04	.04	-.22				
Accepting responsibility	-1.95	.05	-.20				
Escape avoidance	-1.73	.09	-.20				
Planful problem solving	2.09	.04	.21				
Positive reappraisal	1.61	.11	.20				

Group differences

A one-way ANOVA was conducted to assess differences in individualism-collectivism between U.S. and Turkish students. The results indicated that there was a statistically significant effect of nationality on individualism-collectivism. U.S. students scored higher on both individualism, $F(1, 340) = 12.00, p < .05$ and collectivism measures, $F(1, 340) = 13.83, p < .05$ (See Table 6).

A one-way ANOVA was conducted to assess differences in coping strategies of U.S. and Turkish students. The results indicated that there was a statistically significant effect of nationality on confrontive coping $F(1, 330) = 15.63, p < .05$, self-controlling $F(1, 329) = 5.56, p < .05$, seeking social support $F(1, 329) = 14.30, p < .05$, accepting responsibility $F(1, 29) = 4.22, p < .05$, escape-avoidance $F(1, 329) = 5.13, p < .05$, problem-solving $F(1, 330) = 3.74, p < .05$ and positive reappraisal strategies $F(1, 329) = 11.65, p < .05$. Turkish students scored higher than US students on these coping strategies (See Table 7).

A multiple linear regression was conducted to assess which coping strategy was most highly associated with academic engagement for U.S. and Turkish students when the stressor was controllable. The following coping strategies were entered into the equation: confrontive coping, distancing, self-controlling, seeking social support, accepting responsibility, escape avoidance, planful problem solving. A significant regression equation was found $F(8, 70) = 3.91, p < .05$, with an R^2 of .31 for Turkish students. This indicates that 31% of the variance in academic engagement was explained by coping strategies when the stressor is controllable (See Table 8).

Multiple linear regressions were conducted to assess which coping strategy was most highly associated with quality of life domains when the stressor was controllable.

Table. 6

Significant Univariate Effects of Nationality for Individualism-Collectivism

Dependent Variable	<i>df</i>	<i>F</i>	<i>p</i>	Nationality	Means
Horizontal Individualism	1	6.27	.01	Turkish	6.57
				US	6.94
Vertical Individualism	1	7.37	.00	Turkish	5.27
				US	5.76
Horizontal Collectivism	1	5.93	.01	Turkish	6.25
				US	6.61
Vertical Collectivism	1	15.41	.00	Turkish	5.69
				US	6.32
Individualism	1	12.00	.00	Turkish	5.90
				US	6.30
Collectivism	1	13.83	.00	Turkish	5.97
				US	6.47

Table. 7

Significant Univariate Effects of Nationality for Coping Strategies

Dependent Variable	<i>df</i>	<i>F</i>	<i>p</i>	Nationality	Means
Confrontive coping	1	15.85	.00	Turkish	2.11
				US	1.84
Distancing	1	0.28	.59	Turkish	2.14
				US	2.18
Self-controlling	1	5.56	.02	Turkish	2.24
				US	2.09
Seeking social support	1	14.30	.00	Turkish	2.41
				US	2.10
Accepting responsibility	1	4.22	.04	Turkish	2.31
				US	2.14
Escape avoidance	1	5.13	.02	Turkish	2.14
				US	1.98
Planful problem solving	1	3.74	.05	Turkish	2.58
				US	2.44
Planful problem solving	1	11.65	.00	Turkish	1.87
				US	1.96

Table. 8

Multiple regression analysis predicting academic engagement for coping strategies when stressor is controllable for Turkish students

Variable	<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	R^2
Coping Strategies							
Overall model				3.91	8	.00	0.31
Confrontive coping	-.49	.62	-.14				
Distancing	-2.05	.04	-.55				
Self-controlling	1.8	.08	.58				
Seeking social support	-1.69	.09	-.41				
Accepting responsibility	-.89	.38	-.17				
Escape avoidance	-1.98	.05	-.51				
Planful problem solving	2.77	.01	.65				
Positive reappraisal	0.39	.70	.10				

Significant regression equation was found for coping strategies on physical health for both groups. For Turkish students, $F(8, 70) = 4.94, p < .05$, with an R^2 of .36 and for U.S. students, $F(8, 114) = 2.46, p < .05$, with an R^2 of .15. This indicates that for Turkish students, 36% of the variance and for U.S. students, 15% of the variance in physical health domain was explained by coping strategies when the stressor was controllable (See Table 9).

Another significant equation was found for coping strategies on environment for both groups. For Turkish students, $F(8, 70) = 4.94, p < .05$, with an R^2 of .21 and for U.S. students $F(8, 114) = 2.28, p < .05$, with an R^2 of .16. This indicates that for Turkish students, 21% of the variance and for U.S. students, 16% of the variance in environment domain was explained by coping strategies when the stressor was controllable (See Table 10).

When the stressor was perceived as uncontrollable, there was no significant effect of coping strategies on academic engagement and environment domains for both groups. A significant regression equation was found for coping strategies on physical health domain only for U.S. students. $F(8, 79) = 2.32, p < .05$, with an R^2 of .19. This indicates that 19% of the variance in physical health was explained by coping strategies when the stressor was uncontrollable (See Table 11).

One-way ANOVA was conducted to assess the association between nationality and quality of life domains. The results indicated that there was a statistically significance effect of nationality on physical health, psychological and environment domains. U.S. students scored higher on physical health $F(1, 339) = 26.03, p < .05$, psychological $F(1, 341) = 5.80, p < .05$, and environment domains $F(1, 339) = 9.95, p < .05$. Additionally, U.S. students rated their quality of life higher than Turkish students, $F(1, 341) = 7.69, p < .05$ (See Table 12). One-way ANOVA was conducted to assess differences in academic engagement by nationality. The

results indicated no significant difference between Turkish and U.S. students on academic engagement.



Table. 9

Multiple regression analysis predicting physical health for coping strategies when stressor is controllable for Turkish and U.S. students

Variable	Nationality	<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	<i>R</i> ²
Coping Strategies								
Overall Model	Turkish				4.94	8	0.00	0.36
	U.S.				2.46	8	0.02	0.15
Confrontive Coping	Turkish	.95	.34	.59				
	U.S.	-.87	.38	-.36				
Distancing	Turkish	-.99	.33	-.59				
	U.S.	1.52	.13	.59				
Self-controlling	Turkish	.32	.75	.23				
	U.S.	-.39	.70	-.19				
Seeking social support	Turkish	-2.00	.05	-1.08				
	U.S.	-1.23	.22	-.42				
Accepting responsibility	Turkish	-1.90	.06	-.81				
	U.S.	-.67	.50	-.24				
Escape Avoidance	Turkish	-4.00	.00	-2.3				
	U.S.	-2.23	.03	1.02				
Planful problem solving	Turkish	.72	.47	.37				
	U.S.	2.60	.01	.91				
Positive Reappraisal	Turkish	2.47	.16	1.48				
	U.S.	.98	.33	.41				

Table. 10

Multiple regression analysis predicting environment for coping strategies when stressor is controllable for Turkish and U.S. students

Variable	Nationality	<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	<i>R</i> ²
Coping Strategies								
Overall Model	Turkish				4.94	8	.00	0.21
	U.S.				2.46	8	.02	0.16
Confrontive Coping	Turkish	-.69	.49	-.39				
	U.S.	-.47	.63	-.21				
Distancing	Turkish	-1.30	.20	-.71				
	U.S.	1.93	.05	.79				
Self-controlling	Turkish	1.00	.32	.65				
	U.S.	-2.01	.04	-1.06				
Seeking social support	Turkish	-.66	.51	-.32				
	U.S.	-1.07	.28	-.38				
Accepting responsibility	Turkish	-.36	.72	-.14				
	U.S.	-1.40	.16	-.52				
Escape Avoidance	Turkish	-2.68	.01	-1.41				
	U.S.	-.34	.73	-.16				
Planful problem solving	Turkish	.49	.62	.23				
	U.S.	3.03	.00	1.11				
Positive Reappraisal	Turkish	1.99	.05	1.10				
	U.S.	.60	.54	.26				

Table. 11

Multiple regression analysis predicting physical health for coping strategies when stressor is uncontrollable for U.S. students

Variable	<i>t</i>	<i>p</i>	β	<i>F</i>	<i>df</i>	<i>p</i>	R^2
Coping Strategies							
Overall model				2.31	8	.03	0.19
Confrontive coping	.42	.67	.22				
Distancing	.79	.43	.42				
Self-controlling	-1.21	.23	-.80				
Seeking social support	-1.35	.18	-.55				
Accepting responsibility	-1.86	.07	-.84				
Escape avoidance	-1.53	.13	-.96				
Planful problem solving	2.81	.00	1.45				
Positive reappraisal	.84	.40	.46				

Table. 12

Significant Univariate Effects of Nationality for Quality of Life Domains

Dependent Variable	<i>df</i>	<i>F</i>	<i>p</i>	Nationality	Means
Physical well-being	1	26.03	.00	Turkish	14.02
				US	15.41
Psychological	1	5.79	.02	Turkish	14.90
				US	12.54
Social relationships	1	3.25	.07	Turkish	13.54
				US	14.31
Environment	1	9.95	.00	Turkish	14.44
				US	15.31
Overall quality of life	1	7.69	.00	Turkish	3.80
				US	4.06
Life satisfaction	1	2.20	.14	Turkish	3.79
				US	3.62

Discussion

The current study investigated the relationship between students' coping strategies and their psychosocial well-being. The results of the first research question remained consistent with previous findings (Aldao et al., 2010; Badri et al., 2013; Bucks et al., 2011; Compas et al., 2017; Schäfer et al. 2017; Thomas et al., 2011). In the study, students who used more problem-solving strategies had higher scores for academic engagement, psychological, and social relationships quality of life domains. On the other hand, students who used more escape-avoidance strategies had lower scores for academic engagement and all the quality of life domains. There were no significant associations between other coping strategies and academic engagement. Moreover, students who utilized strategies of confronting coping, self-controlling, seeking social support, and accepting responsibility had lower scores for physical health and environment domains. Distancing and positive reappraisal strategies did not show any significant associations with psychosocial well-being measures.

In their study, Bucks et al. (2011) found similar associations between use of problem solving vs. escape avoidance strategies and well-being for patients with Parkinson's disease. The results of Bucks et al.'s (2011) study indicated that greater use of planful problem-solving strategies was significantly associated with better health-related quality of life aspects such as less cognitive impairment, less bodily distress, and improved communication. Additionally, greater use of escape-avoidance was significantly associated with poorer health-related quality of life aspects such as emotional well-being. Likewise, the majority of the previous studies found that problem solving strategies were positively associated with physical and psychological well-being and escape avoidance strategies were negatively associated with well-being (Aldao et al., 2010; Badri et al., 2013; Bucks et al., 2011; Compas et al., 2017; Schäfer et al. 2017; Thomas et al., 2011).

However, there are few studies that resulted in contrary findings for the association between escape-avoidance strategies and health outcomes (Heckman et al., 2004; Punamaki et al., 2008). In their study, Punamaki et al. (2008) found that use of avoidance strategies was significantly negatively associated with post traumatic disorder and somatic symptoms. The relationship between support-seeking strategies and well-being is varied as well (Seguin & Roberts, 2017). In some studies, results indicated that support-seeking coping was a protective factor for mental health (Farhood & Dimassi, 2012; Sousa, 2013; Usta, Farver, & Zein, 2008) and other studies found that there was a positive association between support-seeking coping and psychological distress and somatic symptoms (Punamaki et al., 2008; Scholte et al., 2004). Current study supported the latter studies. One assumption is that students who have lower levels of physical health and are exposed to negative environmental conditions might seek more social support.

The second research question was to explore the role of student's perceptions and external (objective) ratings of stressor controllability in the relationship among coping strategies and psychosocial well-being of students. Initially, a comparison between subjective and objective controllability was made. Results indicated a significant association between individuals' perceived controllability of the stressor and external ratings of the stressor. In contrast to current study findings, Frazier and Caston (2015) did not find any significant correlations between perceived present control over a stressor and objective control in their study. This might be due to differences in stressors described in the studies. In the current study, academic and school stress was one of the most frequently described stressors. However, in Frazier and Caston's study, participants reported experiencing variety of traumatic and stressful events.

When assessing the relation between stressor controllability and coping it was found that students who perceived the stressor as controllable used more problem-solving strategies and students who perceived the stressor as uncontrollable used more escape avoidance strategies. Similarly, findings of the study by Nicholls, Levy, Grice, & Polman (2009) showed that problem-focused coping strategies were associated with higher levels of stressor control, compared with avoidance coping and emotion focused strategies.

Results revealed significant associations between stressor controllability and psychosocial well-being as well. Students who perceived the stressor as controllable had higher scores on physical health, psychological, and environment domains and scored higher on overall perception of quality of life and health. These findings suggest that students with higher levels of control over a stressor have a better perceived well-being than students with lower levels of control or no control over a stressor.

Previous research suggested that stressor controllability plays a key role in the impact of stress on behavior and well-being (Christianson et al., 2010; Henderson, Snyder, Gupta & Banich; 2012; Villemure & Bushnell, 2009). These studies demonstrated that cognitive-attentional factors were associated with perceived well-being. The study by Muller (2012) showed that perceived control over experimentally-induced pain was negatively associated with increased pain, unpleasantness, and perceived pain intensity. Also, in their study Frazier et al. (2011) reported that individuals who perceived that they have more control over their present symptoms of trauma reported alleviated symptoms of posttraumatic stress. Additionally, when individuals reported to have more control, they engaged in less binge drinking and experienced lower levels of distress (Frazier et al., 2011). These findings suggest that objective stressor controllability and perceived controllability of the stressor impact individual's physical and

mental health outcomes and higher levels of perceived control over the stressor can alleviate distress.

Interestingly, there was no effect of stressor controllability on academic engagement. However, previous studies showed that moderate controllable stress aids academic performance and exposure to uncontrollable stressors tends to hinder performance (Henderson et al., 2012; Kausar, 2010; Rafidah et al., 2009). This study assessed academic engagement (sense of belonging and participation in studies) rather than academic performance (achievement). Even though, most studies found that students with higher engagement have higher academic achievement (Alrashidi, Phan & Ngu, 2016; Lee, 2014), differences in operationalization for engagement and achievement constructs might explain the lack of association between stressor controllability and academic engagement.

Furthermore, the current study explored the effect of controllability in the relationship between coping and well-being. When students perceived the stressor as controllable, less use of escape-avoidance and more use of problem-solving strategies predicted higher academic engagement and environment scores. Also, students who utilized coping strategies such as seeking social support and escape avoidance strategies to manage controllable stressors had lower scores of physical health. In response to uncontrollable stressors, use of coping strategies such as seeking social support, self-controlling, accepting responsibility, escape avoidance predicted lower physical health as well. However, use of problem-solving strategies in response to uncontrollable stressors was again predicted better physical health. When the stressors were perceived as uncontrollable, coping strategies did not predict academic engagement.

Goodness of fit theory partly explains some of these differences in the relationship between coping and well-being by stressor controllability. Based on the goodness of fit theory, if

a situation is controllable by the person, the normative and healthier reaction is to attempt to directly deal with the stressor; if a situation is uncontrollable by the person, the normative and healthier reaction is to avoid or accept the problem or adapt to the situation. Supporting the goodness of fit theory, the results of a metaanalysis revealed that children and adolescents who used active coping (i.e.; problem-focused) in response to controllable stressors had significantly higher social skills and lesser externalizing behaviors than those who used active coping when used to manage uncontrollable stressors (Clarke, 2006; Forsythe & Compas, 1987). Also, few studies found that avoidant coping was associated with better health outcomes when the stressor was not controllable or manageable (Clarke, 2006; Ntoumanis, Edmunds, & Duda, 2009).

In general, problem solving strategies coping were found to be positively associated with healthy functioning in the context of controllable stressors (Clarke, 2006; Coiro et al., 2017; Nicholls, 2009). However, the results are mixed for studies that investigated the relationship between problem focused coping and well-being when stressors were uncontrollable (Seguin & Roberts, 2017). Some studies found that problem-focused coping was associated with relatively negative health outcomes (Clarke, 2006; Forsythe & Compas, 1987; Göral, Kesimci, & Gençöz, 2006; Vitaliano et al., 1990) and some studies found little or no association between problem-solving and health outcomes when the stressor was uncontrollable (Dimiceli, Steinhardt & Smith, 2010; Park, Folkman, & Bostrom, 2001; Sousa, 2013).

For the last research question, the study examined the group differences between Turkish and U.S. students and possible cross-cultural variations within measures. In general, Turkey has been recognized as a collectivistic country based on cultural values of commitment to family and society (Aycicegi-Dinn & Caldwell-Harris, 2011; Sorkun 2018). In contrast, the U.S.A has been considered as an individualistic country based on cultural values such as self-direction,

autonomy, personal achievements (Imada 2012; Lowry, Zhang, Zhou & Fu, 2010). However, the results of the collectivism-individualism measure yielded unexpected findings; U.S. students scored higher on all collectivism and individualism dimensions when compared to Turkish students. Therefore, group differences explained here should not be evaluated based on differences in collectivistic vs. individualistic dimensions.

In a literature review by Aycicegi-Dinn and Caldwell-Harris (2011) asserted that individuals from Turkey are not homogenously more collectivistic and less individualistic than individuals from U.S. This might partly explain the inconsistencies between current findings and previous research.

Additionally, both groups scored the highest on horizontal individualism which assesses individuals' preference to be unique and distinct from groups. In contrast, they scored the lowest on vertical individualism which assesses individuals' preference to be independent and competitive. Previous studies found that the least preferred dimension is vertical collectivism which assesses individuals' preference to prioritize the interests of the group over personal goals (Aycicegi-Dinn & Caldwell-Harris, 2011; Chirkov et al., 2005; Cukur & De Guzman, 2004). In the current study, participants distinctively consist of college students, thus their preferences might differ from the general population.

Whereas Turkish students scored significantly higher on almost all of the coping strategies, only distancing strategy did not differ for Turkish and U.S. students. This means that Turkish students' use of coping strategies varies more than that of U.S. students when they encounter a stressful situation. However, findings revealed that mainly problem-solving strategies predicted better health outcomes, thus use of other coping strategies is not necessarily

effective to cope with stressors. Additionally, more use of escape avoidance strategies of Turkish students can be even maladaptive.

When the relation between coping and well-being examined separately for Turkish and U.S. students, results revealed that Turkish students' higher use of escape avoidance strategies to manage controllable stressors predicted lower scores for academic achievement, environment and physical health. In contrast, U.S. students' higher use of problem-solving strategies in response to the controllable stressors predicted higher scores for environment and physical health domains.

Furthermore, U.S. students had higher scores on physical health, psychological and environment domains and overall perceived quality of life than Turkish students. Turkish students reported to use more escape-avoidance strategies compared to U.S. students. Escape-avoidance strategies in response to manage controllable stress found to be ineffective and maladaptive. Differences in health outcomes can be also attributed to differences in environmental conditions. For instance, in this sample, Turkish students reside in a larger and more crowded city compared to U.S. students. Environmental conditions such as traffic, pollution, and noise and fast paced city life can lead to additional stress for Turkish students who reported to have lower scores for perceived quality of life.

While these findings provide important associations among coping, stressor controllability, and well-being from a cross-cultural perspective, there are several limitations. First, this study relied on self-report data, had a relatively small sample size ($N=344$), and used a convenience sample of college students who might not be representative of young adults in general. The types of stressful events experienced by more diverse samples may vary, as might the associations among measures of stressor controllability, coping, and well-being. The use of

questionnaires to assess coping processes has its limitations because it relies on retrospective reports which can potentially create concerns about accuracy (Van den Bergh & Walentynowicz, 2016). Also, due to their relatively low reliability scores, data acquired from some measures should be interpreted with caution. Second, this is a cross-sectional study and only provides correlational data which prohibits causal inferences or conclusions. It is difficult to say if use of higher escape avoidance strategies lead to poorer psychosocial well-being or due to poorer well-being students tend use escape avoidance strategies to manage stress. Further analyses using longitudinal data is necessary to provide evidence-based support for the role of stressor controllability and coping on well-being. Third, in the literature there is little agreement about conceptualization, operationalization, subtypes, and dimensions of coping making it difficult to compare current findings with previous studies (Skinner et al., 2003). Finally, current study did not make any comparison between different types of stressors and only examined the controllability of the stressor. For future research, identifying different types of stressors can provide more information on the relationship among stressors and coping.

Even with those limitations, the current study aiming to help college students adaptively cope with stressful situations, contributes to the coping literature and provides important implications for future research. Life is challenging for college students as they are exposed to variety of stressors such as demanding academic workload, interpersonal and familial conflicts, personal and financial struggles, uncertainty about the future and more.(Hurst et al., 2013; Mahmoud et al., 2012; Meadows et al., 2006).Thus, it is crucial to ascertain what remedies or actions would work best for them to cope with stress. This study showed that when the stressor is perceived as controllable, making explicit efforts to improve the stressful situation based on logical problem-solving strategies can lead to better psychosocial well-being. However, it is also

critical to evaluate the degree of controllability of the stressor or the situation to adaptively cope with the stressor.

Additionally, positive associations between perceived controllability of the stressor and quality of life domains emphasize the impact of cognitive processes on well-being. The way students appraise the stressor can intensify or ameliorate the effects of the stressor on well-being. These findings support the efficacy of cognitive behavioral therapies and can be utilized in counseling settings. The stressors that students encounter might not be uniformly controllable or uncontrollable, thus college counselors can help students to assess the level of controllability of the stressor and choose the most effective coping strategy accordingly.

Finally, examining coping strategies of Turkish and U.S. students provided information on which coping strategies are more effective in response to controllable stressors across cultures. The results demonstrated more similarities than differences between groups. Problem solving strategies were shown to be effective for both groups. For Turkish students, higher use of escape avoidance strategies to manage controllable stressors led to poorer health outcomes.

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Appendix A
Demographic Questionnaire

1. What is your age? _____
2. Are you a student?
 - a. Yes, an undergraduate student
 - b. Yes, a graduate student
 - c. No, I am not a student.
3. Name of the university you attend to _____
4. Are you a domestic student?
 - a. Yes
 - b. No
5. What year are you in college?
 - a. First year
 - b. Second year
 - c. Third year
 - d. Fourth year
 - e. Fifth year
 - f. English language preparation year
 - g. Other _____
6. What is your sex? _____ Male _____ Female _____ Other
7. What is your gender?
 - a. Woman
 - b. Man
 - c. Agender/non-binary
 - d. Other _____
7. What is your race/ethnicity?
 - a. White (Caucasian), non-Hispanic origin
 - b. Black or African American
 - c. Hispanic or Latinx
 - d. Asian
 - e. Native American or American Indian
 - f. Other _____
8. What is your work status?
 - a. Employed Full-time
 - b. Employed Part-time
 - c. Do not work
9. What is your income per year?

- a. \$0 - \$9,999
- b. \$10,000 - \$19,999
- c. \$20,000 - \$29,999
- d. \$30,000 - \$39,000
- e. \$40,000 - \$49,000
- f. \$50,000 or more

9b What is your income per month?

- a. 0 TL – 1,999 TL
- b. 2,000 TL - 4,999 TL
- c. 5,000 TL - 7,999 TL
- d. 8,000 TL - 9,999 TL
- e. 10,000 TL - 12,999 TL
- f. 13,000 TL - 15,999 TL
- g. 16,000 TL or more

Ways of Coping Questionnaire Scale (WOCQ; Folkman & Lazarus, 1980)

Identify a stressful encounter that occurred recently, where it took place and what happened. Next, read each item below and indicate, by using the following rating scale, to what extent you used it in the situation you have just described.

1. Just concentrated on what I had to do next – the next step.
2. I tried to analyze the problem in order to understand it better.
3. Turned to work or substitute activity to take my mind off things.
4. I felt that time would make a difference – the only thing to do was to wait.
5. Bargained or compromised to get something positive from the situation.
6. I did something which I didn't think would work, but at least I was doing something.
7. Tried to get the person responsible to change his or her mind.
8. Talked to someone to find out more about the situation.
9. Criticized or lectured myself.
10. Tried not to burn my bridges, but leave things open somewhat.
11. Hoped a miracle would happen.
12. Went along with fate; sometimes I just have bad luck.
13. Went on as if nothing had happened.
14. I tried to keep my feelings to myself.
15. Looked for the silver lining, so to speak; tried to look on the bright side of things.
16. Slept more than usual.
17. I expressed anger to the person(s) who caused the problem.
18. Accepted sympathy and understanding from someone.
19. I told myself things that helped me to feel better.
20. I was inspired to do something creative.
21. Tried to forget the whole thing.
22. I got professional help.
23. Changed or grew as a person in a good way.
24. I waited to see what would happen before doing anything.
25. I apologized or did something to make up.
26. I made a plan of action and followed it.
27. I accepted the next best thing to what I wanted.
28. I let my feelings out somehow.
29. Realized I brought the problem on myself.
30. I came out of the experience better than when I went in.
31. Talked to someone who could do something concrete about the problem.
32. Got away from it for a while; tried to rest or take a vacation.
33. Tried to make myself feel better by eating, drinking, smoking, using drugs or medication, etc.
34. Took a big chance or did something very risky.
35. I tried not to act too hastily or follow my first hunch.
36. Found new faith.
37. Maintained my pride and kept a stiff upper lip.
38. Rediscovered what is important in life.
39. Changed something so things would turn out all right.

40. Avoided being with people in general.
41. Didn't let it get to me; refused to think too much about it.
42. I asked a relative or friend I respected for advice.
43. Kept others from knowing how bad things were.
44. Made light of the situation; refused to get too serious about it.
45. Talked to someone about how I was feeling.
46. Stood my ground and fought for what I wanted.
47. Took it out on other people.
48. Drew on my past experiences; I was in a similar situation before.
49. I knew what had to be done, so I doubled my efforts to make things work.
50. Refused to believe that it had happened.
51. I made a promise to myself that things would be different next time.
52. Came up with a couple of different solutions to the problem.
53. Accepted it, since nothing could be done.
54. I tried to keep my feelings from interfering with other things too much.
55. Wished that I could change what had happened or how I felt.
56. I changed something about myself.
57. I daydreamed or imagined a better time or place than the one I was in.
58. Wished that the situation would go away or somehow be over with.
59. Had fantasies or wishes about how things might turn out.
60. I prayed.
61. I prepared myself for the worst.
62. I went over in my mind what I would say or do.
63. I thought about how a person I admire would handle this situation and used that as a model.
64. I tried to see things from the other person's point of view.
65. I reminded myself how much worse things could be.
66. I jogged or exercised.

Academic Engagement Scale (Schaufeli, et al., 2002)

Indicate how often you feel these emotions.

1. When I'm studying, I feel mentally strong.
2. I can continue for a very long time when I am studying.
3. When I study, I feel like I am bursting with energy.
4. When studying I feel strong and vigorous.
5. When I get up in the morning, I feel like going to class.
6. I find my studies to be full of meaning and purpose.
7. My studies inspire me.
8. I am enthusiastic about my studies.
9. I am proud of my studies.
10. I find my studies challenging.
11. Time flies when I'm studying.
12. When I am studying, I forget everything else around me.
13. I feel happy when I am studying intensively.
14. I can get carried away by my studies.

Quality of Life Scale-BREF (WHOQOL-BREF, WHOQOL Group, 1998)

Please read each question, assess your feelings, and circle the number on the scale for each question that gives the best answer for you.

1. How would you rate your quality of life?
2. How satisfied are you with your health?

The following questions ask about how much you have experienced certain things in the last two weeks.

3. To what extent do you feel that physical pain prevents you from doing what you need to do?
4. How much do you need any medical treatment to function in your daily life?
5. How much do you enjoy life?
6. To what extent do you feel your life to be meaningful?
7. How well are you able to concentrate?
8. How safe do you feel in your daily life?
9. How healthy is your physical environment?
10. Do you have enough energy for everyday life?
11. Are you able to accept your bodily appearance?
12. Have you enough money to meet your needs?
13. How available to you is the information that you need in your day-to-day life?
14. To what extent do you have the opportunity for leisure activities?
15. How well are you able to get around?
16. How satisfied are you with your sleep?
17. How satisfied are you with your ability to perform your daily living activities?
18. How satisfied are you with your capacity for work?
19. How satisfied are you with yourself?
20. How satisfied are you with your personal relationships?
21. How satisfied are you with your sex life?
22. How satisfied are you with the support you get from your friends?
23. How satisfied are you with the conditions of your living place?
24. How satisfied are you with your access to health services?
25. How satisfied are you with your transport?

The following question refers to how often you have felt or experienced certain things in the last two weeks.

26. How often do you have negative feelings such as blue mood, despair, anxiety, depression?

Individualism-collectivism (IND-COL) measure (Triandis and Gelfand's, 1998)*Horizontal Individualism*

1. I'd rather depend on myself than others
2. I rely on myself most of the time, I rarely rely on others
3. I often do my own thing
4. My personal identity, independent of others, is very important to me

Vertical Individualism

1. It is important for me to do my job better than the others
2. Winning is everything
3. Competition is the law of nature
4. When another person does better than I do, I get tense and aroused

Horizontal Collectivism

1. If a co-worker gets a prize, I would feel proud
2. The well-being of my coworkers is important to me
3. To me, pleasure is spending time with others
4. I feel good when I cooperate with others

Vertical Collectivism

1. Parents and children must stay together as much as possible
2. it is my duty to take care of my family, even when I have to sacrifice what I want
3. Family members should stick together, no matter what sacrifices are required
4. It is important to me that I respect the decision made by my group