

Mediating Role of Resilience in the Relation Between Early Maladaptive Schemas and Adult Separation Anxiety Symptoms

Erken Dönem Uyumsuz Şemalar ve Yetişkin Ayrılma Kaygısı Belirtileri Arasındaki İlişkide Psikolojik Dayanıklılığın Aracı Rolü

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ABSTRACT

Objective: This study aimed to examine the mediating role of psychological resilience in the relationship between early maladaptive schemas and adult separation anxiety symptoms. **Method:** The sample of the study consisted of a total of 332 undergraduate students, 196 female (60.9%) and 126 male (39.1%), who were studying in Western Türkiye. The participants were between the age of 18-30 years (M=21.05, SD=1.58). Young Schema Scale-Short Form-3, Adult Separation Anxiety Questionnaire, Psychological Resilience Scale for Adults and Sociodemographic Form were applied.

Results: There is a significant positive relationship between impaired autonomy ($r=.46$), disconnection ($r=.23$), other-directedness ($r=.28$) and unrelenting standards ($r=.28$) schema domains and adult separation anxiety symptoms. Female participants have higher separation anxiety symptoms than males. According to the mediation analyses in which gender was controlled, self-perception which is one of the sub-dimensions of resilience has a mediator role between disconnection ($\beta=.06$ BC 95% CI [.03-.09]), other-directedness ($\beta=.05$ BC 95% CI [.01-.10]) and high standards and symptoms of adult separation anxiety. Additionally, it has been concluded that another sub-dimension of resilience, social resources, has a suppressive effect on the relationship between impaired autonomy ($\beta=-.02$ BC 95% CI [-.04,-.00]) and disconnection ($\beta=-.06$ BC 95% CI [-.12,-.01]) schema domains and symptoms of adult separation anxiety.

Conclusion: It can be stated that psychological resilience has a protective role against the negative effects of early maladaptive schemas on adult separation anxiety symptoms.

Keywords: Adult separation anxiety, early maladaptive schemas, resilience

ÖZ

Amaç: Bu araştırma, erken dönem uyumsuz şemalar ile yetişkin ayrılma kaygısı belirtileri arasındaki ilişkide psikolojik dayanıklılığın aracı rolünü incelemek amacıyla yapılmıştır.

Yöntem: Araştırmanın örneklemini Türkiye'nin batısında yer alan bir üniversitede eğitim görmekte olan 196 kadın (%60,9) ve 126 (%39,1) erkek olmak üzere toplam 332 lisans öğrencisinden oluşmaktadır. Katılımcıların yaşları 18-30 arasındadır (M=21,05, SS=1,58). Araştırma verileri Young Şema Ölçeği-Kısa Form-3, Yetişkin Ayrılma Anksiyetesi Anketi, Yetişkinler için Psikolojik Dayanıklılık Ölçeği ve Sosyodemografik Form aracılığıyla toplanmıştır.

Bulgular: Erken dönem uyumsuz şema alanlarından zedelenmiş otonomi ($r=.46$), kopukluk ($r=.23$), diğeri yönelimlilik ($r=.28$) ve yüksek standartlar ($r=.28$) şema alanları ile yetişkin ayrılma kaygısı belirtileri arasında pozitif yönde anlamlı bir ilişki olduğu görülmüştür. Kadınlar erkeklere göre daha yüksek düzeyde ayrılma kaygısı belirtisi göstermektedir. Cinsiyet değişkeni kontrol edilerek gerçekleştirilen aracılık analizi sonuçları psikolojik dayanıklılığın alt boyutlarından kendilik algısının, kopukluk ($\beta=.06$ %95 GA [.03, .09]), diğeri yönelimlilik ($\beta=.05$ %95 GA [.01, .10]) ve yüksek standartlar ($\beta=.04$ %95 GA [.01, .11]) ile yetişkin ayrılma kaygısı belirtileri arasındaki ilişkide aracı rol üstlendiği; psikolojik dayanıklılığın bir diğer alt boyutu olan sosyal kaynakların ise zedelenmiş otonomi ($\beta=-.02$ %95 GA [-.04, -.00]) ve kopukluk ($\beta=-.06$ %95 GA [-.12, -.01]) şema alanları ile yetişkin ayrılma kaygısı belirtileri arasındaki ilişkide baskılayıcı etkiye sahip olduğu sonucuna ulaşılmıştır.

Sonuç: Psikolojik dayanıklılığın, erken dönem uyumsuz şemaların yetişkinlik dönemi ayrılma kaygısı belirtileri üzerindeki olumsuz etkisine karşı koruyucu bir rolü olabilir.

Anahtar sözcükler: Erken dönem uyumsuz şemalar, psikolojik dayanıklılık, yetişkin ayrılma

Introduction

Separation anxiety disorder is an anxiety disorder that negatively affects the daily life of individuals and can lead to problems in functionality in social and work life (Altan Sarıkaya et al. 2017). Separation anxiety disorder (SAD) is an individual's intense anxiety and fear of separation from the people he/she is attached to, which is not appropriate for the developmental process of the individual. Individuals with this disorder fear that events such as accidents, illnesses, and death may happen to their loved ones and experience anxiety when they are separated from them (APA 2013). This anxiety, which is only related to separation from parents in childhood, also includes fear and anxiety about being away from their spouse, children, and loved ones in adulthood. Although individuals think that these fears are excessive and irrational, they frequently show behaviors such as trying to be in constant communication and close contact with those they are close to, avoiding sleeping alone, having separation-themed nightmares, and talking excessively not to be separated from the people they are attached to (Manicavasagar et al. 1997). Separation anxiety disorder (Yıldırım and Yaşa 2019), can be observed only in childhood for a long time but also can be present in adulthood (Manicavasagar and Silove 1997). The disorder may show continuity from childhood to adulthood, or it may emerge in adulthood (Shear et al. 2006). SAD has a lifetime prevalence of 7% in the community (Shear et al. 2006) and a prevalence of 20-40% in clinical samples (Pini et al. 2010, Silove et al. 2010).

Separation anxiety in adulthood may be related to early experiences. While fearful, anxious, and avoidant attachment patterns show a positive relationship with adult separation anxiety, they have an inverse relationship with secure attachment (Costa et al. 2009, Yurtseven and Özkul 2021). Similar to attachment, parental attitudes are a factor related to adult separation anxiety. The lack of parental caregiving (Silove et al. 1995), and the overprotective attitude of the parent (Manicavasagar et al. 1999) are the main sources of SAD. In addition, adult separation anxiety is associated with individual characteristics such as negative emotionality and negative temperament (Finsaas and Klein 2021), and intolerance of uncertainty (Boelen et al. 2014).

Early life experiences are associated with early maladaptive schemas. Early maladaptive schemas are defined as mental structures that are dysfunctional for the individual, consisting of emotions, memories, and cognitions that emerge as a result of unsatisfied emotional needs in the early stages of the individual's life and recur throughout his/her life, encompass the individual's beliefs about himself/herself and others (Young et al. 2003). The researchers grouped these structures into 5 schema domains and 18 different schemas in these domains.

The impaired autonomy and performance schema domain includes schemas of dependence/incompetence, vulnerability to illness and harm, enmeshment/undeveloped self, and failure. Individuals with schemas in this domain are defined as individuals who have difficulties in making individual decisions, acting independently, and forming an identity apart from their parents. It has been stated that the families of these individuals often exhibit overprotective behaviors or show little interest in them (Young et al. 2003).

The disconnection and rejection schema domain includes abandonment/instability, mistrust/abuse, emotional deprivation, defectiveness/shame, and social isolation/alienation schemas. Individuals with these schemas were defined as individuals who had difficulties in secure attachment with others. Their families were generally described as inconsistent, indifferent, and cold. It has been stated that most individuals with schemas in this domain tend to avoid romantic and close relationships (Young et al. 2003).

Impaired limits schema domain includes entitlement/grandiosity, and insufficient self-control/self-discipline schemas. Individuals with schemas in this domain are defined as individuals who fail to respect the rights of other members of society, establish internal boundaries, ensure self-control, and keep their promises. It was stated that these individuals could not control their impulses in adulthood because their families were too lenient towards them as children (Young et al. 2003).

The other-directedness schema domain includes subjugation, self-sacrifice, and approval-seeking/recognition-seeking schemas. Individuals with schemas in this domain try to meet the needs of others by sacrificing their needs to maintain close ties with the people around them and to be accepted by others. They restricted themselves in their childhood to receive love and approval from their parents and they could not express their own identities freely, therefore they shaped their decisions according to the opinions of others when they became adults (Young et al. 2003).

The over vigilance and inhibition schema domain includes negativity/pessimism, emotional inhibition, unrelenting standards/hypercriticalness, and punitiveness schemas. Individuals with schemas in the overstimulation and suppression domain are defined as individuals who suppress their instantaneous desires and emotions, and who can give up intimate relationships, happiness, and health to adhere to the strict rules

they have created. It has been stated that these individuals worry that bad events will happen to them if they do not constantly control their emotions and actions (Young et al. 2003). With all these, it can be said that schemas are effective in shaping cognitive, emotional, and behavioral patterns. These patterns show themselves in interpersonal relationships by affecting the processes of identity formation, the attitude displayed in close relationships, the ways of providing self-control, and how people position themselves in the relationship.

These schemas, which are related to early experiences, can elicit negative emotions and psychological problems when activated by various situations (Atlı Özbaş et al. 2011). This effect of early negative schemas, which are said to be affected by traumatic childhood experiences and to be a source of personality disorders, depression, and anxiety disorders (Young 1999), has been demonstrated in numerous studies (Harris and Curtin 2002, Welburn et al. 2002, Rhein and Sukawatana 2015, Tariq et al. 2021, Vieira et al. 2023). Defectiveness/shame, insufficient self-control, dependence (Harris and Curtin 2002); abandonment, and insufficient self-control schemas (Welburn et al. 2002) were found to be associated with depression symptoms. In addition, schemas and schema domains are also associated with anxiety symptoms. Abandonment, emotional deprivation, vulnerability to harm and illness, dependence, self-sacrifice (Welburn et al. 2002), unrelenting standards and approval-seeking (Rhein and Sukawatana 2015) schemas and disconnection, other-directedness and impaired autonomy schema domains (Tariq et al. 2021) are associated with anxiety symptoms. When the relationship between schemas and anxiety is examined in the context of adult separation anxiety, similar results are encountered. Although the scores obtained from early maladaptive schemas show a positive relationship with adult separation anxiety symptom levels (Aydın 2020), early maladaptive schemas are a factor in predicting adult separation anxiety symptoms (Yurtseven and Özkul 2022).

Psychological resilience is one of the important individual characteristics associated with mental health (Jacelon 1997). According to Masten (1994, 2001), psychological resilience is the ability to withstand traumatic, frightening, and threatening events that can disrupt an individual's functioning, coherence, adaptation, and development, and to adapt after overcoming these events. Psychological resilience is also defined as an individual's ability to recover from adverse experiences (Garmezy 1991), the ability to overcome traumatic situations healthily (Wagnild and Young 1993), and a dynamic process that includes the ability to adapt successfully despite stressful and challenging situations (Luthar et al. 2000). According to Rutter (1999), psychological resilience is a dynamic adaptive process created by risk and protective factors. The literature also shows that psychological resilience is addressed in three categories: psychological/dispositional attributes, family support and cohesion, and external support systems (Friborg et al. 2003). In parallel with the diversity of definitions of psychological resilience, Friborg and colleagues (2005) consider psychological resilience as a six-dimensional structure. Among these dimensions, perception of self in the category of personal dispositions corresponds to one's abilities, thoughts about one's strong characteristics, and self-esteem; perception of future corresponds to one's belief that one can achieve one's future goals; structural style corresponds to one's ability to maintain, plan, and organize daily routines; and social competence corresponds to one's flexibility in social situations and communication skills. Family cohesion in the category of family cohesion/ warmth describes conflicts within the family, support from the family, and cooperation with the family. The dimension of social resources in the category of external support systems includes the external support systems that the individual has, such as friends and relatives outside the family, and the ability to access support systems. The definition of psychological resilience in the current study is defined as the ability to successfully overcome threatening and risky events and to adapt to life (Friborg et al. 2005).

With its complex structure consisting of biological, psychological, social, and cultural factors and their interaction with each other, psychological resilience (Southwick et al. 2014) is influenced by personal experiences and external factors. The high level of social support perceived by the individual (Çakır et al. 2021, Özsoy 2022), the positive and strong relationship with parents (Shechory-Bitton 2013), and the high level of harmony with family and society (Braun-Lewensohn et al. 2017) are characteristics that support high levels of resilience. In the individual context, high levels of negative cognitions are associated with low resilience in the face of stressful life events (Haefffel and Vargas 2011, Bekhet et al. 2012). Early maladaptive schemas, which are accepted as the basis for the cognitive characteristics of the person, are also related to psychological resilience. It has been reported that there is a negative relationship between early maladaptive schemas and psychological resilience (Majid et al. 2014). It has been shown that social isolation, mistrust, emotional deprivation, dependency/incompetence, vulnerability to harm and illness, defectiveness, and failure schema subdomains in middle school students (Friedmann et al. 2016) and all schema subdomains except the unrelenting standards schema subdomain among adults (Faraji et al. 2022) negatively predict psychological resilience.

Although strong maladaptive schemas are associated with psychopathologies, it is also known that not all individuals with negative schemas who experience life events that activate these schemas develop

psychopathology (Rezaei and Ghazanfari 2016). This suggests that resilience plays a protective role against psychopathology symptoms by providing coping and resilience in the face of negative personal characteristics and experiences. High levels of resilience are protective against developing emotional problems such as depression, post-traumatic stress disorder, generalized anxiety disorder, and social anxiety disorder (Hjemdal et al. 2011, Hoppen and Chalder 2018, Jefferies and Ungar 2020, Doyle and Catling 2022).

the studies on adult separation anxiety, which is quite common in clinical and non-clinical groups, are limited. The relationship between psychological resilience, which plays a role as a protective and risk factor for a variety of psychopathologies and psychopathological symptoms, and adult separation anxiety has not been studied. Although the relationship between early maladaptive schemas and adult separation anxiety has been demonstrated in recent studies, there is still a need for a better understanding of adult separation anxiety and the nature of this relationship (Mordeno et al. 2023). Therefore, we examined the role of psychological resilience in the relationship between early maladaptive schemas and adult separation anxiety symptoms. the current study examined the relationship between early maladaptive schemas and separation anxiety with the effect of psychological resilience and aimed to explain separation anxiety by taking into account individual characteristics. the hypothesis of the study was formulated as follows: The relationship between early maladaptive schemas and separation anxiety symptoms is better explained by psychological resilience, and psychological resilience has a mediating role in this relationship.

Method

Sample

The sample of the study consists of undergraduate students studying at different faculties of a university in western Turkey. The participants were accessed through convenience sampling (Erkuş 2017). The inclusion criterion was that the participants were university students. Data were not collected from participants who were not university students. No other exclusion criteria were used in the study. It was determined with the G Power 3.1.9.2 power analysis program that 224 participants were required to evaluate the study findings with linear multiple regression analysis, small effect size (.07), 0.95 power value, and 2 predictors. Considering possible data losses, it was aimed to reach 360 people during the data collection process and 338 people were reached. Of the participants reached, 7 were excluded from the analysis due to missing data, 9 were excluded from the analysis due to multiple evaluations (Box plot, Mahalanobis distance), and 322 participants were included in the analysis. Of the participants included in the analysis, 196 were female (61%) and 126 were male (39%). Information about the participants whose ages ranged between 18-30 ($M = 21.06$, $SD = 1.58$) is given in Table 1.

Variables		N	%
Gender	Female	196	60.9
	male	126	39.1
Class	1.	56	17.4
	2.	86	26.8
	3.	96	29.9
	4.	82	25.5
	5.	1	0.3
Place of Residence	Home	197	61.2
	Dormitory	125	38.8

Procedure

Prior to the collection of the research data, ethical approval was obtained from the Research Ethics Committee of the Rectorate of Social and Human Sciences of Aydın Adnan Menderes University (dated 27.11.2019 and numbered 31906847/050.04.04-08/15). The data were collected by the researcher at Aydın Adnan Menderes University between January and April 2020. During the data collection process, the necessary permission was obtained from the lecturers responsible for the courses being carried out in various faculties of the university, and the participants were allowed to fill out the questionnaires during class hours and/or between classes. In addition, university students who were reached outside of class days and hours were also asked to fill out the measurement tools. The participants were informed about the purpose of the study and the conditions of participation, it was stated that participation was voluntary, and individuals who agreed to participate in the study were asked to mark the statement that they voluntarily agreed to participate in the study in the Informed

Consent Form. Participants who agreed to participate in the study were asked to complete the scale battery using the measurement tools introduced above.

Measures

Sociodemographic Information Form

A form containing questions to assess the sociodemographic characteristics of the participants was prepared by the researchers. The form inquired about the participant's age, gender, grade level of education, place of residence (dormitory, house), people they live with (family, roommate, etc.), marital status of their parents, and the settlement where they spent the longest part of their lives.

The Adult Separation Anxiety Symptom Questionnaire

The psychometric properties in Turkish of the measure developed by Manicavasagar et al. (2003) to assess separation anxiety symptoms in adults were examined by Diriöz et al. The scale, which consists of 27 items on a 4-point Likert scale and a single dimension, is a self-report instrument. An increase in scores obtained from the scale is interpreted as an increase in separation anxiety symptoms. The Cronbach alpha value for the Turkish version of the scale was calculated to be 0.93 (Diriöz et al. 2012). The internal consistency coefficient calculated in the current study was 0.89.

Young Schema Questionnaire – Short Form 3

It was developed by Young et al. (2003) to identify and assess early maladaptive schemas. The 6-point Likert-type measurement tool includes 90 items based on self-report. The scale consists of 5 schema domains and 18 schema subdomains (Young et al. 2003). The scale was adapted into Turkish by Soygüt et al. (2009). As a result of this adaptation, the scale consists of 5 schema domains (impaired autonomy, disconnection, other-directedness, impaired limits, unrelenting standards) and 14 schema subdomains (enmeshment/dependence, abandonment, failure, pessimism, vulnerability to harm, emotional deprivation, emotional inhibition, social isolation/mistrust, defectiveness, unrelenting standards, approval-seeking, entitlement /insufficient self-control, self-sacrifice, and punitiveness). The increase in the scores obtained from the sub-dimensions and domains of the scale is interpreted as the stronger presence of the schema and schema domain in the person. The test-retest reliability coefficients of schema domains vary between 0.66-0.83, while the test-retest reliability coefficient values of schema sub-dimensions are between 0.66-0.82 (Soygüt et al. 2009). Internal consistency coefficients range between 0.53-0.81 for schema domains and 0.63-0.80 for schema sub-dimensions (Soygüt et al. 2009). The internal consistency values in the current study ranged between 0.62-0.85 for schema sub-dimensions and 0.72-0.91 for schema domains.

Resilience Scale for Adults

The psychometric properties of the scale developed by Friborg et al. (2005) to assess the psychological resilience of adults in Turkish were examined by Basım and Çetin (2011). The instrument, which is a self-report scale, consists of 33 items and 6 sub-dimensions (perception of self, perception of future, structural style, social competence, family cohesion, and social resources). The scale items include events and situations that people may encounter in life. An axis with positive and negative endpoints was defined for responses. Participants are expected to respond to these events and situations by rating them with five points on positive and negative extremes. The increase in the scores obtained from the scale is interpreted as a higher level of resilience. The Cronbach Alpha values of the sub-dimensions of the Turkish version of the scale were found to be between 0.66 and 0.81 for the sample of students and between 0.68 and 0.79 for the sample of working people (Basım and Çetin 2011). In the current study, it was found that the internal consistency coefficient calculated for the whole scale was 0.89, and the internal consistency coefficients of the sub-dimensions of the measurement tool ranged between 0.45 and 0.75. Among these sub-dimensions, structural style was not included in the analysis due to its low Cronbach Alpha value (0.48).

Statistical Analysis

Research data were analyzed using SPSS 26. The relationships between early maladaptive schemas, psychological resilience, and adult separation anxiety were assessed through correlational analyses, and t-test and ANOVA analyses were used to test whether there was a difference in total separation anxiety scores according to demographic variables (gender, class, socioeconomic level, place of residence, place where most of one's life is spent, and parental relationship status). Results indicated that females (mean = 57.3, SD=

12.07) had statistically significant higher separation anxiety symptoms than males (mean = 51.9, SD= 11.44) and that separation anxiety symptoms differed by gender ($t=3.792$, $p=.000$). Based on this finding, the mediating effect of the psychological resilience variable between early maladaptive schemas and separation anxiety was examined using SPSS version 2.15 of the PROCESS macro software developed by Hayes (2015) while controlling for the gender variable. Since the outcome variable did not differ by other demographic characteristics, it was not controlled in the mediation analyses.

The current study examined missing data before proceeding to the main analyses. The distribution pattern of the missing data was not distributed systematically, and since there were few missing data in the total data, no action was taken for the missing data. The next step was to evaluate the study data for outliers according to the Mahalanobis distance and box plot results. Finally, it was assessed whether the variables were normally distributed. visual evaluation of the box plot and histogram results showed a normal distribution. the kurtosis skewness values were in the range of ± 1 for each variable. Accordingly, the variables had a normal distribution (Field 2013, Tabachnik et al. 2013) and parametric analyses were performed in the next step.

Results

Correlation analysis revealed that the adult separation anxiety score had a moderate positive relationship with the impaired autonomy score ($r=.46$, $p<.01$), and a low positive relationship with the disconnection ($r=.23$, $p<.01$), other-directedness ($r=.28$, $p<.01$) and unrelenting standards ($r=.28$, $p<.01$) scores among the five schema domains. It was observed that adult separation anxiety had a negative and low-level significant relationship with all dimensions of psychological resilience except social resources. Correlation values between all variables are summarized in Table 2.

Variable	1	2	3	4	5	6	7	8	9	10	11
1. ASA	—										
2. IA	0.46**	—									
3. DI	0.23**	0.67**	—								
4. IL	0.10	0.25**	0.32**	—							
5. OD	0.28**	0.51**	0.43**	0.37**	—						
6. US	0.28**	0.42**	0.26**	0.40**	0.43**	—					
7. PS	-0.32**	-0.56**	-0.33**	0.01	-0.13*	-0.15**	—				
8. PF	-0.12*	-0.38**	-0.24**	-0.10	-0.10	-0.02	0.59**	—			
9. SC	-0.17**	-0.20**	-0.41**	-0.01	-0.05	-0.01	0.28**	0.15**	—		
10. FC	-0.04	-0.21**	-0.45**	-0.15**	0.01	0.00	0.31**	0.30**	0.20**	—	
11. SR	0.00	-0.32**	-0.58**	-0.12*	-0.10	-0.05	0.32**	0.28**	0.37**	0.54**	—

ASA: Adult Separation Anxiety, IA: Impaired Autonomy, DI: Disconnection, IL: Impaired Limits, OD: Other-directedness, US: Unrelenting Standards, PS: Perception of Self, PF: Perception of Future, SC: Social Competence, FC: Family Cohesion, SR: Social Resources, * $p<.05$, ** $p<.01$

Mediation Analysis

In this section, the results regarding the mediating role of psychological resilience in the relationship between early maladaptive schema domains and adult separation anxiety, which was examined with the simple mediation model (Model 4) (Preacher and Hayes 2008) under the condition that the gender variable was controlled, are presented. A mediation test explains how or in what way an independent variable (X) affects a dependent variable (Y) through a mediating variable (M) (Preacher and Hayes 2008).

The indirect effect of early maladaptive schema domains on separation anxiety ($a*b$) was calculated based on the effect of early maladaptive schema domains on psychological resilience dimensions (a) and the effect of psychological resilience dimensions on adult separation anxiety (b) based on the explanation of Preacher and Hayes (2008). The total effect of early maladaptive schema domains on adult separation anxiety (c) was obtained by summing the direct effect of early maladaptive schema domains on adult separation anxiety and the indirect effect of early maladaptive schema domains on adult separation anxiety (c') (See Figure 1) Whether the indirect effect of the mediating variable in the model was significant or not was examined with the Bootstrap (5000)

technique. Bootstrap 95% Bias-Corrected and Accelerated (BCa) confidence interval (CI) values not including zero indicate that the indirect effect of the mediating variable is statistically significant (Preacher and Hayes 2008). PROCESS application results and confidence interval values are summarized in Table 3.

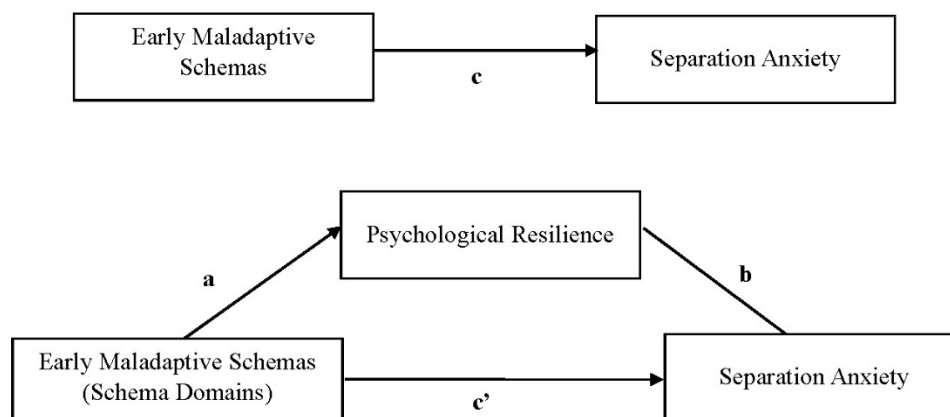


Figure 1. Main study model

The Role of Perception of Self

The indirect effect ($a*b$) value was .06 and the indirect effect was significant by meeting the confidence interval significance criterion ($a*b = .06$, 95% CI [.03, .09]) when the disconnectedness schema domain, perception of self, and adult separation anxiety were tested with the simple mediation model. The indirect effect ($a*b$) value was .05 and the indirect effect was significant by meeting the confidence interval significance criterion ($a*b = .05$, 95% CI [.01, .10]) when the other-directedness schema domain, perception of self, and adult separation anxiety were tested with the simple mediation model. When the unrelenting standards schema domain, perception of self, and adult separation anxiety were tested with the simple mediation model, the indirect effect ($a*b$) value was .06 and the indirect effect was significant by meeting the confidence interval significance criterion ($a*b = .06$, 95% CI [.01, .11]). These results suggest that the perception of self mediates the relationship between the separation, unrelenting standards, and other-directedness schema domains with adult separation anxiety.

The Role of Social Resources

When the impaired autonomy schema domain, social resources, and adult separation anxiety were tested with the simple mediation model, the indirect effect ($a*b$) value was -.02 and the indirect effect was significant by meeting the confidence interval significance criterion ($a*b = -.02$, 95% CI [-.04, -.00]). When the disconnection schema domain, social resources, and adult separation anxiety were tested with the simple mediation model, the indirect effect ($a*b$) value was -.06 and the indirect effect was significant by meeting the confidence interval significance criterion ($a*b = -.06$, 95% CI [-.12, -.01]). Although these results suggest that social resources play a mediating role in the relationships of impaired autonomy and disconnection schema with adult separation anxiety, the magnitudes of the direct (c') and total effect (c) values and the signs of the indirect ($a*b$) and total (c) effect values indicate that they have the role of a suppressor effect rather than a mediator. In mediation analyses, when the variable whose mediation role is tested is included in the model, the fact that the observed direct effect value (c') is larger than the total effect value (c) indicates the suppressor role of the variable in question (Rucker et al. 2011). In addition, when the variable whose mediating role is tested is included in the model, the fact that the observed indirect effect ($a*b$) and total effect values (c) have the opposite sign is accepted as evidence that the variable in question has a suppressive role (MacKinnon et al. 2000, Rucker et al. 2011).

The analysis results suggest a mediating role of social resources was evaluated within the framework of the specified criteria. As a result of the evaluations, in the model including impaired autonomy, social resources, and adult separation anxiety, the direct effect value (.28) was greater than the total effect value (.26); the indirect effect (-.02) and total effect values (.26) were in opposite directions. In the model in which the disconnection schema domain was evaluated, the direct effect value (.25) was greater than the total effect value (.18); the indirect effect (-.07) and total effect values (.18) were in the opposite direction. Based on these findings, it was concluded that the social resources variable had a suppressive role in the relationship between impaired autonomy and disconnection schema domains with adult separation anxiety.

Table 3. Mediation analyses results and BC-CI (5000) values								
IV	DV	MV	IV-MV (a)	MV-DV (b)	IV-DV (c')	Indirect Effect (a*b)	BC 95% CI	Total Effect (c)
IA	ASA							
		PS	-.12**	-.11	.26**	.01	[-.03, .05]	.27**
		PF	-.06**	.12	.28**	-.00	[-.03, .01]	.27**
		SC	-.04**	-.23	.26**	.00	[-.00, .02]	.27**
		FC	-.05**	.12	.28**	-.01	[-.02, .01]	.27**
		SR	-.07**	.35*	.29**	-.02	[-.04, -.00]	.27**
DI	ASA							
		PS	-.09**	-.60**	.13**	.06	[.03, .09]	.19**
		PF	-.05**	-.30	.18**	.01	[-.00, .03]	.19**
		SC	-.10**	-.19	.17**	.02	[-.01, .06]	.19**
		FC	-.12**	.21	.21**	-.02	[-.07, .01]	.19**
		SR	-.15**	.45*	.25**	-.06	[-.12, -.01]	.19**
IL	ASA							
		PS	.00	-.79**	.21*	-.00	[-.06, .05]	.21*
		PF	-.04	-.47*	.18	.02	[-.00, .06]	.21*
		SC	-.00	-.47*	.20*	.00	[-.03, .04]	.21*
		FC	-.10**	-.10	.18*	.01	[-.02, .05]	.21*
		SR	.07*	-.08	.20*	.00	[-.02, .03]	.21*
OD	ASA							
		PS	-.08**	-.68**	.39**	.05	[.01, .10]	.44**
		PF	-.04	-.41*	.43**	.01	[-.00, .04]	.44**
		SC	-.03	-.43**	.43**	.01	[-.01, .04]	.44**
		FC	.01	-.15	.45**	-.00	[-.02, .01]	.44**
		SR	-.04	-.05	.44**	-.00	[-.01, .02]	.44**
US	ASA							
		PS	-.08**	-.68**	.38**	.06	[.01, .11]	.44**
		PF	-.00	-.48**	.43**	.00	[-.02, .03]	.44**
		SC	.00	-.47*	.43**	.00	[-.02, .03]	.44**
		FC	.00	-.14	.44**	-.00	[-.01, .01]	.44**
		SR	-.03	-.08	.44**	.00	[-.00, .02]	.44**

IV: Independent Variable, DV: Dependent Variable, MV: Mediator Variable, ASA: Adult Separation Anxiety, IA: Impaired Autonomy, DI: Disconnection, IL: Impaired Limits, OD: Other-directedness, US: Unrelenting Standards, PS: Perception of Self, PF: Perception of Future, SC: Social Competence, FC: Family Cohesion, SR: Social Resources. *p<.05, **p<.001

Discussion

The findings showed that early maladaptive schemas predicted adult separation anxiety disorder depending on the person's resilience. Disconnection, unrelenting standards, and other-directedness schema domains predicted adult separation anxiety symptoms through perception of self. In addition, social resources from resilience dimensions were found to have a suppressive role in the relationship between disconnection, impaired autonomy schema domains, and separation anxiety.

Factors such as the quality of the relationship established with the caregiver in the early period and the parental attitudes exposed play a role in the emergence of separation anxiety symptoms in adulthood (Alkın 2010). It has been reported that people with separation anxiety symptoms in adulthood were exposed to intensely protective attitudes from their mothers in early childhood (Manicavasagar et al. 1999). Early maladaptive schemas are affected by parental attitudes and behaviors in early periods. According to Young et al. (2003), schemas are rooted in the individuals' unmet emotional needs. maladaptive schemas emerge in the early periods of life, are shaped in detail in the following years, and continue to exist in the future. It has been revealed that all early maladaptive schemas predict separation anxiety (Yurtseven and Özkul, 2022). However, psychological resilience is a construct that is affected by environmental conditions (Masten and Gewitz 2013) and individual characteristics (Aydoğdu et al. 2017). Early maladaptive schemas are one of these individual characteristics (Faraji et al. 2022). In addition to being open to change, psychological resilience has an important protective role in psychopathologies (Friedmann et al. 2016). From this point of view, the current study examined the mediating role of psychological resilience between early maladaptive schemas and adult separation anxiety symptoms to better understand their relationship.

One of the findings of the study is that the level of adult separation anxiety differs according to gender. Girls show more separation anxiety in childhood (Bögels et al. 2013), and it is known that women report more

separation anxiety symptoms among adults (Pini et al. 2010, Silove et al. 2010). This finding can be explained based on gender roles. The study was conducted in a society where patriarchal culture is dominant. Men are expected and supported to show assertive behaviors and women are expected and supported to show behaviors connected to their home and family (Özdemir 2019). This expectation may shape the relationship with one's relatives and one's feelings about that relationship. This can indirectly affect separation anxiety symptoms are related to traumatic experiences and women are more exposed to traumatic experiences in life (Cantekin 2022). The fact that anxiety disorders are more common among women (Hartung and Lefler 2019) also supports this finding.

Perception of self was also found to play a mediating role in the relationship between the disconnection schema field and adult separation anxiety. This result supports the previously revealed inverse relationship between the disconnection schema domain and resilience and the finding that the disconnection schema domain predicts resilience (Sağ and Bilican 2020). People with disconnection schemas believe that others will take advantage of them, think that they are defective, unwanted individuals and feel ashamed, and experience difficulties in interpersonal relationships (Young et al. 2003). In addition, having a disconnection schema is significantly related to state and trait anxiety levels (Atlı et al. 2012). Perception of self includes positive cognitions, self-confidence, and self-esteem about oneself and who one is (Basım and Çetin 2011). People with adult separation anxiety experience intense anxiety about being separated from relatives and do not prefer loneliness (APA 2022). People with adult separation anxiety experience intense anxiety about being separated from relatives and do not prefer loneliness (APA 2022). With this information/data, it was thought that people would be harmed in their interpersonal relationships due to the influence of the disconnection schema and may have the belief that they will not be accepted, the nonacceptance belief can be explained by weakening their positive cognitions towards themselves and increasing their need for a safe space in interpersonal relationships. This need may have led to more separation anxiety symptoms.

Perception of self also plays a mediating role in the relationship between other-directedness and separation anxiety symptoms. Although there are studies emphasizing the relationship between this schema domain and anxiety symptoms (Atlı-Özbaş et al. 2012, Calvete 2014, Duran and Güler 2022), it has also been shown that schemas in this domain are not related to separation anxiety symptoms (Yurtseven and Özkul, 2022). In addition, the inverse relationship of these schemas with resilience is also noteworthy (Faraji et al. 2022; Hosseini Abrishami et al. 2023). The other-directedness schema domain includes self-sacrifice, approval-seeking, and submissiveness schemas. People with a high representation of this schema domain focus on the needs of others by holding back their needs and satisfactions to gain approval and acceptance (Young et al. 2003). tending to behave selflessly in an other-oriented manner may have increased the need to depend on others, who are taken as a reference for behaviors and preferences, to be satisfied. Positive cognition, self-confidence, and self-esteem can play a protective role by reducing the effect of the other-orientation schema domain on separation anxiety symptoms.

According to another finding, perception of self has a mediating role in the relationship between unrelenting standards schema domain and adult separation anxiety. Individuals with unrelenting standards schemas set high goals for themselves to not be criticized by others and to get approval, and they feel obliged to achieve their goals. In addition, this schema area includes perfectionism, which has features such as excessive focus on details and the need to always do the right thing (Young et al. 2003). perfectionism is associated with anxiety disorders (Alden et al. 1994, Kawamura et al. 2001, Pirinççi, 2009, Wheeler et al. 2011). Since self-perception includes elements related to self-esteem, it is thought that the findings of the studies evaluating the relationship between perfectionism and self-esteem support this finding of the current study. Along with the inverse relationship between perfectionism and self-esteem (Ashby and Rice 2002), it is known that high perfectionism and low self-esteem can cause psychological problems (Çelik and Şenay Güzel 2018). A person's resilience is weakened by the unrelenting standards schema due to the perception of self can be explained by showing higher levels of separation anxiety symptoms. University students with high scores in this schema area may have become more vulnerable to separation anxiety by holding on to the close relationships they have in the face of negative evaluations about themselves, taking part in relationships in their new environments, and having difficulty expressing themselves in these relationships.

Mediation findings revealed that perception of self had a negative relationship with early maladaptive schemas and separation anxiety symptoms within the models. This pattern suggests that individuals' positive thoughts and attitudes towards themselves are a protective factor that reduces the emergence of adult separation anxiety symptoms due to early maladaptive schemas. The protective role of high levels of resilience for many psychopathologies (Min et al. 2015, Calvete et al. 2018, Song et al. 2021) was also revealed in this study.

The findings also showed that the social resources dimension of resilience had a suppressive role in the relationships between impaired autonomy and disconnection schema domains and separation anxiety symptoms. Although suppressive variables are not common, they are rarely reported because their effects are overlooked (Tzelgov and Henik 1991). No other study has found that social resources have a suppressive effect. However, while social support, which is related to the perception of individuals towards their social resources, is expected to show a relationship with psychological health, emotional support was found to be suppressive on life satisfaction (Helgeson 1993). In addition to access to support, it has been emphasized that whether the support is found to be adequate and whether it is beneficial to the person has a critical role in the relationship between support and well-being. Similarly, the items of the measurement tool used in the current study include statements such as 'Some close friends/family members can encourage me/no one can encourage me', 'The relationships between my friends are weak/strong', 'I get support from my friends/family members/I do not get support from anyone', which do not evaluate what the resource means to the person and its adequacy for the person while evaluating the social resources that are effective in the person's resilience. With such statements, the qualitative equivalent of social resources, whose existence and level of existence for the individual was evaluated, could not be evaluated (Basım and Çetin, 2011). The negative effect of the impaired autonomy schema, which becomes evident by having difficulty in protecting one's boundaries and developing an identity separate from one's relatives, may have paved the way for the inability to provide support from social resources to support well-being and may have strengthened the relationship between impaired autonomy and separation anxiety symptoms. Similarly, the activation of the disconnection schema, which is characterized by the belief that interpersonal relationships will be harmed and having a negative self-perception in relationships, may have prevented the person's social resources from supporting well-being. With this process, the relationship between disconnection schema and separation anxiety may have been strengthened by the effect of social resources.

Unlike other schema domains, resilience dimensions did not play a mediating or suppressive role in the relationship between the impaired limits domain and separation anxiety symptoms. Although impaired limits was a significant predictor for separation anxiety, this relationship was not affected by resilience. There are studies showing that schemas in this area predict anxiety disorders (Pinto-Gouveia et al. 2006, González-Díez et al. 2015; Makas and Çelik 2018). Similarly in a study on the relationship between resilience and depression, which is an internalized disorder such as separation anxiety with impaired limits (Sağ and Bilican 2020). It was observed that psychological resilience did not have a mediating role in the relationship between impaired limits and depression. This schema area includes the difficulty of seeing oneself as rightfully superior, self-control in one's behavior, and self-discipline in one's life, shaped by the overly tolerant attitudes of caregivers (Young et al. 2003). These difficulties may make the person more attached to close relationships with highly permissive caregivers and lead to intense anxiety about separation from them. The person may not be able to consciously experience elements of resilience such as self-esteem and social resources, along with damaged, poorly established personal boundaries, and use them to manage anxiety about separation from loved ones.

Conclusion

Psychotherapy processes carried out by working on schemas are known to reduce psychopathology symptoms (Welburn et al. 2002; Batur, 2004; Çakır, 2007; Soygüt et al. 2009; Deas et al. 2011; Karaca and Ateş 2019). The results of the current study indicated that schema therapy could be beneficial for people with separation anxiety symptoms considering the positive effect of schema therapy on resilience (Rahbar Karbasdehi et al. 2020), the findings of the current study support that schema therapy can also be targeted to support resilience. In addition, intervention programs that aim to increase resilience, such as 'Friends for Life' (Shortt et al. 2001) developed for children, can also be developed and disseminated for adults. The findings of this study underlined that the intervention programs to be developed specifically for maladaptive schemas and separation anxiety may focus on increasing individual's self-esteem and their positive thoughts about themselves, making them realize their strong characteristics, improving their perception of self, and increasing the quality of their social resources. These may contribute to the prevention of the emergence of adult separation anxiety symptoms and the regression of symptoms by reducing the negative effects of early maladaptive schemas and increasing the positive effect of resilience.

The majority of the participants in the current study are women, and they all live in the same province and study at the same university. For future research, selecting a sample of participants from different provinces and universities with a more balanced gender distribution would be beneficial to increase the generalizability. The age range in the current study includes only young adults. A study examining the relationship between psychological resilience and age reported that psychological resilience increased with increasing age (Faraji et al. 2022). It was found that there was a negative relationship between adult separation anxiety symptoms and age

(Sağ 2016). The generalizability of the findings will increase if the sample of future studies on the subject includes the age range of middle and older adulthood. This approach may also contribute to a better understanding of the appearance of the study variables in other periods of adulthood.

In the current study, adult separation anxiety was examined at the level of symptoms with a non-clinical sample. It is thought that including a clinical sample of people diagnosed with adult separation anxiety disorder in future studies will allow intergroup comparisons and contribute to a more detailed understanding of the relationships in question. In addition, symptoms of adult separation anxiety can be seen for the first time in adulthood, or they can continue since childhood (Poulton et al. 2001, Pini et al. 2010). To test whether the etiology of adult separation anxiety affects the relationship revealed in the current study, future studies may examine the participants by dividing them into groups according to the time when they first started to show symptoms of adult separation anxiety. In addition, longitudinal studies may provide information about the prognosis of adult separation anxiety and may provide a better understanding of the effect of schema development on the emergence of adult separation anxiety together with the change in resilience traits. Despite the mentioned limitations, this study is one of the studies investigating the relationship between early schemas and adult separation anxiety. It is thought that it contributes to the literature as a study evaluating the role of a factor in this relationship, such as psychological resilience, whose importance in terms of mental health has been emphasized in many studies and continues to be studied with the same intensity. In addition, in the current study, the suppressive effect, which is rarely seen and/or reported in the literature (Tzelgov and Henik 1991), was detected and discussed. By drawing attention to the impact that may arise from the way an important concept such as psychological resilience is handled, the importance of approaching the issue with sensitivity is emphasized. There is a clear need for theories that address positive and negative characteristics in a balanced way in explaining psychopathologies (Wood and Tarrrier 2010). The current study is thought to make an important contribution to the theory and clinical practice by examining the effect of a positive trait related to well-being such as resilience together with negative traits such as maladaptive schema areas in adult separation anxiety symptoms.

In conclusion, the results of the study showed that the relationship between early maladaptive schemas and adult separation anxiety symptoms is better explained by psychological resilience. Disconnection, unrelenting standards, and other-directedness schema domains formed in early periods predicted adult separation anxiety symptoms through perception of self.

In addition, social resources were found to play a moderating role in the relationship between disconnection, impaired autonomy schema domains, and separation anxiety symptoms. More studies should be conducted to explain, prevent, and treat the etiology of separation anxiety in adults. It is believed that the studies paying attention to the above-mentioned methodological elements will allow us to obtain results with high methodological qualifications and scientific value regarding the subject.

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