Relationships of Attachment Styles and Gender, Personal Meaning, Depressiveness and Trait-Anxiety among College Students

Üniversite Öğrencilerinin Bağlanma Stillerinin Cinsiyet, Kişisel Anlamlılık, Depresyona Yatkınlık ve Sürekli Kaygı Düzeyleriyle İlişkisi

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Abstract

This study investigated the relationship between college students' attachment styles and their gender, personal meaning, depressiveness and state anxiety. One hundred fifty five voluntary college students participated to the study. Simultaneous multiple regression analysis, multinomial and binary logistic regression analyses and independent t-test were used for data analyses. A significant relationship was observed between attachment and depressiveness. There was no significant relationship between attachment and trait-anxiety. Males and females differed only on attachment-related avoidance, dependency factor of depressiveness and trait-anxiety. Gender partially predicted college students' attachment styles. Implications of the results, limitations of the study and directions for future research were discussed.

Keywords: Attachment, personal meaning, depressiveness, trait anxiety, college students.

Öz

Bu çalışmada, üniversite öğrencilerinin bağlanma stilleri ile cinsiyetleri, kişisel anlamlılık düzeyleri, depresyona yatkınlık ve sürekli kaygı düzeyleri arasındaki ilişki incelenmiştir. Çalışmaya 155 gönüllü öğrenci katılmıştır. Veri analizleri çoklu regresyon, çok kategorili ve iki kategorili lojistik regresyon analizleri ve bağımsız gruplar için t-testi ile yapılmıştır. Bağlanma faktörleri ve depresyona yatkınlık faktörleri arasında anlamlı ilişkiler bulunmuştur. Kadın ve erkek öğrencilerin bağlanma ile ilgili kaçınma, bağımlılık ve sürekli kaygı düzeyleri arasında anlamlı farklılıklar bulunmuştur. Öğrencilerin cinsiyetleri, bağlanma kategorilerine aidiyetlerini sadece kısmen yordamıştır. Araştırmanın sonuçları ve sınırlılıkları tartışılmış, ileriki araştırmalar için öneriler yapılmıştır.

Anahtar Sözcükler: Bağlanma, romantik bağlanma, kişisel anlamlılık, depresyona yatkınlık, sürekli kaygı, üniversite öğrencileri.

Introduction

Attachment theory originated from the research on the infant-caregiver relationship. Robertson and Bowlby (1952) identified infants' behavioral patterns followed by separations from their mothers. These observations led Bowlby pay close attention to the importance of the connection between infant and care-giver. Bowlby (1969) concluded that behaviors by which infants sought and maintained proximity to caregivers were keys to evolutionary survival of the human species.

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Following this initial focus on infant-caregiver relationship (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969), attachment theory has evolved to address various periods of the lifespan development. Furthermore, this remarkable blooming in attachment research has embraced a variety of groups and mental health issues. The relationship of attachment to adult romantic love (Hazan & Shaver, 1987), developmental psychopathology (Petersen et al., 1991), adjustment to college (Kenny & Perez, 1996), therapeutic relationship (Shorey & Snyder, 2006), bereavement (Field, Gao & Paderna, 2005), choice of medical specialty areas (Ciechanowski et al., 2006) and same sex romantic relationships (Mohr, 1999) are only a few examples of the growth in attachment research. These studies have examined the relationships of adult attachment to development of adult psychopathology and to adult functioning and well-being.

Attachment styles have been investigated with samples of university student in Turkey. For example, Çetin (2004) examined effectiveness of an attachment oriented psychoeducational group training on improving university students' preoccupied attachment styles. She found significant changes from preoccupied attachment styles to secure attachment in the treatment group participants. Working with a sample of university students, Hamakta, Deniz and Durmuşoğlu-Saltalı (2009) examined the relationship between attachment styles and emotional intelligence. The authors found that secure attachment was significantly related to dimensions of emotional intelligence. Amado (2005) investigated the relationship between first year university students' attachment styles and several indicators of well-being and psychopathology. She found that individuals scores on depression and hopelessness varied significantly according to their attachment classification.

Since the attachment theory is a theory of survival and adaptation, it can provide insight into college students' efforts toward adjusting to and surviving through such a developmentally significant experience. Likewise, the concept of personal meaning is also closely associated with adaptation and survival (Frankl, 1963). This study examines the relationships of attachment status and indicators of well-being and proneness to psychopathology. More specifically, personal meaning will be used as an indicator of psychological well-being, while depressiveness and trait-anxiety will be the two measures of psychopathology.

These two constructs were selected for two reasons. The first reason has to do with the prevalence of depression and anxiety among college students (Archer & Cooper, 1998). The second reason stems from the fact that these two constructs (depressiveness and trait-anxiety) are personality traits. Since the literature more commonly involves studies with states (i.e., Amado, 2005), an examination of these two traits' relations to attachment and personal meaning can make unique contributions to attachment research.

Despite the increased attention attachment theory has received during the last decade, attachment research is yet to grow beyond basic research inquiries. Also, in a time of limited resources for mental health services, the development of time-effective interventions is only possible with sufficient empirical knowledge. Studies with attachment theory propose that how individuals experience close relationships has relevance to other areas of their functioning. Finding empirical evidence linking attachment to measures of wellbeing and psychopathology will help psychotherapists attain further clarity in interrelationships between major areas of human functioning. Such clarity will, in turn, strengthen efficacy of therapeutic interventions with college students. Hence, this study intended to contribute to this advancement in attachment research and college student mental health.

Method

Sample

A voluntary sample was used for this study which consisted of undergraduate students in four personal growth classes taught at the College of Education of a large South Eastern state university in the United States during the academic year of 2003-2004. Two interpersonal

communication classes, one stress and anxiety management and one alcohol and drug abuse class, were sampled. Students in these classes were informed about the survey by their respective instructors. All the students present in these classes, who were between ages of 18-23 and who volunteered to participate were included in the study. While none of the students present in these classes declined participation in the study, 12 could not do so because they were older than 23. Participation was voluntary and students received extra credit from their respective instructors. A total of 155 individuals completed the survey ($\underline{N}$ = 155). Fewer than 1/3rd of the participants were males (48 persons, 31 %), whereas over 2/3rd were females (107 persons, 69%).

Measures

The Experiences in Close Relationships Questionnaire-Revised (ECR-R; Fraley, Waller, & Brennan, 2000). The ECR (Brennan, Clark, & Shaver, 1998) is a 36-item Likert type self-report measure of adult attachment. It measures adult attachment within the context of romantic relationships. The ECR has two subscales, Anxiety and Avoidance, each represented by 18 items. The Anxiety scale measures one's self-reported degree of anxiety in romantic adult relationships, whereas Avoidance assesses the extent of avoidance of intimacy in such relationships. Instead of specifying attachment categories, the ECR-R places individuals' attachment orientations on the continuum of these two dimensions.

The security of attachment is conceptually placed at lower levels of these two dimensions. The scores on these two factors can be converted to place respondents into three or four categories.

Fraley et al utilized Item Response Theory (IRT) in developing the ECR-R. The report test re-test reliability coefficients ranging between .93 and .95. In this study, scores on factors of attachment (anxiety and avoidance) were calculated by summing students' scores on each factor.

The Life Regard Index- Revised (LRI-R; Debats, 1998). Battista and Almond (1973) developed the original Life Regard Index (LRI), which is a 28-item Likert type scale. Battista and Almond preferred to the term life regard to refer to one's perception of life as essentially meaningful. They believed that the presence of a framework was an essential prerequisite to a sense of meaning. Furthermore, they proposed that the extent to which the goals of this framework are actualized would give a person a global sense of fulfillment with life. Hence, they constructed the questionnaire into two subscales: the Framework Scale (FS) and the Fulfillment Scale (FU).

The revised form by Debats (1998) uses 3-point Likert type scale. Debats (1990) examined psychometric properties of the LRI with a sample of Dutch college students. He found that the Cronbach alpha estimates of internal consistency ranging from .86 (Index), and .80 (Fulfillment) to .79 (Framework). The Fulfillment scale correlated with the Index .88, and the Framework and the Index .87, whereas the two subscales correlated .54. Test-retest reliability ranged from .73 to .80 (Debats (1990).

Depressive Experiences Questionnaire (DEQ; Blatt et al., 1976): The DEQ (Blatt, D'Affliti, & Quinlan, 1976) is a 7-point Likert type scale consisting of 66 items assessing dependency and self-criticism, which are considered fundamental personality traits associated with vulnerability to depression. Although Blatt and colleagues (1976) identified efficacy as a third factor, often times only the first two factors have been used. Zuroff, Igreja, and Mongrain, (1994) found similarly convincing evidence for the DEQ's test-retest reliability (12 months) with $\underline{r}$ = .79. They found high internal consistencies (Cronbach's ⊚= .75). Scores on DEQ were obtained using calculation procedures of Santor, Zuroff, and Fielding (1997). These procedures involve a series of computer programs which provide separate scores for each factor of depressiveness and a score for depressiveness.

The State-Trait Anxiety Inventory, Trait Version, Form Y (STAI-T: Spielberger, 1983): The State-Trait Anxiety Inventory (STAI) was developed by Spielberger, Gorsuch and Lushene (1970). It is a brief self-report instrument assessing both state and trait-anxiety for clinical and empirical purposes. The STAI conceptualizes and measures trait-anxiety as one's general tendency to feel

an array of situations as threatening. Thus Spielberger et al. (1970) hypothesized that individuals with high T-Anxiety would be more likely to respond to stressful situations with more frequent and higher levels of S-Anxiety.

The T-Anxiety scale (STAI-T) is a 4-point Likert type scale consisting of 20 statements. Spielberger (1983) reports test-retest reliability coefficients for the Y Form of T-Anxiety to range from .73 to .86 for college students. The alpha coefficients for internal consistency of the scale had a median of .90 for various populations. In addition to the four instruments mentioned above, the survey inquired information on participants' age and gender.

Results

Attachment status and personal meaning: A simultaneous multiple regression analysis was conducted to examine this relationship. While the outcome variable was personal meaning, the independent variables were attachment-related anxiety, attachment-related avoidance, gender, dependency, self-criticism, and trait anxiety (Table 1).

This model was significant (F (6, 148) = 16.696, p < .0001. R^2 = .404) and accounted for 40.4% of the variance in personal meaning. Neither attachment-related anxiety (t (1, 154) = -1.914, p = .058) nor attachment- related avoidance (t (1, 154) = -1.070, p = .286) had a significant relationship to personal meaning.

Table 1.

Simultaneous Multiple Regression Output Using Personal Meaning as the Dependent Varia

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	104.646	7.281		14.372	.000
Attachment Anxiety	-1.301	.680	-.147	-1.914	.058
Attachment Avoidance	-.692	.647	-.079	-1.070	.286
Gender	-3.742E-02	1.609	-.002	-.023	.981
Dependency	4.813E-02	.049	.070	.989	.324
Self-Criticism	-.172	.053	-.281	-3248.	.001
Trait-Anxiety	-.385	.104	-.318	-3.714	.000
R=.635[a]	R^2=.404	R^2_{adj}=.379			
F(6,148)= 16.696	p=.000				

a. Dependent Variable: Personal Meaning

Placement in four attachment categories: A multinomial logistic regression analysis with main effects (gender, personal meaning, dependency, self-criticism, and trait-anxiety) and all possible interaction effects was conducted. The results of this model showed that the sample size was not sufficient for the inclusion of the interactions. The difference between the deviance for the interaction model (259.131) and the deviance for the main effects (347.912) was divided by the difference between the two degrees of freedom (447-372= 75) and it was equal to 88.781, which is smaller than the chi square value of 90.5312 (70< $\underline{df}$ <80, α= 0.005). Given this likelihood ratio test, with the exception of interactions with gender, no other interactions were included in the model. The following models were also run (Table 2).

Table 2.
Multinomial Logistic Regression Analyses Output for Attachment Style as the Outcome Variable with Four Levels-Main Effects Only

Attachment Status		B	Wald	df.	Sig.	Exp(B)	95% Confidence Interval for Exp(B)	
							Lower Bound	Upper Bound
Dismissing	Intercept	1.833	.246	1	.620			
	MEANING	-1.358E-0	.223	1	.637	.987	.932	1.044
	DEPENDEN	-1.711E-0	1.195	1	.274	.983	.953	1.014
	SELFCRIT	-1.129E-0	.004	1	.949	.999	.965	1.034
	TRAITANX	4.507E-0	1.613	1	.204	1.046	.976	1.121
	[GENDER=0]	-1.290	6.767	1	.009	.275	.104	.748
	[GENDER=1]	0[a]	.	0	.	.	.	.
Fearful	Intercept	-1.203	.077	1	.781			
	MEANING	-6.333E-0	4.478	1	.034	.939	.885	.995
	DEPENDEN	8.093E-0	.186	1	.666	1.008	.972	1.046
	SELFCRIT	2.916E-0	1.722	1	.189	1.030	.986	1.075
	TRAITANX	2.771E-0	.477	1	.490	1.028	.950	1.112
	[GENDER=0]	-1.271	4.628	1	.031	.281	.000	.893
	[GENDER=1]	0[a]	.	0	.	.	.	.
Preoccupied	Intercept	-2.489	.364	1	.546			
	MEANING	-4.824E-0	2.491	1	.115	.953	.897	1.012
	DEPENDEN	9.559E-0	.281	1	.596	1.010	.975	1.046
	SELFCRIT	3.409E-0	2.841	1	.092	1.035	.994	1.077
	TRAITANX	-2.378E-0	.301	1	.583	.977	.897	1.063
	[GENDER=0]	.760	1.073	1	.300	2.138	.508	9.006
	[GENDER=1]	0[a]	.	0	.	.	.	.

Nagelkerke R^2=.277   Cox & Snell R^2= .255

a. This parameter is set to zero because it is redundant.

In the first model, a multinomial logistic regression analysis was utilized to examine the main effects. This model was significant in accounting for between 25.5% and 27.7% of the variance in attachment style. Only gender and personal meaning were significant. Individuals with lower scores on personal meaning were more likely to be in the fearful category of attachment while those with higher scores were more likely to be in the secure one. Gender was significant regarding all the paired-comparisons of attachment classifications with the secure one, with the exception of the preoccupied category: In secure versus dismissing comparison, females were more likely to be in the secure category while males were more likely to be in the dismissing one. In the fearful versus secure comparison, females were more likely to be in the secure category, whereas males were more likely to be in the fearful one. No significant main effects were found regarding dependency, self-criticism, or trait-anxiety in predicting placement in the four categories of attachment.

In the second model, a binary logistic regression analysis placement in secure versus insecure categories of attachment was examined. In this analysis fearful, preoccupied and dismissing categories were recoded into the insecure classification. This model was overall significant accounting for 13.3 to 17.7% of the variance in attachment classification. However, none of the individual variables predicted students' placement in secure versus insecure attachment categories.

The third model used multinomial regression analysis to test if the independent variables and their interactions with gender predicted placement in the four attachment classifications. This model was overall significant, accounting for 31.6 to 24.4% of the variance in attachment

classification. No significant main or interaction effects were found.

In short, gender and personal meaning partially predicted attachment classification. Dependency, self-criticism, trait-anxiety and the interactions of all the dependent variables with gender did not predict students' placement in attachment categories.

Attachment Status and Depressiveness: Simultaneous regression analyses were conducted to examine this relationship (Table 3). Dependency and self-criticism were used in separate regression models as the outcome variables. Attachment-related anxiety, attachment-related avoidance, gender, personal meaning, and trait-anxiety were the independent variables. While using dependency as the outcome variable, the analysis resulted in a significant model ($\underline{F}$ (5, 149) = 7.949, $\underline{p}$ < .0001. $\underline{R}^2$ = .211), which accounted for 21.1 % of the variance in dependency. It showed that trait-anxiety ($\underline{t}$ (1, 154) = 3.394, $\underline{p}$ < .001), gender ($\underline{t}$ (1, 154) = -2.328, $\underline{p}$ = .021), attachment-related avoidance ($\underline{t}$ (1, 154) = -2.308, $\underline{p}$ = .022), and attachment-related anxiety ($\underline{t}$ (1, 154) = -2.168, $\underline{p}$ = .032) were significantly related to dependency.

Table 3.

Simultaneous Multiple Regression Output Using Dependency Factor of Depressiveness as the Dependent Variable

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	T	Sig.
(Constant)	103.935	14.356		7.240	.000
Attachment Anxiety	2.389	1.102	.184	2.168	.032
Attachment Avoidance	-2.463	1.067	-.192	-2.308	.022
Gender	-6.009	2.582	-.183	-2.328	.021
Personal Meaning	.136	.133	.093	1.023	.308
Trait-Anxiety	.546	.161	.308	3.394	.001
R=.459^a	R^2=.211	R$^2_{adj}$=.184			
F(5,149)= 7.949	p=.000				

a. Dependent Variable: Dependency

In another simultaneous multiple regression model, self-criticism was the outcome variable. This analysis resulted in a significant model ($\underline{F}$ (5, 149) = 29.657, $\underline{p}$ < .0001. $\underline{R}^2$ = .499). It accounted for almost 50 % of variance in self-criticism. Of all the independent variables only attachment-related avoidance was not significantly related to self-criticism (Table 4).

Table 4.

Simultaneous Multiple Regression Output Using Self-Criticism Factor of Depressiveness as the Dependent Variable

Variables	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	96.682	12.790		7.559	.000
Attachment Anxiety	3.052	.982	.211	3.107	.002
Attachment Avoidance	.790	.951	.055	.831	.407
Gender	6.718	2.300	.183	2.921	.004
Personal Meaning	-.387	.118	-.236	-3.269	.001
Trait-Anxiety	.787	.143	.397	5.496	.000
R=.706^a	R^2=.499	R$^2_{adj}$=.482			
F(5,149)= 29.657	p=.000				

Dependent Variable: Self-Criticism

A multinomial logistic regression model in which attachment was used as a categorical variable with four classifications (secure, fearful, preoccupied and dismissing) was conducted. Also, in a binary model attachment was classified as secure and insecure (fearful, preoccupied, and dismissing). The result showed that dependency, self-criticism or their interactions with gender did not significantly predict college students' placement in either four or two categories of attachment. In summary, dependency was significantly related to both factors of attachment while self-criticism was only related to attachment-related anxiety.

Attachment status and trait-anxiety: Simultaneous multiple regression analysis was used to examine this relationship. Trait-anxiety was the dependent variable. Attachment-related anxiety, attachment-related avoidance, gender, personal meaning, dependency, and self-criticism were the independent variables.

This model was significant ($\underline{F}$ (6, 148) = 24.262, $\underline{p}$ < .0001. $\underline{R}^2$ = .496) and accounted for 49.6 % of the variance in trait-anxiety (Table 5). This model showed significant relationships between trait-anxiety and all the variables except for attachment-related anxiety ($\underline{t}$ (1, 154) = .101, $\underline{p}$ = .919) and attachment-related avoidance ($\underline{t}$ (1, 154) = 1.213, $\underline{p}$ = .227).

Table 5.

Simultaneous Regression Output Using Trait-Anxiety as the Dependent Variable

Variables	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.
(Constant)	15.425	8.453		1.825	.070
Attachment Anxiety	5.294E-02	.522	.007	.101	.919
Attachment Avoidance	.594	.490	.082	1.213	.227
Gender	-3.542	1.185	-.191	-2.988	.003
Personal Meaning	-.221	.060	-.268	-3.714	.000
Dependency	.111	.036	.196	3.078	.002
Self-Criticism	.201	.038	.399	5.273	.000
R=.704^a	R^2=.496	R$^2_{adj}$=.475			
F(6,148)= 24.262	p=.000				

a. Dependent Variable: Trait-Anxiety

Gender: A series of independent $\underline{t}$-tests and multinomial logistic regression analysis were used to test for gender differences. There were significant differences between males and females only on attachment-related avoidance, dependency, and trait-anxiety. Males had significantly higher mean scores on avoidance while females had significantly higher mean scores on dependency and trait-anxiety. On the other hand, there were no significant differences between males and females on measures of attachment-related anxiety, personal meaning, and self-criticism (Table 6).

The relationship between gender and attachment was also examined with a series of logistic regression analyses, in which attachment was the outcome variable with either two or four categories. When comparing secure versus dismissing categories, females were more likely to be in the secure category while males were more likely to be in the dismissing one. While comparing secure versus fearful categories, females were more likely to be in the secure category whereas males were more likely to be in the fearful category. Gender did not predict individuals' placement in the preoccupied category of attachment.

Table 6.

Independent Sample t-Tests According to Gender

	Gender	N	Mean	Std. Deviation	t	df	Sig. (2-tailed)
Attachment Anxiety	Male	48	2.75	1.09	-.932	153	.353
	Female	107	2.94	1.21			
Attachment Avoidance	Male	48	3.19	1.14	3.226	153	.002
	Female	107	2.55	1.15			
Personal Meaning	Male	48	71.85	8.88	-.034	153	.973
	Female	107	71.92	11.08			
Dependency	Male	48	125.37	13.99	-3.928	153	.000
	Female	107	135.32	14.83			
Self-Criticism	Male	48	113.93	11.41	1.336	153	.184
	Female	107	109.99	18.96			
Trait-Anxiety	Male	48	34.79	7.99	-2.351	153	.020
	Female	107	38.25	8.68			

Discussion

Results of this study were only partially inline with the findings of prior research. Discussion of the results is presented below according to each independent variable.

Attachment and Personal Meaning

Findings of the current study did not show any significant relationships between factors of attachment (anxiety and avoidance) and personal meaning. However, when attachment was used as a categorical-outcome variable with four levels, personal meaning significantly predicted placement in two of the attachment categories. When comparing secure versus fearful classifications, lower scores on personal meaning predicted fearful attachment whereas higher scores predicted secure attachment. Attachment and personal meaning were only associated with respect to scores on the lower and higher ends of both factors attachment.

According to attachment theory, individuals form specific attachment orientations in early years of development. Therefore, they might form their meaning systems in ways that are congruent with these orientations. Hence, regardless of what specific insecure attachment style they utilize, persons might find their lives purposeful and fulfilling as long as such styles do not predispose them to highly challenging developmental pathways as it might be the case in disorganized or fearful attachment.

Given their high degree of developmental activity, college students may not be as clear about their life goals (framework) and may not be as content with their current lives (fulfillment) as indicated by scores on the LRI-R. It is reasonable to argue that growth at such developmentally sensitive periods might inevitably coincide with considerable degree of discontent with ones existing life in order for significant change to occur.

Attachment and Depressiveness

Findings revealed mixed results regarding these two variables. When attachment was used as an independent-continuous variable, the simultaneous regression analysis showed that both attachment factors were significantly related to the dependency factor of depressiveness and only attachment-related anxiety was significantly related to self-criticism. There was no significant relationship between attachment-related avoidance and self-criticism. However, when attachment

was used as an outcome-categorical variable, factors of depressiveness or their interactions with gender did not significantly predict college students' membership in categories of attachment.

Prior theory and research suggest relationships between factors of attachment and those of depressiveness. A strong relationship was expected between dependency and attachment-related anxiety. Individuals with high degrees of dependency are on the one hand, characterized with having ongoing-intense longings for intimate relationships and on the other hand, not having much faith that these needs will be met (Zuroff & Fitzpatrick, 1995). Thus, they are characterized with fears of abandonment which have a great deal of theoretical relevance to the characteristics of anxious-ambivalent (preoccupied) attachment (Kobak, Sudler, & Gamble, 1991; Zuroff & Fitzpatrick, 1995).

Attachment-related anxiety had a significant relationship to self-criticism. Persons with attachment-related anxiety are known to have negative internal working models of self and positive models of others. Such self-perception could also be part of the perfectionist strivings of self-critics. According to prior research a significant relationship would be expected between self-criticism and attachment-related avoidance. Zuroff and Fitzpatrick (1995) report that self-critical individuals have significant concerns about obtaining approval of others whereas avoidant persons do not. Self-critical persons also reported having low self-esteem while avoidant persons often report positive self-images. In this study, there was no significant relationship between self-criticism and attachment-related avoidance. Zuroff and Fitzpatrick (1995) showed that self-criticism was associated with fearful attachment (Bartholomew & Horowitz, 1991) rather than dismissing attachment style. This finding was not confirmed by this study when attachment style (four levels) was used as the outcome variable. Self-criticism, dependency or their interactions with gender did not significantly predict placement in categories of attachment, regardless of whether a two or four-category model was used. This could be due to converting ECR-R scores into categories. Fraley et al. (2000) recommend that converting scores on the ECR-R may limit the psychometric utility of the test. In the current study such categorization was made simply for the convenience of making comparisons with previous research easier since most of these studies used categorical models of attachment. However, given the results, this may not advisable for future research.

Attachment and Trait-Anxiety

No significant relationship was detected between attachment and trait-anxiety. Neither attachment-related anxiety nor attachment-related avoidance was significantly related to trait-anxiety. Furthermore, trait-anxiety or its interaction with gender did not significantly predict attachment categories. No studies were found in the literature that specifically examined these two variables. However, one would expect that high scores on attachment-related anxiety and low scores on avoidance, which correspond to the preoccupied attachment style, would be significantly related to trait-anxiety. Typically, persons with this attachment style are thought to have hyperactive affect-regulation strategies (Main, 1990). These strategies involve anxiety regarding parent/partner's availability and their responsiveness to the person's needs. Thus some degree of anxiety in close relationships would be expected. A significant and positive relationship between attachment-related anxiety and trait-anxiety would be consistent with the premises of attachment theory. One reason for the contrary results might be that the anxiety inherent in the preoccupied attachment style (high score on the attachment-related anxiety scale) might be specific to the relational domain. It may not be generalized to other areas of functioning. As a result, the individual may not perceive him or herself as an overall anxious person.

A negative relationship between attachment-related avoidance and trait-anxiety would also be expected. Since such individuals (dismissing) are known to use deactivating strategies of affect-regulation (Main, 1990), they would be expected to perceive lower degrees of anxiety in a variety of situations. This expectation also was not endorsed by the findings of this study. This might mean that affect-regulation strategies formed in early-close relationships are related to

certain affective states but not others. Future research should address relationships between attachment orientation and a variety of affective experiences.

Gender

Kobak and others (1991) claim that being female constitutes a significant risk factor for depression, particularly in adolescents. Attachment researchers typically associate preoccupied attachment with females and dismissing attachment with males. Results of this study indicated that when comparing dismissing versus secure attachment, females were more likely to be in the secure category while males were more likely to be in the dismissing one. When comparing fearful versus secure categories, females were more likely to be in the secure categories whereas males were more likely to be in the fearful one. Although attachment research frequently reports that females are more likely to be in the preoccupied attachment category, this claim was not endorsed by the findings of this study. The results were similar when attachment was used as continuous variable. Male and female students did differ on attachment-related avoidance. Males scored significantly higher than females on avoidance, which is inline with the previous literature. On the other hand, males and females did not differ on the anxiety factor of attachment.

The limited gender differences found in this study could be due to several unique aspects of students' experiences in college. Although such information was not obtained from the sample, it is safe to assume that the majority of the participants were not living in the same town with their parents. As such, regardless of their gender these students might have similar concerns and needs about intimate relationships particularly in the absence of their family. Second, at ages 18 through 23, part of these students' developmental tasks is to acquire competencies in close relationships. Similarities in their developmental needs might be part of the reason for the unexpected similarities in the participants' scores on attachment-related anxiety.

Implications and Limitations

Findings of this study show that there might be merit in the argument questioning the scope of attachment (i.e. Mallinckrodt, 1995). In other words, attachment orientation might be related to a greater range of human functioning than the critics of attachment theory advocate. The findings did not nearly support the idea that attachment can function as a metaconstruct capable of integrating a variety of domains of development and functioning (Lopez, 1995).

Although attachment researchers often make references to the relationships between attachment orientation and affect-regulation, these relationships seems more complex. Results suggest that while attachment orientation might be related to one area of emotionality, it may not be related to another. Further research is necessary to clarify the scope of the impact attachment orientation might have on various domains of functioning.

Several aspects of sampling, theoretical framework, and instrumentation of this study pose limitations to its internal and external validity. Since a sample of convenience was used the results might not be generalizable to the population. The sample of the study was obtained from personal growth classes. The individuals who take these classes might in some significant ways differ from those who do not. For example, students who take such classes are often from certain disciplines, such as education, sociology, recreational sciences and business, and they are in their 3rd or 4th years of college. Likewise, studies with Turkish samples could involve clients' attachment orientations and their presenting issues as well as aspects of their behaviors in therapeutic relationships with counselors.

A significant limitation of this study has to do with its exclusive use of self-reported measures. Attachment was not conceptualized merely as a construct of the conscious mind. Attachment researchers (Bowlby, 1980) link internal working models to the unconscious. Hence, future studies should consider also incorporating measures such as the Adult Attachment Interview (AAI; George et al., 1985) which does not merely rely on individual self-report.

Attachment theory could be extended to various clinical issues such as willingness to seek professional psychological help, compliance with treatment (i.e. regular attendance), and clients' preferences in counseling styles. Likewise, considering the connection between emotional intensity and preoccupied attachment, further research is needed to investigate if this style of attachment is also linked to specific DSM diagnoses such as bipolar disorder, attention deficit hyperactivity disorders and cluster B diagnoses. Attachment research can also be greatly enriched by incorporating biological and genetic variables such as temperament to improve credibility of attachment theory.

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