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Strategies of University Students to Cope with COVID-19 and the Role of Psychological Flexibility

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Abstract

The COVID-19 outbreak is an important stress factor that threatens the health of individuals both physically and psychologically. Within the scope of struggling the outbreak, many precautions, such as quarantine practices, social distance rules, distance education, flexible working hours have been taken and the lives of individuals have changed greatly. One of the groups that have been significantly influenced by this process is university students. The primary purpose of this study is to determine the ways in which university students cope with the outbreak and to understand the role of psychological flexibility. There were 457 university students in the study. Participants completed an online questionnaire form comprising items relevant to their coping strategies and psychological flexibility levels. Results revealed that participants used transcendental coping the most while relational coping the least. Additionally, psychological inflexibility negatively predicted transcendental, behavioral, and relational coping behaviors. These results revealed the fact that psychological flexibility is an important mechanism that channels students' coping behaviors in such a critical process.

Keywords: Coping Strategies, Outbreak, Psychological Flexibility

1. Introduction

Stressful life events and in this sense natural disasters have serious risks for individuals' health outcomes (Kaplan, Sevinç, & İşbilen, 2020). For instance, events such as bereavement, severe diseases of individuals or their relatives, and revenue loss are associated with increases in stress and decrement in happiness and life satisfaction (Krause, Pargament, & Ironson, 2016). For this reason, it was emphasized that one of the main characteristics of development is accommodating one's self to stressful situations and difficulties. Researchers suggested that individuals could overcome stress by regulating their emotions and actions, using effective thinking procedures, interacting with the environment in order to reduce stress, and monitoring their physiological system (Compas et al., 2001).

In the process of the COVID-19 pandemic, all around the world, individuals have drawn on different coping mechanisms in order to alleviate stress resulting from the virus (Cheema et al., 2020). Lazarus and Folkman

(1984) suggested that each person is influenced by stress sources accordingly with their appraisal of the situation and coping responses. According to their definition, coping is “constantly changing cognitive and behavioral efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (p. 141). They emphasized that individuals’ appraisal and coping styles may have important consequences in terms of their health-related issues. Similarly, Labrague and Ballad (2020) also argue that instrumental coping behaviors have a protective role against the unfavorable health outcomes of pandemics.

Accordingly, it was shown that coping behaviors could be categorized as adaptive and maladaptive coping strategies (Carver, Scheier, & Weintraub, 1989). As researchers suggest, when people take action and struggle for disposing of stressful situations, make a plan for dealing with the source of stress, focus solely on working on the stressful situation while ignoring other things, stay behind and wait for an influential solution and ask for social support, they exhibit adaptive coping strategies. On the other side, when they withdraw from trying to resolve the stressful situation, find some irrelevant activities in order to keep their mind busy, lock in negative emotions and disclose them and deny the existence of the stressful situation, they exhibit maladaptive coping strategies (Carver et al., 1989). Many researches revealed that adaptive coping strategies are related to progress in health data while maladaptive ones are related to adverse health outcomes (e.g. Compas, Connor-Smith, Saltzman, Harding Thomsen, & Wadsworth, 2001; Penley, Tomaka, & Wiebe, 2002).

Although, there are limited studies that examine individuals’ coping behaviors in COVID-19 pandemic, existent ones have revealed that individuals utilize a variety of coping behaviors and these are related to their health outcomes. For instance, in a study with medical students, it was shown that doing physical exercises, following serials on an online platform, engaging in religious behaviors, arranging online meetings with family members and social circle, joining an online game, and coming to terms with pandemic reality and adapting self to live with it are among the coping strategies of students. Besides that, it was found that the most influential strategy for these groups of students is engaging in religious behaviors. It was shown that students who involve in such behaviors have lower levels of stress than other students (Abdulghani, Sattar, Ahmad, & Akram, 2020). In a study with Philippine college students, it was understood that majority of the students are practicing hygienic precautions, not taking part in crowded environments, obtaining information about COVID-19, engaging in religious activities, spending time on social media, receiving social support and occupying themselves by doing various activities (Baloran, 2020). Savitsky, Findling and Hendel (2020) presented that there are five strategies of nursing students in order to cope with pandemics. These are believing in themselves to overcome this process, obtaining knowledge and taking experts’ advice about the issue, moving away from the situation by engaging in other activities (e.g. using alcohol), seeking refuge in God and gathering information from people around them, and making fun of the situation. Researchers found that students who engage in different activities in order to move away from the issue of concern have higher degrees of anxiety.

As reresearchers have indicated, students are also using maladaptive coping strategies in a pandemic period and these strategies have generally been associated with problematic health outcomes. For instance, in their study with Polish college students, Rogowska, Kusnierz and Bokszczanin (2020) showed that students who utilize emotion-related coping behaviors-like imagining, feeling guilty of current situation-and avoidance-related coping behaviors-like diverting attention away from by engaging different activities-have elevated levels of anxiety. A similar study with Pakistani college students revealed the fact that some students turn deleterious ways of reducing pandemic-related stress such as using drugs and smoking (Cheema et al., 2020). Likewise, Sun et al. (2020) revealed that individuals’ Internet usage, alcohol consumption and smoking behaviors had escalated in COVID-19 pandemic process.

In respect to coping strategies of Turkish individuals, there are limited studies. In one of them, Hatun, Dicle and Demirci (2020) interviewed with a group of adults and revealed that these individuals were using four types of coping strategies: relational, cognitive, behavioral and transcendental. It was shown that individuals using cognitive ways of coping were striving for rationalizing the situation, gathering information and motivate themselves. On the other hand, individuals using transcendental coping emphasized acceptance, hope, gratitude, patience and resignation. Those who were using a relational coping style stated that they turned their social circle in order to receive support. Lastly, individuals using behavioral coping strategies mentioned that they took some

precautions against the virus, engaged in different activities and indicated avoidance through various ways (e.g. smoking, use of technology, sleeping, and ignoring). Eryılmaz and Şiraz (2019) characterized the pandemic as an event that brings out the pessimism and they suggested that individuals utilize various strategies to cope with this process. Among them are self-control, problem-solving, spirituality, social support, thinking optimistically, denial, protecting self-worth and distancing. In their study with adolescents, they showed that using coping strategies is associated with an increase in well-being. Kirman (2020) analyzed a group of individuals' social media sharing and examined their coping strategies with COVID-19. As a result of content analysis, it was shown that some individuals used religious coping strategies (e.g. taking refuge in God, praying, acceptance, patience), some used secular coping strategies (e.g. physical exercises, humor, thinking positively, watching a TV series), and some used both of them. Similar to the studies that were conducted in other countries, unfavorable coping strategies were associated with adverse health outcomes (e.g. Bilge & Bilge, 2020).

As Dawson and Golijani-Moghaddam (2020) suggest, there is likely to be a relationship between individuals' coping strategies and their psychological flexibility. They described psychological flexibility as "generalized or higher-order ability" that enables individuals to behave in accordance with contextual requirements and their objectives, so they can choose the most appropriate coping strategy that is suitable for conditions (p. 127). It represents individuals' adaptation to changing necessities, their arrangement of cognitive sources, change of viewpoint, and responding different requirements in an equal way (Kashdan & Rottenberg, 2010). Individuals with psychological flexibility are aware of what is going on in their internal world and they behave in accordance with their values. They are conscious of their emotions, thoughts and experiences. Even these are unfavorable; they do not try to change them or reduce the level of them. (Kul & Türk, 2020). On the other side, psychological inflexibility refers to interruption of dynamic interaction between the individual and his/her environment. It is characterized by constant and stereotypical manner (Kashdan & Rottenberg, 2010). Individuals with psychological inflexibility tend to refuse undesirable experiences and have critical viewpoints about them (Rueda & Valls, 2020).

Psychological flexibility is an important concept in terms of shedding light on individuals' experiences and coping strategies that appears in compelling pandemic conditions (Dawson & Golijani-Moghaddam, 2020). A research corroborative of this view revealed that experiential avoidance [a component of psychological inflexibility, which was described in terms of reluctance to face with specific experiences and making an effort for changing them (Hayes et al., 2006; Hayes, Wilson, Gifford, Follette, & Strosahl, 1996)] and coping strategies are highly similar but two different constructs. Additionally, there was a positive correlation between experiential avoidance and maladaptive coping styles (Karekla & Panayiotou, 2011). Rueda and Valls (2020) also found that psychiatric patients who have higher levels of psychological inflexibility were identified with maladaptive coping strategies (e.g. self-blame, denial) and they have more psychopathological symptoms than who were identified with adaptive ones. Similarly, it was shown that individuals with anxiety disorders have higher levels of experiential avoidance and they use maladaptive ways of coping (e.g. denial, self-blame) more than individuals in the control group (Panayiotou, Karekla, & Mete, 2014). In a recent study, participants who have lower levels of psychological flexibility were found to use coping strategies that are dominant in avoidance. (Dawson & Golijani-Moghaddam, 2020). Regarding the relationship between psychological flexibility and adaptive coping strategies, studies generally revealed that psychologically flexible individuals use particular adaptive coping strategies more than individuals who are psychologically inflexible (e.g. Rueda & Valls).

According to Hatun et al. (2020), individuals' coping styles can either increase or hamper their precautions against COVID-19 and this may influence their risk of contracting an illness. Therefore, it is crucial for individuals to identify adaptive coping strategies in order to get through this process healthfully. Because of changes in educational settings and students' daily life activities (Abdulghani et al., 2020), university students are one of the groups that are considerably influenced by this process. Additionally, it was known that young adults have greater vulnerability of developing psychological symptoms and using alcohol with a detrimental frequency (Ahmed et al., 2020). As Cao et al. (2020) suggest, university students are at risk for developing anxiety problems and they are a population that needs considerable support in this process. Besides, it was proposed that pandemic situations, which are uncontrollable and influence many populations, have serious impacts on individuals, even though they do not catch an illness. Additionally, their coping strategies, which

may maladaptive in other situations, may be adaptive in pandemic conditions (Main, Zhou, Ma, Luecken, & Liu, 2011). Therefore, it is important to uncover college students' coping strategies in this period. According to literature review, available studies searching for the influence of pandemic process on university students' lives are scarce (Brooks et al., 2020). For this reason, current study aims to contribute the literature and also interventions to be organized. Although, there are evidences for the relationship between psychological flexibility and individuals' coping strategies, there is a need to search this issue in the COVID-19 pandemic context. In addition to scarce literature on an international scale, we have not reached a study about this issue in Turkey. Therefore, it is valuable to learn how university students' psychological flexibility levels relate to their coping strategies in the pandemic process.

2. Method

2.1 Participant Characteristics

University students continuing their undergraduate or graduate education were included in the study.

2.2 Sampling Procedures

The sample of the study was constituted through the availability sampling method. There were 457 university students (male = 139, female = 316, other = 2) from 60 different departments. 95,6% of the sample were between 18-25, 2,4% of them between 26-30, and 1,9% of them were 31 and above years old. Participants responded to scales via Google Forms. They did not receive any incentive for participating in the study. Initially, an informed consent form containing information about the study and its confidentiality was presented. Then, participants who admitted taking part in the study started to respond to the scales. About 10 minutes was enough to respond to all items.

2.3 Data Collection Tools

2.3.1 Demographical Information Form

In order to gather information about participants, they were asked to complete demographical information form including questions about age, gender, registered department, year of university, economic status, and a question about whether they need any psychological services during COVID-19 pandemic.

2.3.2 Coping with the Outbreak Scale (COS)

Coping with the Outbreak Scale (Hatun et al., 2020) was used for revealing participants' coping strategies during COVID-19 outbreak. 14-item scale has four dimensions: relational (e.g. "I have shared my problems/concerns with my family."), behavioral (e.g. "I have done something that distract me"), transcendental (e.g. "I have prayed"), and cognitive (e.g. "I have thought that how I can cope with the uncertainty) coping strategies. It is answered on a 5-point Likert scale (1 = I have never done, 5 = I have done a lot.). Cronbach's alpha coefficient was reported as .84 for the total scale. The reliability coefficients of each sub-dimensions are as follows: .79 for relational coping, .70 for transcendental coping, .77 for cognitive coping, and .76 for behavioral coping. In the current study, Cronbach alpha coefficient was .83 for the total scale and .69, .73, .69, .82 for cognitive, transcendental, behavioral and relational coping strategies respectively.

2.3.3 Acceptance and Action Questionnaire-II (AAQ-II)

Acceptance and Action Questionnaire-II was developed by Bond and colleagues (2011) for the purpose of understanding individuals' psychological inflexibility and adapted into Turkish by Yavuz and his colleagues (2016). Seven item scale has a single factor structure (e.g. "I am afraid of my feelings."). It is answered on a 7-point Likert scale (1 = never true, 7 = always true). Higher scores indicate higher levels of psychological inflexibility. Cronbach alpha reliability coefficient was reported as .84 and test-retest reliability was found to be high with .85 coefficient. In the current study, Cronbach alpha coefficient was found as .88.

2.4 Research Design

This research is a descriptive study conducted on the basis of quantitative research approach. It draws on relational screening model in order to reveal the relationship between university students' psychological flexibility and their coping strategies.

2.5 Data Analysis

Afterward data collection, the obtained data were transferred to SPSS 22 packaged software. Data cleaning procedures were carried out and then preliminary analyses were conducted. In order to predict participants' coping behaviors based on their psychological flexibility level, a simple linear regression analyses were conducted.

3. Results

In order to learn students' most preferred coping behaviors during COVID-19 outbreak, their mean scores on subdimensions of COS were examined. Considering these scores, it can be said that they were using transcendental coping most, followed by cognitive, behavioral and relational coping. According to Pearson zero-order correlation, there were significant relationships between all pairs of coping behaviors. When the relationship between coping behaviors and psychological flexibility was examined, it was found that there was a negative relationship between psychological inflexibility and relational ($r = -.14, p < .01$), transcendental ($r = -.15, p < .01$), and behavioral coping ($r = -.11, p < .05$). Table 1 shows descriptive statistics and intercorrelations among variables.

Table 1: Summary of Intercorrelations, Means, and Standard Deviations for Scores on the COS dimensions and AAQ-II

Measure	1	2	3	4	5	M	SD
1. Relational Coping	-	.47**	.37**	.23**	-.14**	2.67	1.32
2. Transcendental Coping	.47**	-	.29**	.29**	-.15**	3.52	1.17
3. Behavioral Coping	.37**	.29**	-	.29**	-.11*	3.19	1.10
4. Cognitive Coping	.23**	.29**	.29**	-	.07	3.45	1.09
5. AAQ-II	-.14**	-.15**	-.11*	.07	-	3.59	1.30

Note. COS = Coping with the Outbreak Scale, AAQ-II = Acceptance and Action Questionnaire-II; * $p < .05$, ** $p < .01$

A simple linear regression was carried out to predict transcendental coping behavior based on students' psychological inflexibility levels. The model as a whole explained a significant proportion of variance in transcendental coping behavior, $R^2 = .02$, $F(1, 455) = 10.08$, $p < .01$. Therefore, psychological inflexibility as a predictor significantly predicted university students' transcendental coping behaviors, $\beta = -.15$, $t(455) = -3.18$, $p < .01$. Table 2 shows the result of regression model.

Table 2: Linear Regression with Psychological Inflexibility Predicting Transcendental Coping

Variable	B	SE	95% CI	β	t	p
(Intercept)	4.001	.16	[3.79, 4.54]	.00	24.98	< .001
Psychological Inflexibility	-.13	.04	[-.26, -.06]	-.15	-3.18	< .01

Note. Results: $F(1, 455) = 10.08$, $p < .01$, $R^2 = .02$

Unstandardized Regression Equation: Distance = 4.001 + (-.13 * Psychological Inflexibility)

Another simple linear regression was carried out to predict behavioral coping behavior based on students' psychological inflexibility levels. The model as a whole explained a significant proportion of variance in behavioral coping behavior, $R^2 = .01$, $F(1, 455) = 5.18$, $p < .05$. Thus, psychological inflexibility as a predictor significantly predicted university students' behavioral coping behaviors, $\beta = -.11$, $t(455) = -2.28$, $p < .05$. Table 3 shows the result of regression model.

Table 3: Linear Regression with Psychological Inflexibility Predicting Behavioral Coping

Variable	<i>B</i>	<i>SE</i>	95% CI	β	<i>t</i>	<i>p</i>
(Intercept)	3.52	.15	[3.63, 4.35]	.00	23.22	< .001
Psychological Inflexibility	-.09	.04	[-.23, -.02]	-.11	-2.28	< .05

Note. Results: $F(1, 455) = 5.18$, $p < .05$, $R^2 = .01$

Unstandardized Regression Equation: Distance = 3.52 + (-.09 * Psychological Inflexibility)

Lastly, a simple linear regression was carried out to predict relational coping based on students' psychological inflexibility level. The model as a whole explained a significant proportion of variance in relational coping behavior, $R^2 = .02$, $F(1, 455) = 8.59$, $p < .01$. Therefore, psychological inflexibility as a predictor significantly predicted university students' relational coping behaviors, $\beta = -.14$, $t(455) = -2.93$, $p < .01$. Table 4 shows the result of regression model.

Table 4: Linear Regression with Psychological Inflexibility Predicting Relational Coping

Variable	<i>B</i>	<i>SE</i>	95% CI	β	<i>t</i>	<i>p</i>
(Intercept)	3.17	.18	[3.68, 4.22]	.00	17.57	< .001
Psychological Inflexibility	-.14	.05	[-.22, -.04]	-.14	-2.93	< .01

Note. Results: $F(1, 455) = 8.59$, $p < .01$, $R^2 = .02$

Unstandardized Regression Equation: Distance = 3.17 + (-.14 * Psychological Inflexibility)

4. Discussion

In this study, which was conducted with university students during the epidemic process, the psychological flexibility of university students and the ways of coping they used were studied. They mostly use transcendental coping, and then cognitive, behavioral and relational coping. It is known that after intense stress-induced, natural disasters, illnesses or difficult life events such as the loss of a loved one, the level of somatic stress increases, semantic inquiries are experienced, and psychological well-being decreases. (Krause et al., 2016). Wang et al. (2020) in their study, in which they examined the first psychological symptoms of the COVID-19 epidemic in Chinese society, found that individuals exhibit moderate and severe symptoms of depression, anxiety and stress. Choi, Hui, and Wan (2020) in their study in Hong Kong similarly found that the COVID-19 epidemic caused increases in depression and anxiety levels. It is extremely important for individuals to have psychological flexibility in this process. The results of the research showed that psychological flexibility is associated with depression, anxiety, and stress (Masuda & Tully, 2012). The results of this research show that individuals resort to less coping methods as their psychological flexibility decreases. It is stated in the literature that people with high psychological flexibility achieve healthier results (Cheng, 2001).

Psychological flexibility includes many skills such as identifying needs in various situations and adapting to the new situation, the necessary strategies for this, realizing changes in personal or social relationships or changing behaviors (Kashdan & Rottenberg, 2010). It is seen that approaches to coping with the epidemic are related to psychological flexibility. In the results of this study, the psychological flexibility of university students significantly predicts their coping behaviors. Psychological inflexibility reduces the use of coping styles. This situation manifests itself in the dimensions of transcendental coping, relational and behavioral coping.

The results of the studies on coping with the effects of the COVID-19 pandemic coincide with the results of this study. One of the results of the study is that university students use relational ways of coping. In the literature, there are studies that concluded that receiving social support from the family during the pandemic is protective in terms of anxiety (Cao et al., 2020) and that people receive the most social support from their family and

friends during the pandemic (Kabasakal & Aktaş, 2021) overlaps with. In the study conducted by Kaplan et al. (2020), the participants stated that they coped with the epidemic process through religious activities and positive thinking. In the same study, it is stated that behavioral coping methods such as sports and meditation and cognitive coping methods such as acquiring information, research/documentary viewing are also used.

Within the scope of this study, the following suggestions can be made for future researchers: This research includes university students. For example: adults', children's, the elderly individuals', etc. coping strategies and prioritization may vary. It may be beneficial to conduct the study with these groups as well. Since there are few studies on coping with the epidemic, it is thought that there is a need for multidimensional studies in different age groups on this subject.

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