



Psychological maltreatment, coping flexibility, and death obsession during the COVID-19 pandemic: A multi-mediation analysis

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Abstract

Recent psychological studies have reported that child maltreatment is a common issue during the COVID-19 pandemic, with negative factor leading to greater risk of occurrence of mental health problems. However, the relationship between psychological maltreatment and psychological factors is complex. Understanding the factors, which may help to provide interventions, is a critical step for mental health providers. This study aims to examine the relationships between psychological maltreatment, coping flexibility, coronavirus anxiety, coronavirus stress, and death distress. We collected data from 394 Turkish young adults (76% male; average age 21.36 ± 2.57 years) during the outbreak of COVID-19. The results of multi-mediation analysis showed that psychological maltreatment was positively related to the death obsession. More importantly, this relationship could be explained through the mediated effects of coping flexibility, coronavirus anxiety, and coronavirus stress. This study highlights the non-negligible role of psychological maltreatment in affecting death obsession and the role of coping flexibility in explaining the psychological influence of maltreatment.

Keywords Psychological maltreatment · Coping flexibility · Coronavirus stress · Coronavirus anxiety · Death obsession

Psychological maltreatment is a form of maltreatment directed at a child by parents or primary caregivers. A child can be abused physically, mentally, sexually or socially. Psychological (emotional) maltreatment is defined as a poor parent–child or primary caregiver–child without physical contact (Hart et al., 1987). It can be considered as an emotional mistreatment of a child. Studies have shown that childhood maltreatment experiences have lifelong adverse effects on one's physical, social-emotional, behavioral, and neurological development (Arslan, 2018; Dubey et al., 2020), well-being (Arslan, 2017b; Paul & Eckenrode, 2015), and mental disorders (Arslan, 2017a, b; Arslan & Yıldırım, 2021; Kisely et al., 2018). Psychological maltreatment in childhood can contribute to increased emotional distress, cognitive distortions, low sense of self-sufficiency and self- (Kendall-Tackett, 2001). In retrospective studies on emotional abuse, aggression, and disruptive behaviors (Miller-Perrin

& Perrin, 2007), evidence has been reported regarding the associations between child maltreatment and emotional maladjustment, conduct problems (Hart et al., 1987), poor self-esteem (Arslan, 2016; Savi, 1999), depressive illness, suicidal behaviors (Mullen et al., 1996) posttraumatic stress disorder, and substance use (Kendler et al., 2000) This suggests that child maltreatment is an important identifier of various mental health and behavioral problems.

Psychological Maltreatment During COVID-19

Studies highlighting lifelong effects of childhood emotional maltreatment showed that emotional maltreatment disrupted psychological functionality in the long term and associated with psychological distress in adulthood (Arslan et al., 2022; Campbell & Hibbard, 2014; Dubey et al., 2020; Paul & Eckenrode, 2015). It also plays an important role in the development of incompatible schemas, such as mistrust, abandonment (Young et al., 2003) and impairing the functionality, cohesion of individuals and emergence of certain mental distress (Arslan, 2021c; Oei & Baranoff, 2007). Such experiences may also lead to experience of post-traumatic stress

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responses including the notion that the world is a dangerous and an unsafe place, creating feelings of helplessness, worthless, numb, hyper-alertness, and vulnerability (Dinleyici & Şahin Dağlı, 2016). As such, it is important to consider that individuals with childhood maltreatment experiences will be at risk in terms of dealing with intense stress situations created by the COVID-19 pandemic. Indeed, children who are subjected to psychological maltreatment have serious deterioration in the development of coping strategies to deal with stressful situations (Brooks et al., 2020; Sabina & Tindale, 2008). Accordingly, individuals with childhood psychological maltreatment experience may be more vulnerable to negative effects of stress and threat situations experienced during health crises like the current pandemic. Research on the COVID-19 pandemic have shown that uncertainty and increasing fear are related to various mental health outcomes as well as worsening pre-existing psychological conditions (Shigemura et al., 2020; Yıldırım & Özasan, 2021). While this indicates that many negative consequences of maltreatment are expected to worsen during COVID-19 pandemic, it may make it difficult to cope with fear, stress and anxiety due to COVID-19. The current pandemic has been shown to be a significant source of stress threatening physical health, mental health, and well-being of many people around the world (Arslan & Allen, 2021; Brooks et al., 2020). Coronavirus anxiety and coronavirus have been found to be related with various mental health problems (e.g., depression, anxiety, stress, functional disorders) in the context of current pandemic (Arslan et al., 2020a; Lee et al., 2020; Yıldırım & Güler, 2021). Recent studies in relation to the COVID-19 pandemic suggest that coronavirus anxiety is associated with coronavirus fear, coronavirus diagnosis, impairment, hopelessness, alcohol/drug coping, suicidal ideation, religious coping, and social attitudes (Lee et al., 2020; Lee, 2020a, b).

Mental health problems have been substantially increased during COVID-19 pandemic. Studies reported that psychological distress in Italy was 38% (Moccia et al., 2020), while in China, 17% of people experienced severe depression symptoms, 30% of them experienced moderate to severe anxiety symptoms, 8% of them experienced moderate to severe stress symptoms alongside a substantial increase in alcohol consumption during the COVID-19 pandemic (Ahmed et al., 2020). Another study in China reported that, 75% of people feared their family members would contract COVID-19 (Wang et al., 2020). In a study conducted in Turkey, approximately one in four participants experienced symptoms of anxiety and about one in three participants experienced symptoms of hopelessness at moderate to severe levels (Şahin & Kulakaç, 2021). While these results suggest that the current pandemic is threatening mental health and lives of people, it is important to evaluate the effects of childhood maltreatment on individuals and its relationships with stressors, coping strategies, and death distress in

the context of pandemic. Death distress can be a common symptom among people during the pandemic. Death obsession is one of the critical components of death distress and refers to repetitive thoughts, intrusive images, and ruminations centered around death of its own or significant other people (Yıldırım & Güler, 2021). It includes three important aspects: death rumination, death dominance and death idea repetition (Abdel-Khalek, 2004). Studies during pandemic demonstrated that death obsession is associated with perceived stress and coronavirus risk in young adults (Arslan, 2021d; Yıldırım & Güler, 2021). This suggests that death obsession is an important research avenue that needs to be addressed in the context of pandemic.

Coping is another concept that needs to be studied in relation to child maltreatment. While coping can help to alleviate negative emotions caused by different stressors it contributes to positive mental health and well-being during the COVID-19 pandemic. With effective coping strategies, individuals highlight their strengths, evaluate, and redefine the consequences of stressors (Lazarus & Folkman, 1984). Coping strategies are cognitive and behavioral efforts of individuals to manage the internal and external demands of stressful events. Individuals use various coping strategies to reduce or manage the physical, psychological or social harm of stressors (Lazarus & Folkman, 1984). Bonanno et al. (2011) highlights the importance of coping flexibility to deal with adversities. Coping flexibility is defined as the ability to effectively cope with the inevitable consequences of the situation (Folkman & Moskowitz, 2004). The way people deal with traumatic experiences is important in the adaptation process (Yıldırım & Maltby, 2021). Studies have reported a positive relationship between coping flexibility and positive psychological adaptation outcomes and psychological well-being (Bonanno et al., 2004).

Dual-Process Theory (Cheng et al., 2014) is a useful theory that attempts to understand coping flexibility. This theory postulates that coping flexibility is an ability to stop using maladaptive coping styles and to apply adaptive coping strategies to deal with life stressors (Kato, 2012, 2015). The theory also underscores effective strategies and emphasize character strengths of dealing with adversities and challenges (Kato, 2012, 2015). Understanding coping flexibility in the lights of Dual-Process Theory has important theoretical and practical value. The ability to engage in different types of coping strategies (e.g., forward-focus coping) promotes people's psychosocial adjustment and wellbeing in the face of adverse life experiences (Bonanno et al., 2004; Bonanno et al., 2011). The flexibility approach mainly emphasizes that individuals who utilize different strategies flexibly would more successfully cope with adverse life events, which in turn would cultivate their mental health and adjustment. The coping flexibility is related to future and trauma-oriented coping in dealing with traumatic situations. People using trauma-focus coping

strategies may for example reduce routine activities after experiencing traumatic events, whereas individuals using future-focus coping strategies may sustain optimal activities by establishing goals and strategies to deal with the adverse impacts of these events (Park et al., 2015). People who are abused in childhood often have difficulty in coping with negative feelings and problems that lead to psychological distress. However, childhood maltreatment experiences could be exacerbated during pandemic, and this might have serious mental health consequences. Available evidence suggests that COVID-19 pandemic is a serious health threat with psychological, emotional, social, and relational consequences (Yıldırım & Güler, 2021). Therefore, the effects of COVID-19 on psychological health and well-being (American Psychological Association, 2020) are increased by coronavirus anxiety, fear, and stress.

Present Study

Psychological maltreatment is a complicated psychological, behavioral and cognitive mechanism and causes to profound actions and consequences for mental health outcomes. Recent psychological studies have reported that child maltreatment is a common issue during the COVID-19 pandemic (Lawson et al., 2020), with negative factor leading to greater risk of occurrence of mental health problems. In addition, the relationship between psychological maltreatment and psychological factors is complex. In general, many research has indicated that psychological maltreatment significantly affects well-being and mental health outcomes. Considering the Dual-Process Theory (Cheng et al., 2014), individuals with high levels of coping flexibility are more likely to overcome the adverse effects of psychological maltreatment, which in turn may reduce the negative impacts of coronavirus experiences on mental health. Therefore, we sought to examine the mediating role of coping flexibility in the association of psychological maltreatment with coronavirus stress and anxiety and death obsession among Turkish people. Based on this aim, we hypothesize that: (a) psychological maltreatment would have a significant indirect effect on coronavirus psychological outcomes and death obsession through coping flexibility; (b) coping flexibility would mediate the relationship between psychological maltreatment and coronavirus psychological outcomes, and (c) coronavirus psychological outcomes would have a significant indirect effect on death obsession through coping flexibility.

Method

Participants

The sample of study included 394 young adults from a state university of Turkey. Participants were 24% female and 76%

male, ranging in age between 19 and 40 years ($M = 21.36$, $SD = 2.57$). The majority of participants reported medium socioeconomic status (SES) (low SES = 18.8%, medium SES = 68.5%, and upper SES = 12.7%). Regarding the coronavirus characteristics, the majority of young adults were non-infected (94%), and approximately 27% of them had an infected family member. The data of the study was gathered through a web-based online survey, which was created using the study measures and demographic items (e.g., gender, age). Before data collection, the participants were presented a consent form that explained measures included in, and the aims of, the study. The survey was administrated to participants during online distance education. The study was approved by Burdur Mehmet Akif Ersoy University's Institutional Review Board.

Measures

Psychological Maltreatment Questionnaire–Short Form (PMQ) The PMQ is a 12-item self-report rating scale developed to assess childhood psychological maltreatment among Turkish people (Arslan, 2015). All items of the measure are scored using a 4-point rating scale (e.g., “My parent would threaten me with hurting someone or something I love.”), ranging from almost never (1) to almost always (4). After reversing positive items, the scale scores are created by summing item responses, and higher scores reflect greater levels of psychological abusive parental behaviors and acts. Previous research reported that the PMQ had strong internal reliability estimates with Turkish adults (Arslan, 2017a, b, 2021b).

Coronavirus Stress Measure (CSM) The CSM is a 5-item self-report rating measure (e.g., “How often have you felt that you were unable to control the important things in your life due to the COVID19 pandemic?”) used to assess the perceived coronavirus-related stress of people (Arslan et al., 2020a). All items of the scale are rated based on a 5-point point scale, ranging between 0 (never) and 4 (very often). The scale scores are created by summing item responses, and higher scores represent greater levels of stress related to coronavirus pandemic. Research indicated that the scale provided a strong reliability estimate with Turkish sample (Arslan et al., 2020a).

Death Obsession Scale (DOS) The DOS a 3-item self-report scale (e.g., “I find it greatly difficult to get rid of my thoughts about death.”) developed to measure obsessive thought relevant death of own and significant others (Dadfar & Lester, 2020). All items in the scale are scored using a 5-point point scale between 1 (never) and 5 (always). The DOS scores are created by summing item responses, and higher scores indicate greater levels of obsessive thought relevant death.

Previous research reported that the scale had strong internal reliability estimate with Turkish sample (Yıldırım & Güler, 2021).

Coronavirus Anxiety Scale (CAS) The CAS is a 5-item self-report measure (e.g., I felt dizzy, lightheaded, or faint, when I read or listened to news about the coronavirus) used to measure coronavirus anxiety (Lee, 2020a, b), with scoring based on 5-point point scale, ranging from 0 (Not at all) to 4 (Nearly every day over the last 2 weeks). Previous research showed that the scale had strong internal reliability estimate with Turkish people (Arslan et al., 2020b).

The Perceived Ability to Cope with Trauma (PACT) Scale The PACT is a 20-item self-report scale (e.g., “Keep my schedule and activities as constant as possible”) developed to assess the coping flexibility of participants (Bonanno et al., 2011), with scoring based on 5-point point scale, ranging from 1 (not at all able) to 7 (extremely able). Previous research reported that the scale had strong internal reliability estimate with Turkish samples (Arı & Soysal, 2019).

Data Analyses

Prior to testing the multi-mediation analyses, preliminary analyses for the measured variables were performed to examine descriptive statistics, the normality assumption, and internal consistency reliability estimates. Pearson correlation analyses were next carried out to investigate the relationships between psychological maltreatment, coping flexibility, coronavirus stress, coronavirus anxiety, and death obsession. Kurtosis and skewness statistics were utilized to assess the assumption of normality with their cut-off values. Skewness scores lower than |2| and kurtosis scores lower than |7| indicate the data is relatively normally distributed (Curran et al., 1996). After examining preliminary analyses, a multi-mediation model was conducted to examine the proposed mediation model testing the mediating role of coping flexibility on the association of psychological maltreatment with coronavirus experiences (i.e., anxiety and stress) and death obsession among young adults. The proposed mediation model (Model 81) was performed using PROCESS macro version 3.5 for SPSS (Hayes, 2018). In the

model, indirect effects were interpreted using a 95% confidence interval (Hayes, 2018; Preacher & Hayes, 2008). Bias-corrected bootstrapping procedures were utilized to test the significance of indirect effects in the mediation model. All study analyses were conducted using SPSS version 25.

Results

Preliminary Analysis

Descriptive statistics indicates that skewness values were between -0.48 and 1.86 and kurtosis values were between -0.71 and 3.22 , reporting that all measured variables in the study had relatively normal distribution. The internal reliability estimates of the analyzed variables were between 0.89 and 0.93 , indicating that the variables had adequate-to-strong internal reliability coefficients.

Person correlational analyses showed that psychological maltreatment had a significant and negative correlation with coping flexibility and positive associations with coronavirus stress, coronavirus anxiety, and death obsession. Coping flexibility was negatively and significantly correlated with coronavirus stress, coronavirus anxiety, and death obsession. Coronavirus stress and coronavirus anxiety were positively and significantly correlated with death obsession. The results of the preliminary and correlation analyses are presented in Table 1.

Mediation Analyses

The proposed multi-mediation model was run to investigate the direct and indirect relationships between the measured variables of the study. Findings showed that psychological maltreatment had a significant direct effect on coping flexibility, coronavirus anxiety, and coronavirus stress, with explaining 5% of the variance in coping flexibility. Next, coping flexibility had significant associations with coronavirus stress and coronavirus anxiety. Psychological maltreatment and coping flexibility accounted for 9% of the variance in both coronavirus stress and coronavirus anxiety. Coping flexibility mediated the effect of psychological maltreatment on coronavirus stress and coronavirus anxiety. Subsequent

Table 1 Descriptive statistics and correlation results

Scales	<i>M</i>	<i>SD</i>	Skew	Kurt	α	1	2	3	4	5
1. Psychological maltreatment	19.18	6.19	1.06	.93	.89	—	-.23**	.21**	.20**	.24**
2. Coping flexibility	53.55	16.54	-.31	-.71	.93		—	-.25**	-.26**	-.31**
3. Coronavirus stress	13.04	5.17	-.48	-.57	.92			—	.27**	.29**
4. Coronavirus anxiety	2.65	4.33	1.86	3.22	.91				—	.36**
5. Death obsession	5.70	3.39	1.18	.55	.90					—

** $p < .001$

Table 2 Unstandardized coefficients for the mediation model

Antecedent	Consequent			
	M_1 (Coping flexibility)			
	Coeff.	SE	<i>t</i>	<i>p</i>
X (Psychological maltreatment)	-.60	.13	-4.70	<.001
Constant	65.11	2.58	25.20	<.001
$R^2 = .05$ $F = 22.10; p < .001$				
	M_2 (Coronavirus anxiety)			
X (Psychological maltreatment)	.09	.03	2.86	.004
M_1 (Coping flexibility)	-.06	.01	-4.61	<.001
Constant	3.92	1.00	3.89	<.001
$R^2 = .09$ $F = 18.81; p < .001$				
	M_3 (Coronavirus stress)			
X (Psychological maltreatment)	.14	.04	3.34	<.001
M_1 (Coping flexibility)	-.06	.02	-4.22	<.001
Constant	13.95	1.28	10.87	<.001
$R^2 = .09$ $F = 18.72; p < .001$				
	Y (Death obsession)			
X (Psychological maltreatment)	.06	.02	2.33	<.001
M_1 (Coping flexibility)	-.04	.01	-3.78	.020
M_2 (Coronavirus stress)	.20	.04	5.28	<.001
M_3 (Coronavirus anxiety)	.10	.03	3.17	<.001
Constant	4.72	.88	5.39	<.001
$R^2 = .22$ $F = 27.08; p < .001$				

SE=standard error. Coeff=unstandardized coefficient. X=independent variable; M=mediator variable; Y=outcome or dependent variable

results indicated that death obsession was significantly

predicted by psychological maltreatment, coping flexibility, coronavirus stress, and coronavirus anxiety. Collectively, all variables in the model accounted for 22% of the variance in death obsession. Coronavirus stress mediated both effect of psychological maltreatment and coping flexibility on death obsession among Turkish people. Furthermore, coronavirus anxiety and coronavirus stress mediated effect of psychological maltreatment on death obsession. These results indicate that coping flexibility is an important source in reducing the negative impacts of both coronavirus and childhood adverse experiences on death-related obsessive thoughts among young adults. The mediation results are presented in Table 2 and Fig. 1. Standardized total and indirect effects with 95% bias-corrected confidence intervals are also presented in Table 3.

Discussion

The present study aimed to examine the mediating role of coping flexibility in the association of psychological maltreatment with coronavirus stress and anxiety and death obsession among Turkish people. Findings from the study offered evidence supporting the main hypothesis of the study that psychological maltreatment had significant indirect effect on both death obsession and coronavirus outcomes through coping flexibility. We first found that childhood psychological maltreatment had a significant predictive effect on coronavirus stress and coronavirus anxiety. This research findings provide evidence that government and health authorities need to actively take measures and respond to the pandemic to reduce the risk of maltreatment. There are very limited studies in relations to the prevalence

Fig. 1 The mediation depicting the associations between the study variables

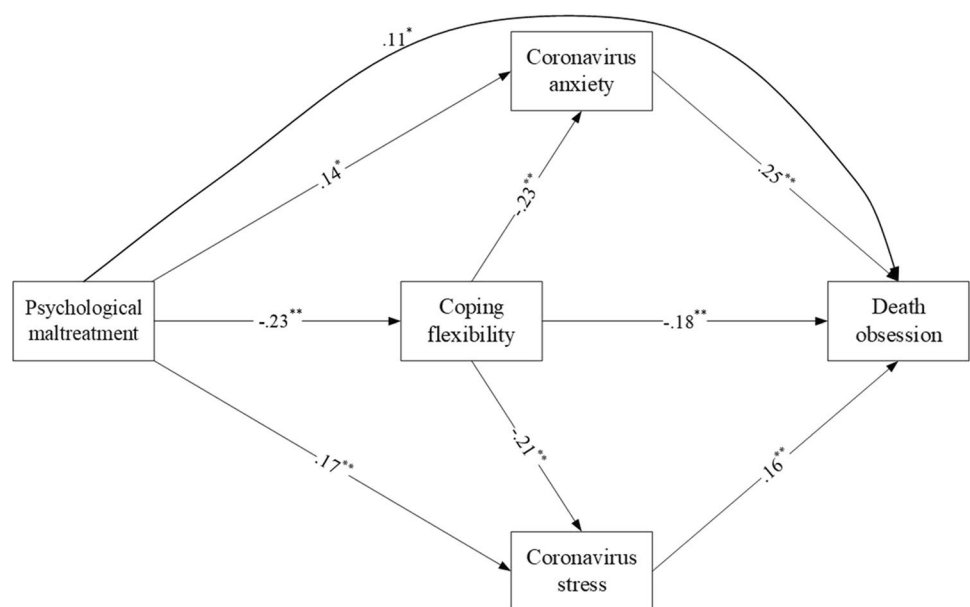


Table 3 Standardized indirect effects

Path	Effect	SE	LLCI	ULCI
Total indirect effect	.12	.03	.07	.18
Maltreatment → coping → death obsession	.04	.02	.02	.07
Maltreatment → anxiety → death obsession	.04	.02	.01	.07
Maltreatment → stress → death obsession	.03	.01	.01	.05
Maltreatment → coping → anxiety → death obsession	.01	.01	.01	.03
Maltreatment → coping → stress → death obsession	.01	.01	.01	.02

Number of bootstrap samples for percentile bootstrap confidence intervals: 5000

psychological maltreatment and its relations with pandemic related outcomes. Available evidence showed that the risk for psychological and physical maltreatment during the COVID-19 pandemic has been substantially increased due to pandemic-related factors including fear, stress, anxiety, and parental job loss (Lawson et al., 2020; Tsur & Abu-Raiya, 2020; Yıldırım & Solmaz, 2020). For example, in a large sample of adults Tsur et al. (2020) showed that adults who experienced child maltreatment report a higher level of COVID-19-related acute stress disorder than those who did not experience child maltreatment. This suggests that child maltreatment serves a critical role in affecting the short and long-lasting consequences of mental health-related concerns, including anxiety and stress in the face of adversity.

We next found that coronavirus stress and coronavirus anxiety significantly predicted death obsession, and both variables mediated the effect of psychological maltreatment on death obsession. These results suggest that people exposed to psychological maltreatment are more likely to experience COVID-19 related anxiety and stress which in turn increase the likelihood of experiencing a greater level of obsessive thought relevant to death of their own and significant others. These results are in line with previous research. For example, psychological distress was found to be associated with greater death anxiety (Shakil et al., 2020). Although limited, the association between pandemic related stressors and mental health outcomes have been documented in different studies (Joaquim et al., 2021; Ornell et al., 2020).

Subsequent analyses demonstrated that psychological maltreatment had significant indirect effect on both death obsession and coronavirus outcomes through coping flexibility. Coping flexibility mitigated the adverse impacts of childhood psychological maltreatment on both coronavirus outcomes and death obsession. These results suggest that coping flexibility can be serve as resilience factor in reducing death-related obsessive thoughts in face of adverse life experiences. Certain types of coping mechanism (e.g., positive cognitive reframing) were found to be associated between the pandemic related stressors and child maltreatment (Lawson et al., 2020). Coping flexibility is a psychological resource facilitating individuals to cope with stressors. Evidence from the current pandemic showed that

positive psychological resources assist to reduce the impact of pandemic related stressors on death distress (i.e., anxiety, depression, obsession) and happiness (Yıldırım & Güler, 2021), while pandemic related stressors can increase the death distress (Shakil et al., 2020).

Limitations and Implications

There are several limitations of the present study that should be addressed in future research. First, this study utilized a cross-sectional approach where participants were required to report on single timeframe, which may have bias. Second, the employment of a cross-sectional method limits any inference about causality among the analyzed variables or changes over time. Third, representation and eligibility criteria of the sample precludes generalization of emerging finding to the general population. For instance, the age ranges of participants were between 19 and 40 years old. As a result, we cannot draw a conclusion regarding the results from this sample to adolescents, elderly, or clinical populations. Furthermore, the use of a convenience sample from online survey restricts generalizations to the other populations because of sample representativeness. Subsequent studies will be necessary to address these limitations to verify the generalizability and replicability of the present results. Finally, in this study, self-report measures were used. In self-report measures, social desirability is a common problem in which participants could have to overestimate or underestimate their responses to draw either positive or negative attitudes. Given the characteristics of the study sample, their responses may have been affected by the current state of the pandemic, which has carried a tense and stressful situation. Further studies could be utilized additional methodologies (e.g., longitudinal study) to improve validity of the current results.

Notwithstanding these limitations, our findings present initial evidence for factors associated with changes in death obsession during COVID-19. Findings are in accordance with predictions of increased symptoms of death obsession following the COVID-19 related stressors. Theoretical contributions of the present findings are noteworthy. Our study contributes to the extant literature on the psychological

influence of COVID-19. In particular, we determine an insightful effect of the child maltreatment from a young adults' perspective that child maltreatment can significantly increase people's coronavirus anxiety, coronavirus stress, and death obsession and decrease coping flexibility. In addition to this direct effect, we further determine the internal mechanism among the analyzed variables. We find that being mistreated in childhood evokes poor coping flexibility and subsequently enhances coronavirus anxiety and coronavirus stress, which have a carrying-over effect on young adults' death obsession. This study focuses on one critical element of death distress – death obsession. That is, this research stream is underrepresented. As such, the influence on other types of death distress alongside the underlying mechanisms should be an interesting avenue for future studies.

Furthermore, this research contributes to the literature on coping flexibility in the context of pandemic by broadening the understanding of both the antecedent and consequents of coping flexibility. This study confirms that child maltreatment would also hamper coping flexibility. In terms of coping flexibility's consequent, we investigated coronavirus anxiety and stress that has beyond much of earlier research which has largely investigated the direct outcomes (Arslan et al., 2020a, b). Particularly, we show that mistreated young adults in childhood tend to adopt less cognitive flexibility to focus on how to cope with the current psychological problems (anxiety and stress) caused by pandemic. Moreover, the effect of coping flexibility on death obsession would also be facilitated through coronavirus anxiety and stress. Having coping flexibility results in reduced coronavirus anxiety and stress which in turn leads to low death obsession. Thus, reducing coronavirus anxiety and stress will mitigate young adults' death obsession if they use coping flexibility to overcome with problems. Our empirical research verifies our hypothesis that the relationship between coping flexibility and death obsession is mediated by coronavirus anxiety and stress. Therefore, interventions could be designed to improve the coping flexibility which might help college students to overcome the adverse impacts of psychological maltreatment on mental health and wellbeing. Additionally, coping flexibility could be used as a strategy to promote people's health during the pandemic.

The findings of this study also have important implications in terms of providing guidelines for policy makers and mental health providers. First, we report that child maltreatment could hamper coping flexibility which was negatively associated with coronavirus anxiety and stress. A special focus should be given to psychological maltreatment during pandemic by governments and mental health professionals. Certain types of coping mechanism (i.e., coping flexibility) help to mitigate the effect of psychological maltreatment on COVID-19 experiences. Cognitive flexibility also leads to reduced death obsession. Such empirical evidence and

knowledge can inform public health authorities to minimize harmful effects of stressors on mental health outcomes and may provide mental health professionals and clinicians with beneficial knowledge about both risk and protective factors for death obsession during and post pandemics. When designing promotion programs, mental health professionals should consider adding psychological resources related to cognitive flexibility to mitigate death distress. Longitudinal studies are required replicate the findings of this study, and to offer evidence concerning the long-term consequences of these changes reported during the COVID-19 pandemic.

In conclusion, this study supports that psychological maltreatment has a significant relationship with the death obsession. More importantly, the coping flexibility, coronavirus anxiety, and coronavirus stress explain this relationship. Overall, the current paper stresses the non-negligible impact of psychological maltreatment in affecting death obsession and also has important implications for policymakers and mental health professionals.

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Data Availability The datasets generated during and/or analyzed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all participants included in the study.

Conflicts of Interest The authors declared no conflicts of interest with respect to the research, authorship, and/or publication of this article.

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