L-Università ta' Malta
Centre for Resilience & Socio-Emotional Health

International Journal of Emotional Education
ISSN: 2073 7629

Volume 15, Number 2, November 2023 pp 122 - 139

www.um.edu.mt/ijee

Attachment and Social Connectedness: The Sequential Mediating Role of Inferiority and Perfectionism

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A large body of research has been reported on the lifelong consequences of attachment, with social connectedness being one of the main related factors. It is thus crucial to determine the mediating variables in the relationship between attachment and social connectedness. To better understand the relationship between anxious and avoidant attachment styles and social connectedness among university students, this study investigated the sequential mediating roles of inferiority and perfectionism. The study involved 390 undergraduate students (257 female, 133 male) enrolled in various undergraduate programs. Data was collected through various scales including the *Experiences in Close Relationships, Almost Perfect Scale, Social Connectedness, and Inferiority Scale*. Structural equation modeling shows that adaptive perfectionism partially mediates the relationship between avoidant attachment and social connectedness. Additionally, inferiority functions as a mediator between anxious attachment and maladaptive perfectionism, while maladaptive perfectionism partially functions as a mediator between inferiority and social connection. The results suggest that it would be beneficial for practitioners to address inferiority and perfectionism so as to promote social connectedness among undergraduate students.

Keywords: Attachment, inferiority, perfectionism, social connectedness

First submission 13th October 2022; Accepted for publication 28th April 2023

Introduction

Establishing social connectedness is one of the basic needs of individuals, and an indicator of one's positive mental health. There are periods in the developmental process when the need to establish

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https://doi.org/10.56300/VRVY9123

ISSN 2073 7629
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relationships becomes more prominent, such as the time as a university student. According to the developmental approach, time spent at university is a period during which individuals learn how to build and sustain social connections (Chickering & Reisser, 1993). Studies show that social connectedness makes it easier for university students to stay in the education process (Allen et al., 2008), and facilitates their adjustment to university (Maunder, 2018). Social connectedness plays a crucial role for undergraduate students as it not only protects their mental health but also contributes to their academic studies.

Attachment and Social Connectedness

Attachment is one of the main determinants of social connectedness amongst university students. Attachment is a tendency to establish emotional bonds, to seek and maintain closeness with important others (Bowlby, 2013). According to attachment literature, the life-long effects of babies' experiences with their caregivers will continue, and these effects will impact the relationships with others (Ainsworth, 1989; Bartholomew & Horowitz, 1991; Bowlby, 2013; Mikulincer & Shaver, 2007). If early negative experiences occur, then an insecure attachment style develops, marked by anxious and avoidant attachment behaviours. While anxious attachment is characterized by concerns about the approachability and sensitivity of partners (Fraley et al., 2000), avoidant attachment involves avoiding intimacy and experiencing challenges in regulating or expressing emotions (Sümer et al., 2009). As emerging adults developing adult skills, university students benefit from secure attachment in assessing professional or personal relationships (Mattanah et al., 2011). In a meta-analysis study, controlling for age, gender, and ethnicity, it was found that the proportion of securely attached students decreases, while the rate of insecurely attached students increases (Konrath et al., 2014). In addition, there is a negative relationship between insecure attachment and social connectedness (Chen et al., 2012; Gültekin & Arıcıoğlu, 2017). Social connectedness has a negative relationship with loneliness (Duru, 2008), psychological symptoms (Capanna et al., 2013), vulnerability, worry, and suicidal thoughts and behaviour (Drum et al., 2017). On the other hand, belonging to a social group and having close relationships are related to psychological adjustment (Blau et al., 2016).

Attachment and Inferiority

Several developmental outcomes in later life have been related to the quality of early parent-child relationships. Particularly, insecure attachment driven by negligent parenting has been linked to inadequate and poor mental health outcomes. Inadequate parental attention to children's needs has been associated with insecure attachment (Bowlby, 2014). Children exposed to such neglectful experiences would not know what love and sociability are, and these experiences will cause inferiority (Adler, 2012). Recent findings also reveal a positive relationship between insecure attachment and inferiority (Akdoğan, 2017; Ekşi et al., 2016).

Attachment, Inferiority, and Perfectionism

Another variable positively associated with insecure attachment is perfectionism (Ulu & Tezer, 2010; Gnilka et al., 2013; Chen et al., 2015). To the best of our knowledge, the research does not yet specify the variables that define or explain how perfectionism and insecure attachment interact. When the permanent effects of attachment on individuals are considered, inferiority can be a crucial determinant in the relationship between attachment and perfectionism. Individuals with a sense of inferiority tend to create an idealized version of themselves and strive to achieve it. Adler (2011) defined the ideal self as the belief that others can accept an individual, despite not being perfect. These individuals also have social interests and experience perfectionism efforts with a sense of controllable inferiority, and cope with this feeling in constructive and beneficial ways (Ansbacher & Ansbacher, 1956). On the other hand, non-ideal individuals act with the unrealistic belief that others can accept them only if they are perfect. Therefore, they strive for personal power and sense of superiority by setting stringent goals for themselves. Adler defines this situation as neurotic perfectionism (Ansbacher & Ansbacher, 1956). According to Adler, neurotic perfectionists' acts are entirely devoid of social interest.

Individuals with perfectionist tendencies set high standards for themselves that are often difficult to achieve. They drive themselves to achieve impossibly high standards, and their entire sense of value is based on how successful they are (Burns, 1980). The adaptive and maladaptive aspects of perfectionism that have been recognized in recent literature are the emphasis of the two-dimensional approach. The adaptive dimension refers to the positive and motivating aspects of perfectionism, while the maladaptive dimension is based on evaluations from others and can lead to the manifestation of various pathological symptoms (Stoeber & Damian, 2016). In addition, many researchers agree that adaptive perfectionism is less harmful than maladaptive perfectionism, with the latter leading to more psychopathological symptoms than the former (Cha, 2016; Limburg et al., 2017; Molnar et al., 2016).

Perfectionism and Social Connectedness

In the Perfectionism Social Disconnection Model (PSDM), Hewitt et al. (2006) distinguish between the subjective and objective dimensions of social connectedness. The subjective dimension refers to how distant from others an individual internally feels, while the objective dimension refers to the actual number of relationships an individual has. Perfectionists suffer from this subjective or objective social disconnection due to alienation, close relationship problems, inadequate perception of social support, perceptions about how reckless others are, and a lack of support (Hewitt et al., 2006). The results of a recent meta-analysis show that maladaptive perfectionism predicts increased depression through social disconnection and stress. However, adaptive perfectionism is only predicted to increase depression through social disconnection (Smith et al., 2020). This finding reveals the importance of social connectedness in the psychopathological symptom levels of perfectionists.

The Current Study

The literature suggests that insecure attachment causes inferiority, and individuals try to handle this with perfectionism, which leads to a decrease in their social connectedness levels. In this context, we aim to discover the sequential mediator roles of inferiority and perfectionism in the relationship between anxious and avoidant attachment styles and social connectedness among university students.

Method

Participants

The sample comprised 390 undergraduate students who were recruited using convenience sampling. During the sampling process, we aimed to ensure that the distribution of participants across six different faculties was proportional to the number of students registered in each respective faculty. The maximum margin of error of the study was 4.9% with 95% confidence interval. The mean age of the participants was 20.62 years (SD=1.83). Of these, 257 (65.9%) were female, and 133 (34.1%) were male. The age means were comparable, with 20.39 for females and 21.10 for males. 112 (28.7%) of the participants were freshers, 100 (25.6%) were sophomores, 92 (23.6%) were juniors, and 86 (22.1%) were seniors.

Soper (2021) suggests a sample size calculation for the Structural Equation Model (based on Westland's 2010 study) which considers the number of latent and observed variables. When we applied our variable numbers (six latent and twenty-one observed variables) to this calculation, it suggested a minimum of 161 observations for a 0.3 anticipated effect size, a 0.8 statistical power level, and a 0.05 probability level. Therefore, the number of participants in this study seemed adequate to test the hypothesized model.

Measures

Personal Information Form: The demographical information of participants; age, gender, department, and grade were collected through this form.

Experiences in Close Relationships-Revised (ECR-R; Fraley et al., 2000): The ECR-R assesses attachment relationships across various relationship types, namely, parental, sibling, romantic partner, and others. The scale is a seven-point Likert-type with 36 items designed to evaluate adult attachment types. Higher scores represent higher anxious and avoidant attachment styles. The ECR-R was translated into Turkish by Selçuk et al. (2005). The anxiety and avoidance sections had Cronbach's alpha values of 0.86 and 0.90, respectively. In the current study the αs were 0.88 for both anxiety and avoidance.

Inferiority Scale (IFS; kdoğan & Ceyhan, 2014a): The IFS was developed in Turkish based on Adlerian psychology to measure inferiority amongst university students. The scale is a five-point Likert-type scale consisting of 20 items with three subscales; Discouragement, Negation of Self Value, and Useless Superiority Effort. High scores indicate higher levels of inferiority. The scale explains 43.63% of the total variance, with Cronbach's alpha coefficients of the subscales being .80, .71, and .73

respectively and .86 for the whole scale (Akdoğan & Ceyhan, 2014a). In this study, the αs were .80, .74, and .65, respectively.

Almost Perfect Scale-Revised (APS-R; Slaney et al., 2001): This scale has 23 items and three subscales: Discrepancy, High Standards, and Order. It is a seven-point Likert-type scale. An increase in scores corresponds to an increase in each domain and overall score. Ulu (2007) carried out the scale's Turkish adaption, and the findings were presented as x^2 (180) =547.158, p < .01; RMSEA = .07; GFI = .90; CFI = .90. Only Standards and Discrepancy subscales were used in the present study and the αs were .84 and .89, respectively.

Social Connectedness Scale-Revised (SCS-R; Lee et al., 2001): The scale is a six-point Likert-type scale consisting of 20 items in a single factor. Higher scores indicate a higher social connection. The scale explains 46% of the total variance, with a Cronbach's alpha of .92. Şahin and Duy (2021) conducted the Turkish adaptation, and the fit statistics were x^2/sd (471.55/168) = 2.81, p = .001; RMSEA = .081; SRMR = .06; CFI = .97, and NNFI = .96. The test-retest correlation was .84, and the α was .93. In this study, the α was .92.

Data Analysis

First, we checked the multivariate normality assumptions. Second, using structural equation analysis with latent variables and LISREL 8.7, we tested the measurement and theoretical models. By using t values, the path coefficients in the model were evaluated. The final model was established using the chi-square difference test (x^2). Additionally, we used a nested model and maximum likelihood estimation for the mediation test. In order to evaluate the quality of the model, the following fit indices were considered: chi-square/df; Root Mean Square Error of Approximation (RMSEA); Comparative Fit Index (CFI); GFI (Goodness of Fit Index); and Non-Normed Fit Index (NNFI). With regards to goodness of fit indices, RMSEA and SRMR are lower than .08, but CFI, NNFI, and GFI are expected to be higher than .90 (Kline, 1998; Schumacher & Lomax, 2004). The significance level in the study was accepted as .05.

Procedure

We placed five control items among the questionnaires to check the trustworthiness of the participants. An example of these control items is “Please indicate the I somewhat disagree option for this item.” As a result of this, we excluded almost half of the data. In addition, we presented the questionnaires in four different mixed orders.

The Ethical Committee of Anadolu University approved the study. We provided detailed information to participants about the purpose of the research, accessing conditions of the data, right to privacy, and withdrawal from the study at any time during the process.

Findings

Descriptive Statistics

First, we examined the descriptive statistics of twenty-one observed variables. Kurtosis values were between -.08 and -.75, while skewness values were between .09 and .51. As a result, all values ranged within the -1 and +1 normal distribution boundaries (Tabachnick & Fidell, 2013). Additionally, the observed variables' means, standard deviations, and bivariate correlations were calculated (see Table I). The findings indicate that the anxious attachment (ANX2) and inferiority (DSC) variables had the greatest correlation, which was .50. This supports the finding that no multicollinearity problem exists between the variables (Tabachnick & Fidell, 2013).

Confirmatory Factor Analysis (CFA)

We implemented the two-step approach to test the structural model. The model was comprised of six latent variables, anxious attachment, avoidant attachment, inferiority, adaptive perfectionism, maladaptive perfectionism, and social connectedness, as well as twenty-one observed variables. The findings resulted in an acceptable fit to the data, as indicated by the following goodness of fit statistics: x^2/df (499.80/174) = 2.87, p<.001; GFI: .89; CFI = .96; NNFI: .95; RMSEA = .069 (90% confidence interval for RMSEA =.062–.077). The standardized factor loadings ranged from .41 to .91, showing that they loaded significantly in the predicted directions in their respective constructs. The relationships between latent variables calculated after the CFA are presented in Table II.

Structural Model

We then tested the structural model after confirming that the measurement resulted in acceptable goodness of fit statistics. The standardized path coefficients of the structural model are presented in Figure 1. The path coefficients from anxious attachment to adaptive perfectionism (β=-.03, p>.05), from anxious attachment to maladaptive perfectionism (β=.02, p>.05), and from anxious attachment to social connectedness (β=-.09, p>.05) are not significant. In addition, the path coefficients from avoidant attachment to inferiority (β=-.01, p>.05), from avoidant attachment to adaptive perfectionism (β=-.03, p>.05), and from inferiority to adaptive perfectionism (β=.17, p>.05) were also statistically non-significant.

Table I. Bivariate correlations between observed variables and descriptive statistics

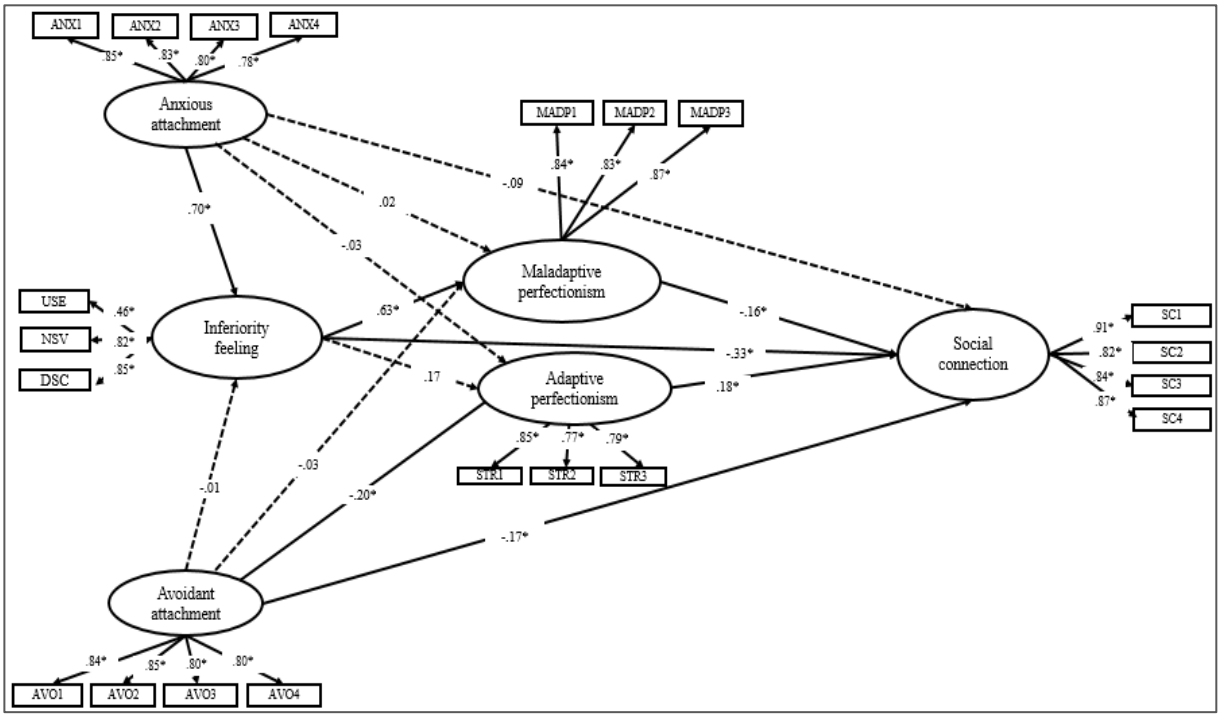
	Observed variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
1.	ANX1	-																				
2.	ANX2	.72**	-																			
3.	ANX3	.70**	.65**	-																		
4.	ANX4	.63**	.65**	.65**	-																	
5.	AVO1	.20**	.20**	.26**	.21**	-																
6.	AVO2	.24**	.24**	.30**	.22**	.74**	-															
7.	AVO3	.24**	.25**	.27**	.24**	.64**	.68**	-														
8.	AVO4	.23**	.23**	.29**	.23**	.68**	.66**	.68**	-													
9.	USE	.25**	.34**	.27**	.15**	-.02	-.03	.00	.03	-												
10.	NSV	.49**	.49**	.47**	.47**	.14**	.16**	.13**	.17**	.29**	-											
11.	DSC	.49**	.50**	.47**	.43**	.20**	.16**	.19**	.28**	.39**	.73**	-										
12.	ADP1	.02	.14	.06*	.03	-.09	-.08	-.08	-.03	.49*	.06	.03	-									
13.	ADP2	-.14*	-.04	-.10	-.06	-.15**	-.17**	-.13**	-.15**	.38**	-.15**	-.17**	.66**	-								
14.	ADP3	.00	-06	.05	-.01	-.07	-.06	-.09	-.05	.47**	.00	.04	.66**	.60**	-							
15.	MADP1	.28**	.32**	.28**	.22**	.13*	.12*	.08*	.14**	.40**	.43**	.41**	.26**	.08**	.32**	-						
16.	MADP2	.25**	.32**	.28**	.20**	.07	.08	.04	.12**	.43**	.36**	.37**	.45**	.21**	.45**	.73**	-					
17.	MADP3	.35**	.43**	.39**	.32**	.08	.09	.07	.13*	.44**	.47**	.49**	.35**	.17**	.34**	.73**	.72**	-				
18.	SC1	-.39**	-.35**	-.30**	-.32**	-.30**	-.26**	-.18**	-.25**	-.15**	-.41**	-.37**	.06	.19**	.06	-.33**	-.25**	-.26**	-			
19.	SC2	-.37**	-.36**	-.34**	-.32**	-.29**	-.26**	-.16**	-.25**	-.17**	-.44**	-.45**	.08	.25**	.08	-.30**	-.26**	-.30**	.72**	-		
20.	SC3	-.29**	-.33**	-.26**	-.27**	-.27**	-.28**	-.19**	-.25**	-.20**	-.39**	-.32**	.01	.12**	.01	-.27**	-.24**	-.25**	.76**	.75**	-	
21.	SC4	-.33**	-.34**	-.25**	-.29**	-.23**	-.22**	-.15**	-.22**	-.18**	-.41**	-.38**	.00	.11*	.04	-.33**	-.25**	-.31**	.81**	.69**	.72**	-
	M	16.70	19.19	13.61	15.88	14.64	15.08	11.90	13.60	19.24	14.33	22.26	15.81	10.46	9.24	13.18	15.30	15.75	22.61	21.01	19.53	20.14
	SD	5.96	5.32	4.67	4.54	5.24	5.40	4.47	4.58	4.03	4.30	5.91	3.67	2.31	2.92	5.41	5.37	4.88	4.60	4.50	4.33	4.51

Note. *p<.05, **p<.01. Note: N =390; ANX1–ANX4 =four parcels of anxious attachment; AVO1-AVO4 =four parcels of avoidant attachment; USE = Useless superiority effort, NSV = Negation of self-value, DSC = Discouragement subscales of the Inferiority Scale; MADP1-MADP3 =the first, second, and third parcels of maladaptive perfectionism; ADP1-ADP3 = the first, second, and third parcels of adaptive perfectionism; SC1-SC4 =four parcels of social disconnection.

Table II. Correlations among the Latent Variables Obtained from the Measurement Model

Latent Variables	1	2	3	4	5
1. Anxious attachment	-				
2. Avoidant attachment	.37*	-			
3. Inferiority feeling	.69*	.25*	-		
4. Adaptive perfectionism	.01	-.16*	.03	-	
5. Maladaptive perfectionism	.44*	.14*	.61*	.44*	-
6. Social connectedness	-.46*	-.35*	-.53*	.11*	-.37*

Note. *p<.05



Note. *N=390; *p < .05; ANX1–ANX4 =four parcels of anxious attachment; AVO1-AVO4 =four parcels of avoidant attachment; USE = Useless superiority effort, NSV = Negation of self-value, DSC = Discouragement subscales of the Inferiority Scale; MADP1-MADP3 =the first, second, and third parcels of maladaptive perfectionism; ADP1-ADP3 = the first, second, and third parcels of adaptive perfectionism; SC1-SC4 =four parcels of social disconnection*

Figure 1. The Structural Model's Standardized Path Coefficients

In the next step of the analysis, the smallest paths were removed from the model, starting with the standardized coefficients which were statistically insignificant. The alternative models were tested according to the Chi-square difference test. As seen in Table III, the p values of the x^2/df values are smaller than .01.

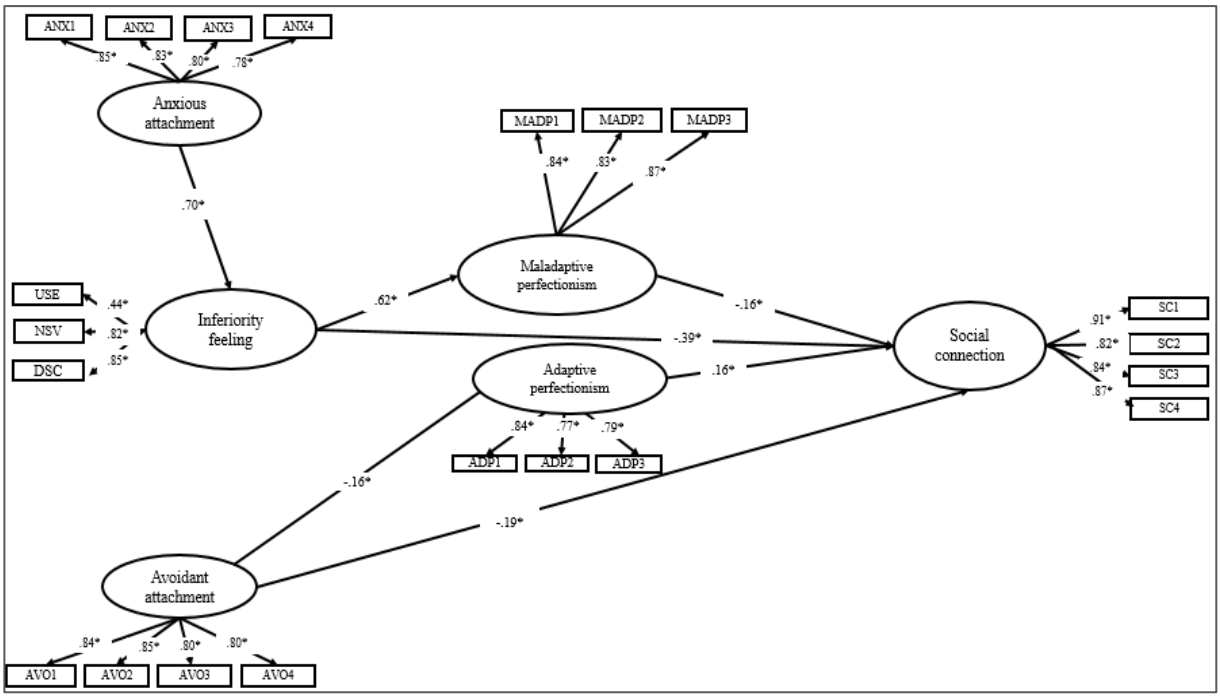
Since these values are expected to be larger than .05, this test is quite sensitive to sample size. Therefore, we continued the analyses. Following the changes made in the hypothetical model, we removed the path between inferiority and social connectedness to test the fully-mediated model (Model 7). A significant chi-square difference was obtained when we compared Model 6 and Model 7, indicating that Model 6 produced better values than Model 7, and there was a significant change in the model [$x^2(1) = 26.05$, $p<.05$]. Therefore, the path was again added to the model. After repeating the same process, we removed the model's path between avoidant attachment and social connectedness (Model 8). A significant chi-square difference was obtained as we compared Models 6 and 8, indicating that Model 6 again produced better values than Model 8, and there was a significant change in the model [$x^2(1) = 12.58$, $p<.05$]. Therefore, the path was again added to the model. Figure 2 displays the final model (Model 6), which was determined by the chi-square difference test.

Table III. Fit Indices of Alternative Models

Alternative models	x^2	sd	x^2/ sd	p	RMSEA	GFI	CFI	NNFI	Chi square difference test
Model 1	611.75	175	3.50	p<.001	.080	.87	.95	.94	-
Model 2	611.55	177	3.46	p<.001	.079	.87	.95	.94	$x^2(2) = .20$, p >.05
Model 3	611.44	178	3.44	p<.001	.079	.87	.95	.95	$x^2(1) = .11$, p >.05
Model 4	611.77	179	3.42	p<.001	.079	.87	.95	.95	$x^2(1) = .33$, p >.05
Model 5	612.75	180	3.40	p<.001	.079	.87	.95	.95	$x^2(1) = .98$, p >.05
Model 6	613.27	181	3.39	p<.001	.078	.87	.95	.95	$x^2(1) = .52$, p >.05
Model 7	639.32	182	3.51	p<.001	.080	.86	.95	.94	$x^2(1) =26.05$, p <.05
Model 8	625.85	182	3.44	p<.001	.079	.87	.95	.94	$x^2(1) =12.58$, p <.05

Note. Model 1: The structural model (Figure 1)

Model 2: The paths from anxious attachment to adaptive perfectionism and from inferiority to strivings were removed.
Model 3: The path from avoidant attachment to inferiority was removed
Model 4: The path from anxious attachment to maladaptive perfectionism was removed
Model 5: The path from avoidant attachment to maladaptive perfectionism was removed
Model 6: The path from anxious attachment to social connectedness was removed (Figure 2)
Model 7: The path from inferiority to social connectedness was removed
Model 8: The path from avoidant attachment to social connectedness was removed



*Note. N=390; *p < .05; ANX1–ANX4 =four parcels of anxious attachment; AVO1-AVO4 =four parcels of avoidant attachment; USE = Useless superiority effort, NSV = Negation of self-value, DSC = Discouragement subscales of the Inferiority Scale; MADP1-MADP3 =the first, second, and third parcels of maladaptive perfectionism; ADP1-ADP3 = the first, second, and third parcels of adaptive perfectionism; SC1-SC4 =four parcels of social disconnection*

Figure 2. The Final Model

According to the final model, the relationship between anxious attachment and maladaptive perfectionism was mediated by inferiority. The relationship between inferiority and social connectedness was partially mediated by maladaptive perfectionism. Furthermore, the relationship between anxious attachment and social connectedness was mediated by inferiority and maladaptive perfectionism. Finally, the relationship between avoidant attachment and social connectedness was partially mediated by adaptive perfectionism.

Multiple linear regression analyses on the data were also performed, and the results were used to calculate the percentages of variation explained. We conducted separate regression models with the relevant independent variables for each dependent variable. Results showed that anxious attachment explained 49% of the inferiority variance, and inferiority explained 38% of the maladaptive perfectionism variance. On the other hand, avoidant attachment explained only 3% of the adaptive perfectionism variance. Additionally, all the variables explained 39% of the social connectedness variance.

Bootstrapping

The bootstrapping procedure was implemented to test the significance of the mediating effects. It was found that all indirect effects were significant (Shrout & Bolger, 2002). The bootstrapped CIs are presented in Table IV.

Table IV. Results of the Bootstrapping Analysis

Path	Mediator	Path coefficients (β)	%95 CI	p
Anxious attachment - Maladaptive perfectionism	Inferiority feeling	.02 (.44*)	[.353, .515]	.002
Anxious attachment–Social connectedness	İnferiority and maladaptive perfectionism	-.09 (-.46*)	[-.424, -.270]	.001
Inferiority feeling-Social connectedness	Maladaptive perfectionism	-.33* (-.53*)	[-.203, -.010]	.026
Avoidant attachment– Social connectedness	Adaptive perfectionism	-.17* (-.35*)	[-.054, -.005]	.010

Note. *$p<.05$. Bootstrap made with 1000 samples. β =Standardized.

Discussion

The current study found that inferiority mediated the relationship between anxious attachment and maladaptive perfectionism. Previous research findings show a significant relationship between anxious attachment and maladaptive perfectionism amongst undergraduate university students from different cultural contexts (Gnilka et al., 2013; Pouravari et al., 2018; Ulu & Tezer, 2010). Similarly, research underlines the relationship between anxious attachment and inferiority (Akdoğan, 2017; Ekşi et al., 2016). Neurotic perfectionists struggle more with intense inferiority than normal perfectionists (Ashby and Kottman, 1996), whilst those with a high level of inferiority concealing the difference between the ideal and the real self Akdoğan & Çimşir, 2019). The relationship between inferiority and maladaptive perfectionism thus appears to be consistent with the literature.

Maladaptive perfectionism has a partially mediating role in the relationship between inferiority and social connectedness. The positive relationships between inferiority and loneliness (Akdoğan, 2017; Akdoğan & Çimşir, 2019) support this finding. According to Adler (2011), individuals who struggle with inferiority and exhibit a lack of interest in social connection may not strive for an ideal society, which may, in turn, contribute to a decrease in their social connectedness. Maladaptive perfectionism is related to various aspects of social relationships, such as interpersonal conflict, estrangement, and low intimacy (Sherry et al., 2016), the need to belong (Chen et al., 2015), rejection sensitivity (Flett et al., 2014), and perceived social support (Gnilka & Broda, 2019). A recent meta-analysis study reveals that maladaptive perfectionism predicts increasing depression through social connectedness and stress (Smith et al., 2020). The decrease in the social connectedness level of individuals with high maladaptive perfectionism in order to cope with inferiority appears to be consistent with the literature.

In the present study, inferiority and maladaptive perfectionism have a fully mediating role in the relationship between anxious attachment and social connectedness. Accordingly, an increase in anxious attachment scores increases sense of inferiority; the inferiority causes an increase in maladaptive perfectionism, and the social connectedness levels consequently decrease. Secure attachment is a source for the individual to perceive himself as sufficient, lovable, and valuable (Bowlby, 2014). On the other hand,

individuals with anxious attachment tend to perceive cognitive, emotional, and physical distance between themselves and their attachment figure and thus may take actions to decrease this perceived distance (Mikulincer & Shaver, 2007). It seems possible that anxious attachment increases the individuals' inferiority. Several findings show a positive relationship between anxious attachment and inferiority (Akdoğan, 2017; Ekşi et al., 2016). In this context, maladaptive perfectionism can be seen as a coping mechanism by individuals who aim to avoid negative evaluations from others (Stoeber & Damian, 2016), as it helps them overcome perceived incompetence. However, maladaptive perfectionism is associated with misunderstanding others' reactions (Macedo et al., 2017). In summary, the study findings align with previous research indicating that both the perceived distance from attachment figures in individuals with anxious attachment and the negative consequences of maladaptive perfectionism on social relationships can lead to a decrease in the level of social connectedness.

Another finding of this study is that adaptive perfectionism has a partially mediating role in the relationship between avoidant attachment and social connectedness. According to this result, when the students' avoidant attachment levels decrease, their adaptive perfectionism levels increase, enhancing their social connectedness. Similar findings reveal that adaptive perfectionism has a mediating role in the relationship between avoidant attachment and hopelessness and life satisfaction (Gnilka et al., 2013). Sense of belonging is widely regarded as a fundamental human need, and it is particularly important for healthy development. However, some individuals may prefer to distance themselves from social resources that could satisfy their need for belonging, instead of actively seeking to fulfill it. Adaptive perfectionism can serve as a means of fulfilling the needs for success and dignity, and individuals with avoidant attachment may seek to fulfill their needs for success and dignity through adaptive perfectionism. In other words, the key to utilizing the benefits of adaptive perfectionism appears to be having secure attachment patterns. In the related literature, similar findings indicate positive relationships between adaptive perfectionism and social connectedness in different age groups (Gilman et al., 2014). Adaptive perfectionism has been found to be positively related to self-control, openness to experience, extroversion (Smith et al., 2018; Ulu & Tezer, 2010), self-compassion, and optimism (Lizmore et al., 2017). These variables are socially desirable features that facilitate interpersonal relationships, also preferred by others, and thus that individuals with these traits will have a greater propensity to form and sustain social connections. According to the results of a recent meta-analysis research, adaptive perfectionism has a lower correlation with psychopathological symptoms than maladaptive perfectionism (Limburg et al., 2017).

Clinical implications

Maladaptive perfectionism has a partial mediating role in the relationship between inferiority and social connectedness and interventions to decrease maladaptive perfectionism may include specific strategies to alleviate inferiority (Akdoğan & Ceyhan, 2014b). Providing short feedback to maladaptive perfectionists on their situation leads to a decrease in these individuals' symptoms and emotional responsiveness (Aldea et al.,

2010). Consequently, it would be appropriate for mental health professionals to consider identifying students with high maladaptive perfectionism and provide them with feedback on their levels of perfectionism.

It would also be appropriate for mental health professionals to keep this in mind while working with university students who exhibit maladaptive perfectionism symptoms that set unrealistic standards for themselves in their daily lives in the counseling process. Considering the strong relationship between the sense of inferiority and maladaptive perfectionism in this study and the consequent risk for such students to drop out of their studies, it would be more important to create mutually agreed-up concrete goals and provide frequent feedback on their progress.

According to the literature, mental health professionals who work with adaptive perfectionists need to include interventions to improve coping skills or support healthy relationships rather than attempting to fit the clients' perfectionistic standards into a different framework (Gnilka et al., 2013). The results of this study suggest that university students with adaptive perfectionism tend to exhibit avoidant behaviour, which highlights the importance of enhancing the interpersonal skills of such individuals.

Limitations and future direction

The findings of the study are based on self-report measures and the findings and recommendations of the present study need to be considered in the light of such a limitation. Secondly, the participants consisted entirely of undergraduate students and convenience was used in the study, thus limiting generalization of the findings. Further studies may make use of representative samples of university students, and address other variables not investigated in the study such as emotional relationships, parental attitudes and personality traits

Declaration

This paper is based on the first author's unpublished doctoral dissertation, under the supervision of the second author (Şahin, 2020).

The authors declare no conflicts of interest with respect to the authorship or the publication of this article.

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