

Attachment anxiety and resilience: The mediating role of coping

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ABSTRACT

In recent research, attachment has been addressed as a core factor that potentially contributes to resilience. However, there is still much to investigate regarding the mechanisms of this relationship. Emotion-focused coping and problem-focused coping strategies may be promising pathways via which attachment associates with resilience. The present study evaluated the role of attachment insecurity (i.e., attachment anxiety and avoidance) in resilience among a Turkish sample during the COVID-19 pandemic. We hypothesized that individuals with high levels of attachment anxiety would experience lower resilience via emotion-focused coping strategies. On the other hand, we did not have a specific hypothesis for attachment avoidance due to contrasting research findings of previous studies. Participants reported their attachment orientation, resilience, and coping strategies. Attachment anxiety was directly and, through both coping strategies, indirectly linked to resilience however attachment avoidance was only indirectly related to resilience through problem-focused coping. The findings indicate that low levels of attachment anxiety and the ability to use problem-focused coping strategies may be associated with greater resilience. The fostering of attachment security may thus reduce the use of emotion-focused strategies and may promote resilience among individuals with high levels of attachment anxiety. Moreover, our study is one of the first to investigate attachment orientations in relevance with coping and resilience during the ongoing pandemic. This research has implications regarding the potentials of introducing psycho-educational trainings for better coping strategies in crisis like COVID-19 pandemic.

1. Introduction

The intense mental demands experienced during the COVID-19 pandemic have shifted the focus towards coping and resilience with respect to well-being. Resilience is of the utmost importance, especially during periods of heightened threat, since it has been demonstrated to be closely related to both physical and psychological well-being (Karremans & Vingerhoets, 2012). Previous studies have shown that secure attachment can buffer distress by means of the implementation of functional coping strategies (Guo, 2019), and can also foster resilience (Bender & Ingram, 2018). By examining preferred coping strategies, the present study explored a possible link between attachment and resilience. In the context of the COVID-19 pandemic, when individuals have been reminded of their own mortality continuously, they might not be impacted in a similar vein and some people might require more support than others (Moccia et al., 2020). In this sense, it is important to identify the protective factors and specific processes that contribute to individuals' well-being and resilience in order to develop intervention

strategies and promote enhanced global (i.e., psychological, social, and occupational) functioning.

1.1. Attachment

Attachment theory (Bowlby, 1969/82, 1988) provides an explanation for the dynamics and the importance of emotional bonding between the infant and its primary caregivers (i.e., attachment figures) based on the infant's very early experiences, and also explains the impact of these initial experiences on later relationships (Mikulincer et al., 2003). The premise of this theory is that attachment behavior is an innate, biological process and is evolutionarily adaptive (Bowlby, 1969/82). According to Bowlby, the attachment behavioral system is one of the evolutionarily adaptive behavioral systems that instinctively guide our behavior from birth with the aim of ensuring the survival of our species. The primary strategy in the attachment behavioral system is to gain proximity to an attachment figure, and the system is activated in the event of a situation or stimulus that is subjectively appraised as

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threatening in order to attenuate feelings of distress. Examples of the kind of threatening situations faced by infants that activate the attachment system include, but are not limited to, fatigue, hunger, illness, discomfort, or pain. By activating the attachment behavioral system (e.g., crying loudly when hungry), the infant attempts to gain proximity, thereby adaptively increasing its chances of survival. In adulthood, the attachment behavioral system is activated in response to significant transitions (e.g., loss, illness, separation, starting university, or moving away from home) that are perceived as distressing, and its purpose is to attenuate stress as well as to elicit support and comfort from others in order to help the individual cope with and adjust to the experienced difficulties (Mikulincer & Shaver, 2007).

While the goal of the attachment behavioral system, as a primary strategy, is to seek comfort and security from an attachment figure when feeling threatened, the achievement of this goal is dependent on the actual response of the attachment figure (Bowlby, 1969). If the attachment figure balances the provision of comfort (i.e., a safe haven) with reassurance and support for exploration (i.e., a secure base) in times of need, the attachment behavioral system is deactivated, since the quest for proximity has apparently been effective. Continuous experience based on this pattern contributes to “attachment security,” which involves individuals exhibiting low levels of attachment anxiety and avoidance. However, if the primary strategy is not efficient and the attachment behavioral system is not deactivated due to an inadequate, unresponsive, or inconsistent attachment figure, one of the secondary strategies—hyperactivation or deactivation—is subsequently activated. Secondary attachment strategies are affect regulation strategies when proximity seeking seems not working, or distressing itself (Mikulincer & Shaver, 2008). If one of these two strategies is activated regularly and predominantly, the individual develops patterns of attachment insecurity—that is, frequent use of the hyperactivation strategy contributes to “attachment anxiety,” whereas frequent use of the deactivation strategy contributes to “attachment avoidance.” The former strategy involves multiplying proximity-seeking attempts until attachment security is provided, whereas the latter is characterized by the inhibition of attachment needs without the achievement of attachment security (Cassidy, 1994; Mikulincer et al., 2009; Shaver et al., 2005). Both these strategies have adverse outcomes for the individual, which include using less effective coping strategies and being less able to form healthy relationships (Hazan & Shaver, 1987; Mikulincer & Shaver, 2018).

Another central premise of attachment theory concerns “internal working models” (Bowlby, 1969/82). Attachment is a dynamic process that is heavily based on evaluations of both the self and the attachment figure in times of need. The outcomes of the attachment relationship, as well as the attachment figure's responses, generate mental representations (i.e., internal working models: IWMs) that contribute to subsequent attachment behaviors. In other words, mental representations of the self and others are formed by repeated adequate or inadequate experiences during the early caregiver–child relationship. These IWMs of the self and others impact the individual's behavioral, cognitive, and affective processes by providing guidance about what to expect from others and how to interpret interactions, and by storing memories of attachment-related events (Bowlby, 1969/82). Once internalized, experiences of threat or safety become working models and serve as templates for behavior, including coping, as well as becoming core aspects of our personality, including resilience (Kirkpatrick & Hazan, 1994).

Securely attached individuals have a history of a responsive, consistent, and adequate child–caregiver relationship that manifests itself in positive views of the self and others later in life. Such individuals are comfortable with close relationships and feel in control of their lives. They have also learned to express their emotions and have developed the sense of internal security essential for modulating appropriate responses to stress and to situations involving risk. Individuals high in attachment anxiety have a history of inconsistently and insufficiently responsive caregiver–child episodes, which have left them with a negative model of

the self and a positive model of others. They are dependent, lack self-confidence, and conform to others' wishes, and while they want relationships, they excessively worry about abandonment. Individuals high in attachment avoidance have had consistently unresponsive caregivers, resulting in a negative model of others and a positive model of the self (Bowlby, 1969/82). Although the positive model of the self in individuals with high attachment avoidance tends to resemble that of secure individuals, it is the result of defensive self-enhancement/self-inflation, in contrast to secure individuals, whose positive self-model is based on their core sense of being loved, accepted, and valued by their attachment figures (Miller et al., 2013). Individuals high in attachment avoidance are uncomfortable with closeness and intimacy, and independence is of the utmost importance in their lives (Mikulincer & Shaver, 2018).

Maintaining the secondary attachment strategies (i.e., hyperactivation or deactivation) and IWMs, which are mostly negative either for self or for others, might make highly insecure individuals less adept at dealing with stressful situations. The recent research has been investigating the relationship between attachment orientations and the ability to cope with stressful situations (Craparo et al., 2018; Fasihi et al., 2013; Frías et al., 2014) building on the conclusion that established attachment schemas may carry forward into adulthood and shape how individuals cope with stressful situations (Seiffge-Krenke & Beyers, 2005).

1.2. Coping

Coping is a complex, multidimensional process that is defined as “constantly changing cognitive and behavioral efforts designed to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person” (Lazarus & Folkman, 1984, p. 141). Compas et al. (2001) define coping as a dynamic process by means of which individuals adapt to stress and adversity. It includes emotion management, the regulation of thought processes and behavior, and action on the environment in order to alter or decrease stress. There are two main coping strategies: problem-focused coping and emotion-focused coping (Lazarus & Folkman, 1984). Problem-focused coping consists of attempts to solve a problem directly while seeking information about it in order to attenuate distress, whereas emotion-focused coping involves a shift of attention towards emotions, either to express or suppress them, without actively focusing on the problem itself. Problem-focused coping strategies (e.g., the gathering of information or planning) are utilized when the individual trusts their abilities to lessen the effects of the stressor(s), whereas emotion-focused coping strategies are implemented when the individual perceives themselves as incapable of dealing with the stressor or perceives the stressor to be something that cannot be altered and has to be endured.

Both the demands of the problem and individual differences, including differences in attachment orientations, influence a person's appraisal of stress and their available resources, and, as a result, have an impact on the coping process (Folkman & Moskowitz, 2004). The attachment system is activated when an individual is faced with a subjectively appraised threat, while the individual's attachment orientation directs their interpretation of the threat, as well as their reaction to it (Collins & Feeney, 2004; Mikulincer & Shaver, 2007). The literature suggests that insecurely attached individuals are more likely to perceive events as stressful and threatening and to react with less-effective coping mechanisms than their securely attached counterparts. Individuals with high attachment security tend use problem-focused coping strategies (e.g., Abraham & Kerns, 2013), whereas individuals with high in attachment anxiety or avoidance tend to be more reliant on emotion-focused coping strategies (Pascuzzo et al., 2013).

Attachment system and coping mechanisms might be regarded as similar in terms of providing cognitive interpretations of distressing stimuli and prompting decisions regarding how much trust to place in oneself and others (i.e., IWMs) in order to alter stress and maintain

homeostasis. Roth and Cohen (1986) suggested that perceived social support and self-compatibility alter the relationship between stress and its outcomes. Individuals differ in terms of asking for social support when faced with a threatening stimulus, and in terms of their appraisal of their own ability to alter stress due to their mental representations of the self and others. Securely attached individuals appraise their ability to cope with stressful situations more positively and constructively, whereas individuals high in attachment avoidance inhibit their reactions to stressors and do not take advantage of social support as a form of coping (Mikulincer & Florian, 1998). On the other hand, individuals high in attachment anxiety are hypervigilant; they overreact to stressors and tend to utilize maladaptive coping behaviors such as exaggerating the seriousness of the problems, their inability to cope as well as focusing on their emotions (Berry & Kingswell, 2012; Mikulincer et al., 2003). Attachment security is known to facilitate personal adjustment in the presence of adversities through constructive, flexible, and reality-attuned coping efforts (Mikulincer & Shaver, 2007). In other words, attachment security directs individuals towards using effective coping strategies and, at the same time, increases their resilience by predisposing them towards flexibility in response to adversities.

1.3. Resilience

Resilience is considered as a skill that helps maintain positive adaptation and normative functioning in individuals who are going through significant or severe adversities (Fletcher & Sarkar, 2013; Jenson & Fraser, 2015). Among the individual differences that have been found to be associated with resilience are beliefs, attachment orientations, coping strategies, and identity characteristics (Craparo et al., 2018; Guo, 2019; Pellerone et al., 2016). Indeed, attachment theory suggests that attachment security provides better developmental outcomes, including resilience (Karreman & Vingerhoets, 2012). Several longitudinal studies have identified a pathway from attachment orientations to resilience, in which attachment orientations affect resilience rather than the other way around (e.g., Galatzer-Levy & Bonanno, 2013).

One of the variables underlying the relationship between attachment and resilience may be coping. According to Leipold and Greve (2009) threats and challenges activate regulatory or coping processes that enable the individual to deal with the respective threat or challenge. Following this approach, Guo (2019) suggested to conceptualize resilience according to the stability or progressive changes resulted from the coping processes. In this respect, coping strategies that are engaged in face of stressors might impact resilience. Previous research has indicated that attachment security is associated with problem-focused coping (Villasana et al., 2016), and that this coping strategy predicts resilience (Guo, 2019).

On the other hand, Karreman and Vingerhoets (2012) showed emotion-focused coping strategies to be related to poor resilience, while in Pascuzzo et al.' (2013) study, attachment anxiety was found to be closely connected to the use of emotion-focused coping strategies. Following the five elements of resilience—personal competence, social competence, family coherence, social support and personal structure—introduced by Friberg et al. (2003), Marriner et al. (2014) suggested that "... many of these elements might be seen in people with a secure attachment style and also in those who use problem-focused strategies majorly to cope with stressors" (p.4).

Although previous research provides evidence for the link between attachment and resilience, less is known about the mechanism underlying this association. Building on the indirect evidence mentioned above, we believe that the association between different coping strategies and attachment orientations may provide an insight into why individuals high in a specific attachment orientation are more likely to demonstrate resilience than others. Our goal was to explore the role played by coping strategies in the relationship between attachment orientations and resilience, since resilience is also explained as "a stress-

resistant attitude, related to the appraisal of oneself as able to cope with stressors" (Karreman & Vingerhoets, 2012, p. 821) and IWMs- that include cognitive appraisals of self- along with secondary strategies connected to attachment orientations, impact coping strategies for stressors. Indeed, the assessment of stressful situations and one's own competences to cope with them is affected by the level of an individual's self-assessment (e.g., IWMs) and habits of reacting to difficulties (e.g., secondary attachment strategies, coping strategies) are among personality determinants of resistance to stress (Huber, 2010 as cited in Pudlo-Komorowska, 2016). Further, it has been argued that resilience should be differentiated from coping since they are related but different constructs with respect to their impact on behavioral changes (Bonanno & Diminich, 2013). Coping refers to cognitive and behavioral strategies to handle and manage stressful events or negative psychological and physical outcomes (Folkman & Moskowitz, 2004) while resilience refers to the adaptive capacity to recover from stressful situations in the face of adversity (Steinhardt & Dolbier, 2008). What is more, there are studies that have observed that coping style predicts resilience (Chen et al., 2018; Chen et al., 2019). In this sense, it may be that attachment influences resilience because it is associated with variance in engaged coping strategies, and coping strategies may in turn shape resilience when faced with distressing stimulus.

Because of the limited number of studies that have associated coping strategies with attachment orientations and resilience (e.g., Craparo et al., 2018; Guo, 2019), as well as evidence suggesting a relationship between the different attachment orientations and resilience (see Rasmussen et al., 2019), we proposed a new model, which is presented in Fig. 1. In particular, we hypothesized that attachment security would be correlated with greater resilience and reliance on the problem-focused coping strategy.

Our goal was to analyze these questions in the context of the COVID-19 pandemic, which is a significant stressor for many people. To the best of our knowledge, no study has investigated the attachment orientations, coping and resilience association during the ongoing COVID-19 pandemic so far. Unlike everyday stressors, which can be understood as mild adversities, the pandemic ranks among such significant adversities as life-threatening diseases, wars, or major disasters (Fletcher & Sarkar, 2013). According to Davydov et al. (2010), resilience and the factors underlying the preferred coping mechanism may differ in relation to the severity of the adversity. Indeed, the COVID-19 pandemic is a significant stressor for many individuals. Coping practices that are detrimental to well-being, such as mental disengagement (e.g., the use of alcohol or sedative drugs and excessive eating), have been commonly employed, and these practices are associated with higher anxiety levels (Savitsky et al., 2020).

Furthermore, the individual's appraisal of the threat represented by the COVID-19 pandemic and their preferred coping strategy are known to affect their adherence to public health measures (Chong et al., 2021; Kachanoff et al., 2021). It is shown that situations that appraised as

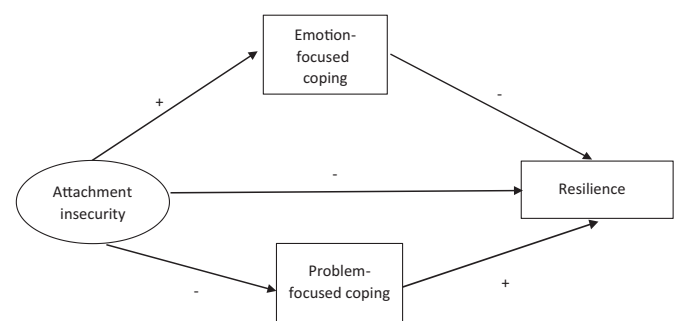


Fig. 1. Hypothesized model of the current study.

Note. +: The association was hypothesized to be positive; -: The association was hypothesized to be negative.

distressing trigger attachment system, and a function of attachment is to regulate distress (Bartholomew & Horowitz, 1991). Also, differences in stress responses are related to attachment orientations (see Kidd et al., 2013). In this sense, we believe that the COVID-19 pandemic provides precise conditions to study coping and resilience through attachment orientations.

Overall, we expected that attachment insecurity, especially attachment anxiety, would predict poorer resilience during the pandemic since Moccia et al. (2020) reported that individuals with higher attachment anxiety levels (vs. lower) stated poorer mental health outcomes during the COVID-19 pandemic. On the other hand, although attachment avoidance listed either as a risk factor (Liu et al., 2009; Marganska et al., 2013) or as a protective factor (Moccia et al., 2020) for poorer mental health outcomes, these findings are less robust compared to attachment anxiety with some studies finding no significant association between attachment avoidance and poor mental health (Eberhart & Hammen, 2009; Stanton & Campbell, 2014; Surcinelli et al., 2010). In this sense, we were not able to provide a specific hypothesis regarding attachment avoidance.

2. Method

2.1. Participants and procedure

In order to perform a regression analysis with five predictor variables, with alpha levels set at 0.05, and to achieve a confidence level of 95%, it was determined that a minimum of 107 participants were needed for this study (Gravetter & Wallnau, 2007). Data were collected from 179 Turkish individuals. After obtaining the necessary permission from the relevant university's research ethics committee, all the questionnaires were uploaded to Qualtrics. The questionnaires were in Turkish. The survey was advertised on relevant Facebook pages as a study on "reactions to distressing events". Participation was both voluntary and anonymous. We obtained the informed consent of all participants, who were selected based on three inclusion criteria: living in Turkey during the COVID-19 pandemic, speaking Turkish, and being older than 18. Twentythree questionnaires were excluded from further analysis, they were either incomplete or completed in an unreliable fashion (giving the same answer to all items), leaving a final sample size of 156. Over two-thirds of the participants were female ($n = 120$, 75.91%). The average age was 35.24 years ($SD = 11.53$). For detailed instructions used for study, see Supplementary Materials.

2.2. Measures

2.2.1. Adult attachment orientations

Adult attachment was assessed using the Experiences in Close Relationships-Revised questionnaire (ECR-R; Fraley et al., 2000, adapted into Turkish by Selçuk et al., 2005). The ECR-R is a 36-item self-report measure of adult attachment. The scale consists of two 18-item subscales that represent the two orthogonal dimensions of the attachment construct: attachment related anxiety ($\alpha = 0.94$) and attachment-related avoidance ($\alpha = 0.92$). Participants were instructed to indicate how they generally experience relationships using a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores reflecting greater endorsement of the construct. An example of an item representing anxiety was "I worry a lot about my relationships," while an example of an item representing avoidance was "I don't feel comfortable opening up to others."

2.2.2. Coping

Coping strategies were measured using the Coping Style Questionnaire (Lewin & Sager, 2009, adapted into Turkish by Aslan, 2018). The scale consists of two subscales: problem-focused coping (e.g., "I try to figure out different ways of solving the problem", $\alpha = 0.89$); and emotion-focused coping (e.g., "I refuse to believe it has happened", $\alpha =$

86). Respondents used a 5-point Likert scale, and on both scales high scores indicated reliance on the respective coping style.

2.2.3. Resilience

Resilience was measured using the Brief Resilience Scale (BRS; Smith et al., 2008). The BRS consists of six items that are scored using a 5-point Likert scale (from 1 = *strongly disagree* to 5 = *strongly agree*) to assess the individual's ability to bounce back from stress (e.g., "I tend to bounce back quickly after hard times", $\alpha = 0.87$). A back-translation procedure was used to translate the six items into Turkish. The researcher translated the items into Turkish, and a notarized translator then back-translated them into English. The Turkish translations were modified until each item could be properly back-translated into English. The BRS was scored by reverse-coding items 2, 4, and 6, and calculating the mean of all six items.

3. Results

Data and supplementary documentation are available [here](#). All the descriptive analyses and bivariate correlations are shown in Table 1. Principal component analysis (PCA) was conducted for the responses to the six items of the BRS. A single factor (eigenvalue = 3.59) that explained 59.91% of the total variance was extracted. The inspection of the scree plot also suggested a one-factor solution (initial eigenvalues = 3.59, 0.69, 0.62, 0.43, 0.34, and 0.30). The Kaiser–Meyer–Olkin (KMO) measure (0.85) and Bartlett's test, $\chi^2(15) = 400.24$, $p < .0001$, clearly showed that the correlations among the BRS items were strong enough for factor analysis. We tested all parallel mediation models using the PROCESS macro (model 4) in SPSS (Hayes, 2013), with 5000 bootstrapped samples. Emotion-focused coping strategies, anxiety, and problem-focused coping strategies were tested as mediators between attachment orientations and resilience. Indirect effects (IEs) were subsequently presented.

3.1. Attachment anxiety

Age and gender were not found to be statistically associated with the level of resilience either in the total effects model ($b = 0.0076$, $p = .185$; and $b = -0.0288$, $p = .849$ respectively; predictors of resilience: attachment anxiety, gender, age) or in the direct effects model ($b = 0.0018$, $p = .728$; $b = 0.0472$, $p = .729$ respectively; predictors of resilience: attachment anxiety, problem-focused coping, emotion-focused coping, gender, age). The results, based on 5000 bootstrapped samples, indicated that, while the total effect of attachment anxiety on resilience was significant ($\beta_{\text{total}} = -0.3272$, $SE = 0.0471$, 95% CI $[-0.2956, -0.1094]$), the direct effect was not ($\beta_{\text{direct}} = -0.0939$, $SE = 0.0481$, 95% CI $[-0.1531, 0.0369]$). Overall, the two mediators fully mediated the relationship between attachment anxiety and resilience ($IE_{\text{overall}} = -0.2333$, 95% CI $[-0.3406, -0.1336]$). All two mediators were found to significantly contribute to the overall IE. Specifically, there was a statistically significant IE of attachment anxiety on resilience through emotion-focused coping ($IE_{\text{emotion}} = -0.1726$, 95% CI $[-0.3406, -0.1336]$). Problem-focused coping also mediated the relationship between attachment anxiety and resilience ($IE_{\text{problem}} = -0.0607$, 95% CI $[-0.1234, -0.0102]$). The overall model explained 55% of resilience, $R^2 = 0.5523$, $F(5,150) = 13.16$, $p < .001$. For the regression coefficients, see Fig. 2.

3.2. Attachment avoidance

We run a similar mediational model for possible attachment avoidance and resilience association. Age and gender were not found to be statistically associated with the level of resilience either in the total effects model ($b = 0.0089$, $p = .141$; and $b = -0.0325$, $p = .839$ respectively; predictors of resilience: attachment avoidance, gender, age) or in the direct effects model ($b = 0.0015$, $p = .781$; $b = 0.0572$, $p = .677$

Table 1
Means, standard deviations, Cronbach's Alpha, and bivariate correlations.

| Variable | M | SD | α | 1 | 2 | 3 | 4 | 5 |
|-------------------------|-------|-------|----------|---|--------|--------|---------|---------|
| 1. Attachment anxiety | 3.196 | 1.402 | 0.94 | – | 0.34** | 0.43** | –0.26** | –0.34** |
| 2. Attachment avoidance | 3.099 | 1.260 | 0.92 | | – | 0.06 | –0.23** | –0.06 |
| 3. EFC | 2.584 | 1.008 | 0.86 | | | – | –0.14 | –0.46** |
| 4. PFC | 3.719 | 0.836 | 0.89 | | | | – | 0.34** |
| 5. Resilience | 3.309 | 0.863 | 0.87* | | | | | – |

Note. $N = 158$. EFC = Emotion-focused coping, PFC=Problem-focused coping.

* $p < .05$.

** $p < .001$.

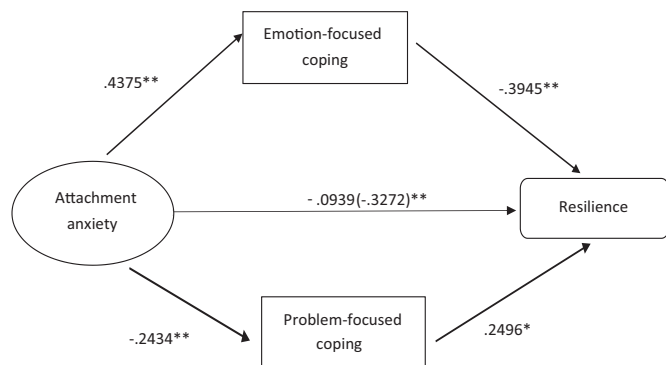


Fig. 2. Parallel mediation model 1.

Note. $N = 156$. The figure shows the indirect effect of attachment anxiety on resilience through emotion-focused coping and problem-focused coping. Standardized effects are presented. The effects on the direct path from attachment anxiety to resilience show the direct effect and the total effect. * $p < .05$, ** $p < .001$.

respectively; predictors of resilience: attachment avoidance problem-focused coping, emotion-focused coping, gender, age). Neither the total effect ($\beta_{total} = -0.0794, SE = 0.0554, 95\% CI [-0.1642, 0.0548]$) nor the direct effect ($\beta_{direct} = 0.0146, SE = 0.0487, 95\% CI [-0.0861, 0.1063]$) of attachment avoidance on resilience was significant. On the other hand, the overall indirect effect was significant ($IE_{overall} = -0.0940, 95\% CI [-0.196, -0.0019]$). Specifically, although there was not a statistically significant IE of attachment avoidance on resilience through emotion-focused coping ($IE_{emotion} = -0.0290, 95\% CI [-0.1099, 0.0426]$), problem-focused coping significantly mediated the relationship between attachment avoidance and resilience ($IE_{problem} = -0.0650, 95\% CI [-0.1384, -0.0137]$). Which means that attachment avoidance is related to resilience only through problem-coping strategies. For detailed regression coefficients see Fig. 3.

4. Discussion

The main purpose of the present study was to obtain a better understanding of the factors that contribute to the connection between resilience and attachment. We tested two mediation models corresponding to the attachment dimensions assessed by the ECR-R (i.e., anxiety and avoidance). Overall, the pattern of the relationship between resilience and attachment orientations (i.e., avoidance and anxiety) seems to be similar, but not significant for attachment avoidance, suggesting that the attachment anxiety has a greater predictive power on resilience when its direct and indirect statistical effects are taken into consideration compared to attachment avoidance. More specifically, individuals with high levels of attachment anxiety might be less resilient to stress compared to others.

Besides the direct effect of attachment anxiety on resilience, emotion-focused coping and problem-focused coping fully mediated the relationship between attachment anxiety and resilience. While

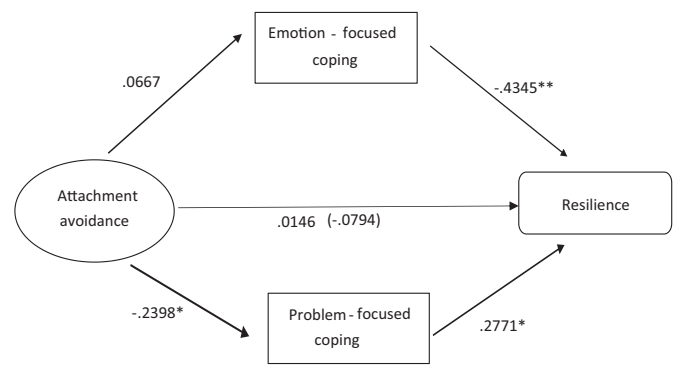


Fig. 3. Parallel mediation model 2.

Note. $N = 156$. The figure shows the indirect effect of attachment avoidance on resilience through emotion-focused coping and problem-focused coping. Standardized effects are presented. The effects on the direct path from attachment avoidance to resilience show the direct effect and the total effect. * $p < .05$, ** $p < .001$.

considering the attachment anxiety and resilience association, it can be assumed that individuals that are high in attachment anxiety tend to use emotion-based coping strategies more, compared to the problem-focused ones and as a result, they indicate less resilience. However, it is noteworthy that, although attachment avoidance did not have a direct significant effect on resilience, it had an indirect significant effect on resilience through problem-focused coping.

In the present study, we demonstrated that attachment orientations are related to resilience through different coping styles. It is assumed that the proposed model provides a useful and holistic view to understand how attachment relates to resilience. The study was carried out in the context of a strong stressor, the COVID-19 pandemic, which is associated with numerous causes of distress, including increased exposure to reminders of mortality and heightened risk of death (Pyszczynski et al., 2021). The finding that attachment anxiety was directly and indirectly related to resilience suggests that attachment is a key feature for stress responsivity and that, attachment anxiety may lessen resilience via the use of an emotion-focused coping strategy: Individuals who are high in attachment anxiety may be less resilient due to the shifting of focus to the self rather than to the problem.

Our findings are in line with the core assumptions of attachment theory with respect to insecure attachment patterns. According to attachment theory, interactions with inconsistent, unreliable, or insensitive attachment figures interfere with the development of a secure and stable mental foundation; reduce resilience to stressful life events; and predispose individuals to psychological breakdown in times of crisis (Bowlby, 1988). Individuals high in attachment anxiety develop a negative internal model of the self, leaving them with the tendency towards negative portrayals of the self and of one's abilities, due to their interpersonal histories that are dominated by feelings of failure and helplessness (Bartholomew & Horowitz, 1991). Since self-efficacy is an underlying factor that fosters resilience (Collishaw et al., 2016), the

sense of lack of control over keeping proximity to attachment figures despite the substantial efforts, might form the basis to low self-efficacy beliefs and interfere with resilience among individuals high in attachment anxiety. Our study demonstrated the impairing effect of attachment anxiety on resilience, and our data are supported by the existing literature (e.g. Rasmussen et al., 2019).

The results of the present study are also in agreement with the assumption that individual's attachment orientation might predispose them to adopt a specific coping strategy. Emotion-focused coping strategies have been positively correlated with attachment anxiety. Attachment anxiety is characterized by employing hyperactivation strategies in order to attract the attention of the attachment figure and be soothed when faced with threats. Hyperactivation strategies include the exaggeration of threats, overdependence on the attachment figure, and hypervigilance to threat when faced with distressing situations (Mikulincer & Florian, 1998; Mikulincer & Shaver, 2007). Although the use of hyperactivation and emotion-focused strategies (e.g., self-blame, self-criticism, rumination, focus on negative emotions, and feelings of helplessness) by individuals high in attachment anxiety is to some extent effective in maintaining the attention of the attachment figure, these strategies may serve to intensify anxiety, which has been found to interfere with the development of resilience traits (Cantazaro & Wei, 2010; Pascuzzo et al., 2015).

By contrast, in the present study attachment avoidance was not related to resilience directly but through problem-focused coping. The null direct association between attachment avoidance is in line with Jenkins's statement (2016), that "...the conflicting coping responses make it difficult to ascertain whether attachment avoidance can genuinely promote resilience..." (p.68). Although, in the present study, attachment avoidance seem to foster resilience, the link is established only through problem-focused coping. It seems that, individuals high in attachment avoidance become more resilient because they use less problem-focused coping strategies. This is in line with the findings that present the positive connection between tendency to use 'avoidance-focused' coping strategies (i.e., diverting attention from anxiety provoking stimulus) and attachment avoidance (Marriner et al., 2014). What is more, this finding is also in line with the argument that attachment avoidance seem to work similar to attachment security in adversity; both seem to be related with less distress compared to attachment anxiety (Mikulincer & Shaver, 2007).

The positive (indirect) link between attachment avoidance and resilience is not surprising since compulsive self-reliance of individuals that are high in attachment avoidance reinforce their belief that they are competent to manage stressful situations (Mikulincer & Shaver, 2007). In this sense, although both attachment avoidance and attachment security seem to promote resiliency (e.g., Karreman & Vingerhoets, 2012), the manner they are connected to resilience might be different. While problem focused coping is positively related with resilience (de la Fuente et al., 2017) as well as with attachment security (Bender & Ingram, 2018), individuals high in attachment avoidance seem not to benefit from it. Similar to attachment anxiety, attachment avoidance is connected with appraising stressful events as threatening instead of challenging unlike attachment security (Mikulincer & Shaver, 2008). As attachment avoidance has been associated with a minimal distress or distress response to stressors, and individuals high in attachment avoidance preferably distance themselves from the stressor to cope with it (Mikulincer & Shaver, 2007), problem focused coping strategy that involves facing with the stressor might contradict with the defense mechanism based on stress-denial and increase perceived threat as well as unpleasant emotions. Indeed, when distressed, individuals high in attachment avoidance tend to divert their attention away from perceived threats, which also serves for emotional dissociation—a learned defense mechanism to manage stress within the self—in order to conceal the feelings of insecurity (Mikulincer & Shaver, 2007). High level of resilience that goes along with attachment avoidance might be more defensive than that of attachment security, since it requires an

effort to divert attention from actual problem instead of actively focusing on the problem.

Aside from the indirect influence of attachment, problem-focused coping was positively associated with resilience, whereas emotion-focused coping was negatively associated with resilience. In other words, the type of coping strategy adopted is a crucial factor for resilience and, in turn, for well-being in the face of adversity. The findings of the present study regarding the significant associations between coping strategies and resilience are also consistent with the findings of earlier studies (e.g., Villasana et al., 2016), which indicated that problem-focused coping significantly fostered resilience, whereas emotion-focused coping strategies had a detrimental effect on resilience. Indeed, coping based on emotions and distraction correlated negatively with resilience, while task-oriented coping correlated positively with it (Secades et al., 2016).

The present study built on previous research by collating the indirect evidence obtained from coping, resilience, and attachment studies, as well as providing information on the connection between attachment and resilience. However, the study was not without limitations. In terms of design, we used a non-WEIRD sample—that is, Turkish individuals—and although these data may provide an insight into resilience and attachment orientations among this population, they cannot be generalized to other populations, since the COVID-19 pandemic has both universal and country-specific effects due to differences in the handling of the pandemic, including, but not limited to, the extent of the economic support provided to citizens and the different quarantine policies. Although, based on the indirect and direct evidence, we conceptualized the relationship between attachment orientations and resilience as one in which attachment orientation influences resilience by means of the coping strategies employed, the study was cross-sectional, thus no causal inferences can be drawn.

What is more, two-third of our sample consisted of female participants. Even though we could not find an effect of gender while running the analyses, we believe findings might differ due to gender since gender is an important biological determinant of vulnerability to psychosocial stress (Wang et al., 2007). Indeed, in a recent survey conducted in China during COVID-19 outbreak women reported higher post-traumatic stress symptoms (Liu et al., 2020). On the other hand, we did not study the degree participants were affected by COVID-19 pandemic. We believe measuring various COVID-19 related stress factors (e.g., job-loss, loss of loved ones, going through the illness) in the future could provide deeper understanding to present study's findings.

Despite the limitations mentioned above, and although we are unable to provide any information about the causal nature of the relationship, the present study builds on the existing literature and offers an insight into the interplay between attachment orientations and resilience. We believe that the present study provides a basis for future longitudinal or experimental methodologies. To build on our findings, researcher may wish to build a more specific study and focus on the role of different dysfunctional coping strategies (i.e., emotion-focused, and avoidance-oriented) for attachment and resilience association. Indeed, avoidance-oriented coping is another coping strategy that is negatively related to resilience, and it is highly related to attachment avoidance (Marriner et al., 2014). Researchers may also wish to examine the role of different dysfunctional coping strategies on attachment orientations using manipulation methods, including priming, to investigate causality (Rowe et al., 2020). Furthermore, the investigation might be expanded to the role of related mechanisms—including, but not limited to, self-esteem, worldviews, or emotion regulation strategies—since a strong negative correlation was demonstrated between attachment anxiety and resilience. In addition, the results of the present study might have clinical implications with respect to attachment security.

Given the association identified in the present study between attachment anxiety and inadequate coping, in order to strengthen resilience, it would be important primarily to explore ways to improve the effectiveness of coping. Specifically, the inducement of attachment

security based on security priming exercises might guide individuals towards the problem-focused coping strategies that can enhance their resilience. In this sense, the concept of “earned security”—that is, the acquiring of attachment security later in life based on secure contexts (i. e., through a relationship with a secure partner, or felt security following an attachment security priming task; Mota & Matos, 2015; Shibue & Kasai, 2014) might provide a deeper understanding between attachment and resilience. In different contexts, “earned securities” have been shown to perform nearly as well as “continuous securities” (Mota & Matos, 2015; Phelps et al., 1998), suggesting that attachment security inducement is a possible method for improving coping strategies and fostering resilience. Indeed, security priming has been shown to increase attachment security (Lin et al., 2013), which is associated with balanced resilience (Oehler & Psouni, 2018).

Overall, the results of the present study demonstrate the important role of attachment in the facilitation of resilience. Our findings indicate that attachment orientations are likely to be important in building resilience, which may reduce the risk of adverse outcomes. However, this association is mediated by coping strategies, which are also affected by attachment orientations. In a broader sense, our findings suggest that attachment anxiety is a risk factor that negatively impacts well-being by predisposing individuals to show both poor resilience traits and ineffective coping strategies in the face of distress.

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Declaration of competing interest

The authors have no relevant financial or non-financial interests to disclose.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.actpsy.2021.103447>.

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