

Friendship and Romantic Stressors and Depression in Emerging Adulthood: Mediating and Moderating Roles of Attachment Representations

Chong Man Chow · Holly Ruhl

Published online: 22 January 2014
© Springer Science+Business Media New York 2014

Abstract Although friendships and romantic relationships represent important social relationships during emerging adulthood, problems stemming from these relationships may also pose a threat to emerging adults' psychological functioning (Collins and Madsen in *Handbook of personal relationships*. Cambridge University Press, New York, pp 191–209, 2006; La Greca and Moore Harrison in *J Clin Child Adolesc Psychol* 34(1): 49–61, 2005). Thus, investigating relational stressors in friendships and romantic relationships is an important step toward understanding emerging adults' psychological adjustment. This study focused on examining the relationship between relational stressors and depression, and the mediating and moderating roles of relationship-general attachment representations between these constructs. Data were collected from 164 emerging adults attending a Midwestern university. In partial support of our hypotheses, emerging adults' attachment anxiety mediated the relationship between experiences of friendship and romantic stressors and depression; this result, however, was not found for attachment avoidance. Furthermore, results showed that attachment avoidance and anxiety moderated the relationship between friendship stressors and depression in emerging adulthood. Supporting our hypothesis, friendship stressors were predictive of higher levels of depression only for emerging adults who were high in attachment

avoidance or anxiety. Future research and practical implications are discussed.

Keywords Attachment · Stress · Friendship · Romantic relationship · Depression · Mediation · Moderation

Introduction

The formation and conservation of intimate friendships and romantic relationships represents an important developmental task in emerging adulthood (Chow et al. 2011; Smetana et al. 2006). Research suggests that 46–82 % of adolescents' and emerging adults' daily stressors are related to interpersonal relationships, especially conflicts with friends and romantic partners (Seiffge-Krenke et al. 2009). In other words, involvement in friendships and romantic relationships exposes youth to relational challenges that may lead to greater psychological distress (Chango et al. 2012; Seiffge-Krenke 1995). In support of this, research suggests that problems with friends and romantic partners have an even larger impact on depression than problems with parents (Seiffge-Krenke 1995). Despite the prevalence of relational stressors in friendships and romantic relationships, and their impact on emerging adults' psychological functioning, a recent review of studies on adolescents' and emerging adults' interpersonal stressors (Seiffge-Krenke 2011) suggests that only a handful of studies have focused on friendships (18 %) and romantic relationships (10 %). In order to contribute to a further understanding of the links between friendship and romantic stressors and depression, the current study employed an attachment perspective (Bowlby 1982; Cassidy 1994) to examine how attachment representations might be a moderating and/or mediating factor in the connection between

C. M. Chow (✉)
Psychology Department, University of Wisconsin Oshkosh, 800
Algoma Blvd., CF 8, Oshkosh, WI 54901, USA
e-mail: chowc@uwosh.edu

H. Ruhl
School Behavioral and Brain Sciences, University of Texas at
Dallas, 800 W Campbell Rd., GR 41, Richardson, TX 75080,
USA

relational stressors in friendships and romantic relationships and psychological distress.

Attachment Theory

Attachment theory suggests that infants hold representations of their significant relationships that are developed through interpersonal experiences with their primary caregivers (Bowlby 1982; Cassidy 1994). According to attachment theory, three patterns of attachment represent most infants: secure, anxious, and avoidant. These attachment styles are thought to be the result of varied parental caregiving quality. Sensitive and responsive caregivers give rise to secure infants who are confident about the availability of their attachment figures and tend to seek comfort when distressed. In contrast, inconsistent caregivers give rise to anxious infants who are ambivalent about the availability of their attachment figures and show high emotional arousal when distressed. Lastly, rejecting and aloof caregivers give rise to avoidant infants who are uncomfortable with their attachment figures, react with muted emotionality, and do not turn to caregivers for comfort when distressed (Cassidy 1994).

Although attachment in infancy is usually centered on the relationship between the infant and primary caregiver, this area of research offers a promising avenue for examining the role of interpersonal experiences in emerging adults' attachment representations. Elaborating on infant attachment theory, contemporary researchers have argued that the intimate nature of friendships and romantic relationships during adolescence and adulthood should give rise to mental representations that resemble those observed in parent–child relationships (Furman 2001; Furman and Simon 1999). Furthermore, similar to research on attachment in infancy, research with emerging adults suggests that supportive interpersonal experiences are precursors of secure attachment representations, whereas negative interpersonal experiences (e.g., rejection, inconsistent support) are precursors of avoidant or anxious attachment representations (Cassidy 1994; Furman 2001; Furman and Simon 1999). Emerging adults with secure representations are confident about the availability of their significant others and feel comfortable seeking comfort and support from them in times of distress (Brennan et al. 1998). In contrast, individuals high in attachment avoidance are uncomfortable with intimate relationships and tend to suppress their attachment needs when confronted with stress (Brennan et al. 1998). Finally, individuals high in attachment anxiety are hypersensitive to their partners' availability and potential signs of rejection; these individuals often worry about being abandoned or rejected by their close partners (Brennan et al. 1998; Furman 2001; Furman and Simon 1999).

Because emerging adults are involved in networks of relationships (e.g., parents, friends, romantic partners), researchers have been interested how different attachment relationships are represented cognitively (Fraley et al. 2011; Overall et al. 2003; Sibley and Overall 2008). This research indicates that although individuals hold distinctive attachment representations for parent–child relationships, friendships, and romantic relationships, these relationships are nested within a higher-order mental representation of attachment relationships. Based on these findings, it is logical to investigate emerging adults' attachment representations of close relationships in general, rather than specific types of relationships. This approach has been previously employed by recent research on adult attachment relationships (e.g., Jerga et al. 2011).

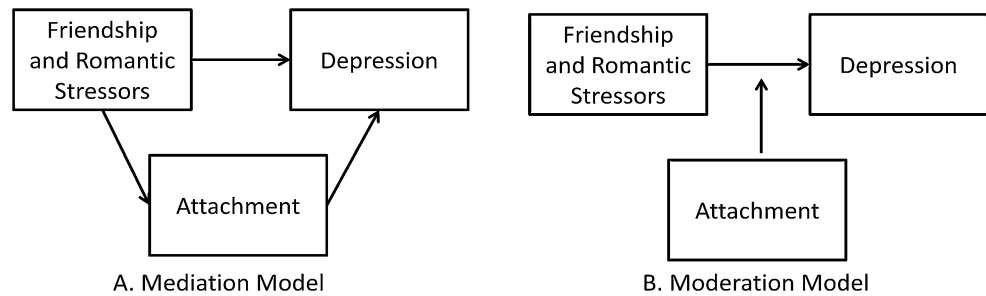
Attachment Representations and Psychological Adjustment

Theorists argue that attachment representations in adolescence and adulthood influence individuals' psychological functioning (Allen et al. 2007; Seiffge-Krenke 2006). Specifically, secure attachment representations provide a greater “coping capacity” for individuals to effectively regulate their negative affect when confronted with challenges and stressors (Allen et al. 2007; Kobak and Sceery 1988; Seiffge-Krenke 2006). Because secure emerging adults are confident about the availability of significant others, they are more likely to employ adaptive coping strategies, including social support-seeking and active coping (Chow and Buhrmester 2011; Kobak and Sceery 1988; Seiffge-Krenke 2006). In contrast, avoidant and anxious emerging adults who have unsupportive or inconsistent interpersonal experiences with significant others may rely on maladaptive strategies, such as denial/distancing or rumination/emotion-focused coping (Chow and Buhrmester 2011; Kobak and Sceery 1988; Seiffge-Krenke 2006). Not surprisingly, therefore, research on adolescents has consistently found that secure attachment is related to better psychological functioning (e.g., lower depression and anxiety), compared with insecure attachment (Allen et al. 1998, 2007; Bernier et al. 2005).

Attachment as a Mediator between Friend and Romantic Stressors and Depression

Attachment representations and stressors in friendships and romantic relationships are both vital indicators of psychological functioning in adolescence and emerging adulthood (Chango et al. 2012; La Greca and Moore Harrison 2005; Seiffge-Krenke 2006). Because of this, the current study was interested in the role that attachment representations might play between relational stressors and psychological

Fig. 1 Conceptual models representing mediation and moderation hypotheses



functioning. Attachment theory suggests that the quality of interpersonal experiences with significant others lays the foundation for the emergence of secure or insecure representations (Bowlby 1982; Furman and Simon 1999). Therefore, aversive experiences with friends and romantic partners may pose a threat to emerging adults' attachment representations. Insecure attachment representations, in turn, may be related to more problematic functioning due to damage of the internal "coping capacity" that emerging adults hold. Indeed, several researchers have suggested that the effects of contextual factors, including aversive interpersonal experiences, on emerging adults' psychological outcomes are mediated by attachment representations (Cusimano and Riggs 2013; Dweck and London 2004; Woodhouse et al. 2010). For instance, one study found that emerging adults' recollection of parental conflict during childhood has an impact on their concurrent psychological functioning, and such association was mediated by attachment-related anxiety and avoidance (Cusimano and Riggs 2013). Thus, it is possible that attachment representations may serve to mediate the link between interpersonal stressors and psychological distress. Numerous studies have shown the negative impacts of friendship and romantic stressors, as well as insecure attachment representations, on depression in adolescence and emerging adulthood (Allen et al. 1998, 2007; Chango et al. 2012; Seiffge-Krenke 1995, 2006). However, little research has explicitly examined the role of attachment representations in mediating the association between friendship and romantic stressors and depression. Because it was found that individuals' general attachment representations are partly represented by both friendships and romantic relationships (Overall et al. 2003; Sibley and Overall 2008), the current study hypothesized that friendship stressors and romantic stressors would be related to more insecure attachment representations, which in turn, would be related to more depression. The conceptual model of such mediation hypotheses is presented in Fig. 1a.

Attachment as a Moderator between Friendship and Romantic Stressors and Depression

Attachment representations may also moderate the relationship between interpersonal stressors and depression.

According to the diathesis-stress model, psychopathology is thought to be the result of a complex interaction between contextual factors and individual characteristics (Zuckerman 1999). In other words, it may be the combination of both contextual factors (e.g., relational stressors) and individual characteristics (e.g., attachment avoidance and anxiety) that trigger depression. Indeed, theorists suggest that negative cognitive styles, including insecure attachment representations, may increase vulnerability to psychological problems (Alloy et al. 2006; Chango et al. 2012). For instance, a recent study found that individuals high in attachment-related anxiety experienced higher levels of depression when faced with stress (Jinyao et al. 2012). Similarly, a study also found that victims who experienced interpersonal trauma were more likely to develop depressive symptoms if they were high in attachment anxiety (Elwood and Williams 2007). Surprisingly, both studies found that attachment-related avoidance does not magnify the effect of stress on depression. When generalizing these findings to the current study, it is reasonable to argue that less anxiously attached emerging adults may have a greater coping capacity, which may serve as a buffer from friendship and romantic stressors. In contrast, emerging adults high in attachment anxiety may have less coping capacity and may, therefore, not cope with relational stressors effectively, leading to greater levels of depression. Therefore, the current study hypothesized that the negative impact of friendship stressors and romantic stressors on depression would be stronger for emerging adults high in attachment anxiety. No specific hypotheses were formulated regarding attachment avoidance given that previous studies have not provided strong evidence regarding its moderating role between stress and depression (e.g., Elwood and Williams 2007). The conceptual model of such moderation hypotheses is presented in Fig. 1b.

Method

Procedure

Emerging adults at a Midwestern public university, with a population of approximately 13,000 students, were recruited

to participate as a partial requirement for their psychology courses. After signing up for the study, students were provided a web link that directed them to an online survey. Informed consent to participate was obtained before the survey began. Participants were granted research credits upon completion of the survey.

Participants

A sample of 164 emerging adults participated in the study. Participant age ranged from 18 to 21 years ($M = 19.01$; $SD = .98$). Approximately 49.7 % of the participants were female and 89 % were Caucasian. Over half of the participants (53 %) reported that they were currently involved in a romantic relationship. Among those who were romantically involved, relationship duration ranged from 1 to 68 months ($M = 17.87$, $SD = 14.47$).

Measures

Friendship and Romantic Stressors

Experiences of friendship and romantic stressors were measured with items from the Recent Life Experiences Inventory (Kohn and Milrose 1993). Based on Kohn and Milrose's (1993) recommendations, three items were selected from the original questionnaire to capture romantic stressors, including "dissatisfaction about romantic relationship(s)," "decisions about romantic relationship(s)," and "disagreements with boyfriend/girlfriend." Another three items were used to capture friendship stressors, including "being let down or disappointed by friends," "having your trust betrayed by a friend," and "disagreements with friends." Participants rated each item on a 4-point scale of exposure over the past month, where 1 = *not at all* part of my life and 4 = *very much* part of my life. Corresponding items were averaged to form the romantic and friendship stressors variables. Internal reliabilities for romantic and friendship stressors were .68 and .76, respectively.

Attachment Representations

Attachment representations were assessed using Brennan et al.'s (1998) 36-item Experiences in Close Relationships (ECR) questionnaire, which measures general attachment avoidance (e.g., "I prefer not to show others how I feel deep down") and anxiety (e.g., "I worry about being abandoned"). Participants were instructed to think about their experiences with close others and answered the questions based on their experiences in these relationships on a scale from 1 (*Strongly Disagree*) to 7 (*Strongly Agree*). Corresponding items were averaged to form the

avoidance and anxiety subscales. The avoidance and anxiety subscales had satisfactory internal reliabilities of .85 and .91, respectively.

Depression

Levels of depressive symptoms were assessed using the 6-item depression subscale from the Brief Symptom Inventory (BSI; Derogatis and Spencer 1983). Participants rated how often they experienced feelings described by the items (e.g., "feeling no interest in things") on a 4-point scale ranging from 1 (*never*) to 4 (*always*). Items were averaged to form the depression subscale; this construct had a satisfactory internal reliability of .86.

Results

Preliminary Analyses

Means, standard deviations, and correlations for the study's variables are shown in Table 1. A series of independent *t* tests were conducted to examine potential gender differences in the key study variables. These analyses revealed that females experienced more romantic stressors than males, $t(162) = -3.63$, $p < .001$; however, no other gender differences were found. Correlations between age and key study variables indicated that older participants reported lower levels of romantic stressors ($r = -.17$, $p = .03$) and higher levels of attachment avoidance ($r = .19$, $p = .02$). Participant age was not related to friendship stressors, attachment anxiety, or depression. As expected, greater levels of romantic and friendship stressors were related to higher depression. Furthermore, greater levels of attachment avoidance and anxiety were related to higher depression.

Friendship and Romantic Stressors and Depression: Attachment as a Mediator

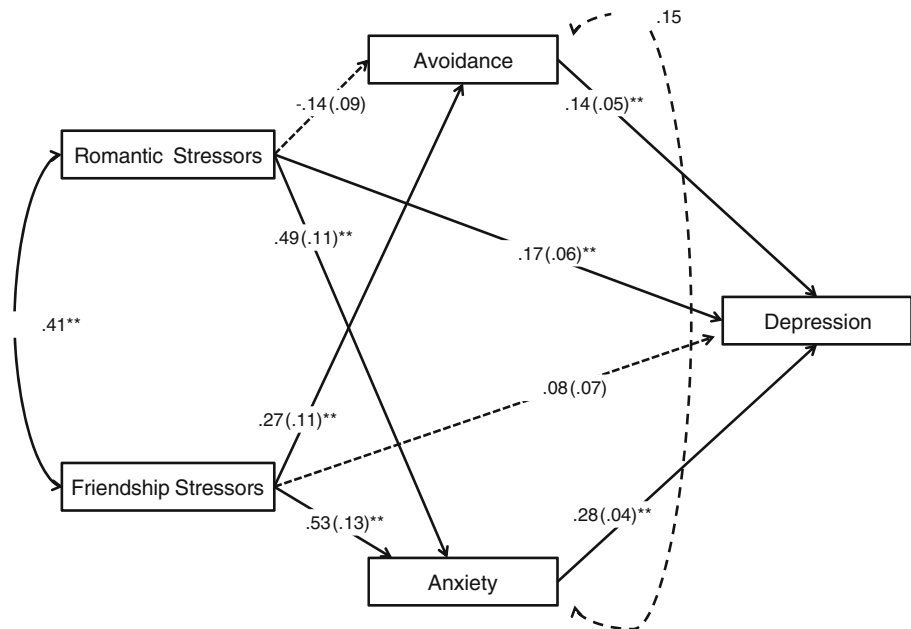
The hypothesized mediating role of attachment security between both friendship and romantic stressors and depression was examined with a path model fitted in AMOS 20.0 (Arbuckle 2011). Participants' sex and age were included as control variables. Because the model was saturated, no fit indices were estimated. As seen in Fig. 2, greater experiences of friendship and romantic stressors were both related to higher attachment anxiety. In contrast, although greater experiences of friendship stressors were related to higher attachment avoidance, experiences of romantic stressors were not. Both attachment avoidance and anxiety were related to higher levels of depression. In order to address the mediation hypotheses, the significance of indirect effects of

Table 1 Means, standard deviations, and correlations among study variables (N = 164)

	1	2	3	4	5	M	SD
1. Romantic stressors	–					2.03	.72
2. Friendship stressors	.41**	–				1.92	.63
3. Attachment avoidance	-.08	.14	–			2.76	.76
4. Attachment anxiety	.45**	.45**	.15	–		3.42	1.08
5. Depression	.44**	.39**	.20**	.63**	–	1.86	.64

** $p < .01$

Fig. 2 Path model of the mediating role of attachment representations between peer stress and depression. Participants' sex and gender were controlled for in the model. *Single-headed* paths represent unstandardized path coefficients with standard errors in the parentheses. *Double-headed* paths represent correlations. The effects of sex and age are not displayed. ** $p < .01$



romantic and friendship stressors on depression through attachment avoidance and anxiety was examined with the Sobel test (Baron and Kenny 1986). Results showed that the link between romantic stressors and depression was mediated by attachment anxiety, $B_{indirect} = 3.75, SE = .04, p < .001$. Results also showed that the link between friendship stressors and depression was mediated by attachment anxiety, $B_{indirect} = 3.52, SE = .04, p < .001$. These findings suggest that emerging adults who experience more romantic and friendship stressors hold more anxious representations, which in turn, are related to more depression. Contrary to our expectations, the current study found that the link between romantic stressors and depression was not mediated by attachment avoidance, $B_{indirect} = -1.36, SE = .01, p = .17$. Similarly, the link between friendship stressors and depression was not mediated by attachment avoidance, $B_{indirect} = 1.85, SE = .02, p = .06$.

Friendship and Romantic Stressors and Depression: Attachment as a Moderator

A hierarchical regression was conducted to examine the moderating role of attachment representations between

friendship and romantic stressors and depression. The current study followed the recommendations of Aiken and West (1991) by standardizing the predictors and moderators before analysis to account for potential multicollinearity among the predictors and interaction terms. In Step 1, participants' sex and age were entered as control variables. In Step 2, romantic and friendship stressors along with attachment avoidance and anxiety were entered, representing a main effects only model. In Step 3, four interaction terms were entered, based on the combinations of friendship and romantic stressors and attachment variables. The moderating effects of attachment between friendship and romantic stressors and psychological adjustment would be evident if the interaction terms were significant. When a significant interaction effect was observed, simple slopes were displayed and tested based on one standard deviation above and below the mean for the predictor and moderator (Aiken and West 1991).

Results showed that neither sex nor age was related to levels of depression (Table 2). As expected, greater romantic stressors, attachment avoidance, and attachment anxiety were predictive of greater depression. Moreover, the four interaction terms accounted for a significant

Table 2 Hierarchical regression examining moderating effects of attachment representations between friendship and romantic stressors and depression

	<i>B</i>	<i>SE</i>	β	ΔR^2
Step 1				
Sex (1 = M, 2 = F)	.17	.10	.13	.028
Age	-.05	.05	-.08	
Step 2				
Sex	.04	.08	.03	.417**
Age	-.07	.04	-.10	
Romantic stressors	.12	.05	.19*	
Friendship stressors	.05	.05	.08	
Attachment avoidance	.10	.04	.16*	
Attachment anxiety	.30	.05	.47**	
Step 3				
Sex	.04	.08	.03	.038*
Age	-.07	.04	-.11	
Romantic stressors	.12	.05	.18*	
Friendship stressors	.04	.05	.06	
Attachment avoidance	.09	.04	.14*	
Attachment anxiety	.33	.05	.52**	
Romantic stressors × attachment avoidance	-.04	.04	-.07	
Romantic stressors × attachment anxiety	-.05	.04	-.08	
Friendship stressors × attachment avoidance	.10	.04	.15*	
Friendship stressors × attachment anxiety	.10	.05	.14*	

Note. Multiple $R^2 = .483$, $F(10, 153) = 14.28$, $p < .001$

* $p < .05$, ** $p < .01$

amount of incremental variance in depression above and beyond the main effects model. Specifically, the effect of friendship stressors on depression was moderated by attachment avoidance and anxiety. In order to interpret the interaction effects, Fig. 3 shows the line graphs that were plotted based on one standard deviation above and below the mean for the predictor and moderator (Aiken and West 1991). The current study also tested the statistical significance of the simple slopes for emerging adults who were high versus low in the attachment dimensions. As seen in Fig. 3a, the results from a simple effect analysis demonstrated that for emerging adults who were low in attachment avoidance, the effect of friendship stressors on depression was minimal, $B = -.06$, $SE = .06$, $p = .33$. In contrast, for emerging adults who were high in attachment avoidance, greater friendship stressors were related to greater depression, $B = .14$, $SE = .07$, $p = .04$. Similarly, Fig. 3b shows that for emerging adults who were low in attachment anxiety, the effect of friendship stressors on depression was minimal, $B = -.06$, $SE = .07$, $p = .45$. In

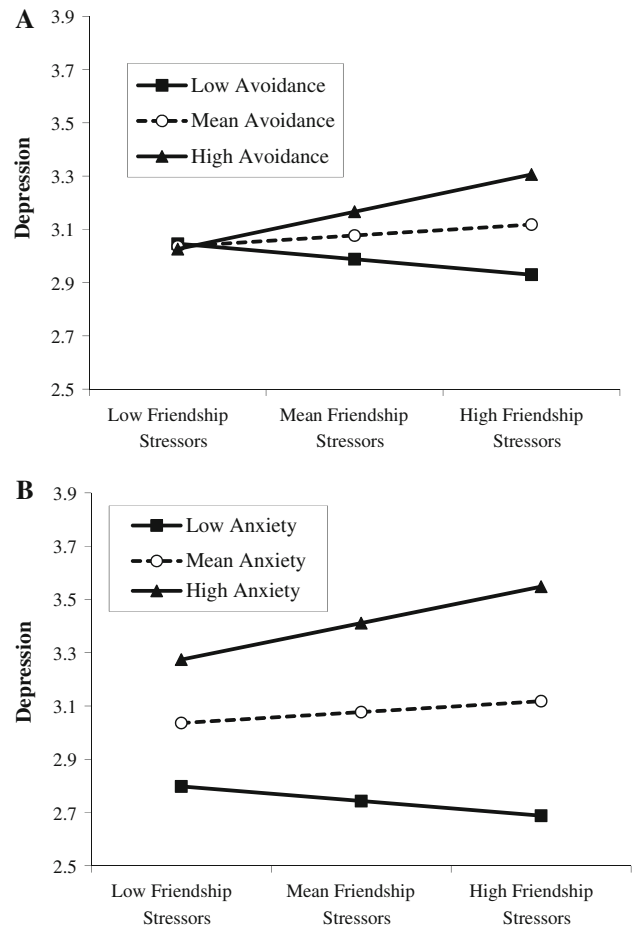


Fig. 3 Relationships between friendship stressors and depression at high, mean, and low levels of attachment avoidance (a) and anxiety (b)

contrast, for emerging adults who were high in attachment anxiety, greater friendship stressors were related to greater depression, $B = .14$, $SE = .06$, $p = .02$. The effects of romantic stressors on depression, however, were not moderated by attachment anxiety or avoidance.

Discussion

The current study contributed to the literature on the importance of attachment representations of close relationships in explaining and influencing the relationship between friendship and romantic stressors and depression. The findings suggest that hypotheses on the mediating and moderating roles of attachment in the associations between friendship and romantic stressors and psychological outcomes do not need to compete with each other. Specifically, findings from this study indicate that attachment anxiety is useful in explaining why friendship and romantic stressors are related to depression in early adulthood. In addition, attachment avoidance and anxiety serve as

moderators of the circumstances in which friendship stressors predict depression.

Friendship and Romantic Stressors and Depression: Attachment as a Mediator

As expected, emerging adults' attachment anxiety mediated the relationship between experiences of romantic and friendship stressors and depression. Specifically, these findings suggest that emerging adults who experience more romantic and friendship stressors are more likely to feel anxious and uncertain about their attachment ties. These anxious representations, in turn, are related to greater depressive symptoms. These findings are consistent with the contention of attachment theory that negative interpersonal experiences serve as risk factors for individuals' representations of close relationships and future interpersonal experiences (Ainsworth et al. 1978). It is likely that stressful situations with friends and romantic partners, such as being let down by these individuals, are related to fears of future abandonment and worries that close ones do not care (i.e., anxiety).

Furthermore, these findings are consistent with research suggesting that anxious attachment is a strong determinant of depression during adolescence and emerging adulthood (Cooper et al. 1998; Garrison et al. 2012; Kamkar et al. 2012). Emerging adults who have developed anxious representations of their relationships with friends and romantic partners are less likely to be satisfied in these relationships and may internalize their fears of abandonment, thinking they are inadequate and undeserving of positive relationships (Blatt and Homann 1992; Bradford et al. 2002). Because friendships and romantic relationships are important facilitators of healthy psychological and emotional adjustment in young adulthood, it follows that dissatisfaction and uncertainty about these relationships will be related to more depression and psychological distress during this period in life (Kingery et al. 2011; Swenson et al. 2008).

The current study did not find that attachment avoidance mediated the relationship between friendship and romantic stressors and depression. Although the path analysis showed that friendship stressors predicted more attachment avoidance, and that avoidance predicted more depression, the indirect effects of friend and romantic stressors on depression through attachment avoidance were not significant. Because avoidance was not directly correlated with romantic or friendship stressors in the bivariate correlation analysis, it is possible that the path analysis findings were due to a suppression effect (MacKinnon et al. 2000). Specifically, the predictive value of friendship stressors on avoidance was likely inflated due to the inclusion of romantic stressors as a predictor of avoidance. Taken

together, these findings indicate that friendship and romantic stressors are more related to emerging adults' attachment anxiety than their attachment avoidance. These findings support the two-dimensional conceptualization of attachment representations in that attachment anxiety involves the emotion regulatory system, whereas attachment avoidance involves the behavioral regulatory system (Fraley and Shaver 2000). It is possible that stressors in friendships and romantic relationships may damage emerging adults' emotion regulatory system (e.g., coping), but not the manner in which individuals regulate their behaviors toward social relationships. Alternatively, because emerging adults with anxious attachment representations may lack a strong coping capacity (Holmberg et al. 2011), these individuals may rely on friends and romantic partners for support and comfort more so than their partners would like. This behavior may put strain on friendships and romantic relationships, leading to more disagreements and dissatisfaction in these relationships.

Friendship and Romantic Stressors and Depression: Attachment as a Moderator

As hypothesized, the current study found that attachment anxiety moderated the relationship between friendship stressors and depression in emerging adulthood. Specifically, the effects of friendship stressors on depression were relatively minimal for emerging adults who were low in attachment anxiety. In contrast, friendship stressors were predictive of higher levels of depression for emerging adults who were high in attachment anxiety. Surprisingly, a similar pattern of moderation was found for attachment avoidance, although no explicit hypothesis was made with regard to this dimension. Research suggests that securely attached emerging adults are more likely to engage in problem-focused and adaptive coping strategies, such as support-seeking (Geng et al. 2008). This adaptive approach to coping with stressors in friendships may buffer against the potential psychological distress that might accompany these stressors. In contrast, emerging adults high in anxiety or avoidance are more likely to engage in rumination or denial as coping strategies (Holmberg et al. 2011). These maladaptive coping strategies may exacerbate the negative impact of friendship stressors on psychological distress. Taken together, these findings indicate that researchers and interventionists should consider methods of improving attachment representations in emerging adults as well as augmenting adaptive coping strategies while minimizing the use of rumination and denial strategies. Although most friendships and romantic relationships will be exposed to at least some stressors, facilitating individuals' abilities to perceive, and cope with, these stressors in a more positive light may help them to have more resilient and satisfying

relationships with others. Indeed, some research suggests that attachment representations can be improved upon from infancy to adolescence and emerging adulthood and that these improvements are related to better interpersonal outcomes (Van Ryzin et al. 2011).

This study did not find that the effect of romantic stressors on depression depended upon attachment security. Because emerging adults often become deeply involved in romantic relationships, it is possible that stressors in romantic relationships have a profound impact on psychological distress for most emerging adults, regardless of their attachment security (Mackinnon et al. 2012; Marchand-Reilly 2009). Because these individuals are only beginning to engage in more committed romantic relationships, even securely attached emerging adults may have difficulties coping with stressors in these relationships, leading to difficulties employing adaptive coping strategies. Many emerging adults may handle romantic stressors by engaging in rumination, co-rumination, or denial; the use of these strategies may be related to depression for both securely and insecurely attached emerging adults (Saffrey and Ehrenberg 2007; Starr and Davila 2009).

Limitations and Future Directions

This study shed light on the profound implications of attachment avoidance and anxiety in explaining and influencing the relationships between friend and romantic stressors and psychological distress. However, there are several limitations of the study that should be considered when interpreting and extrapolating the key findings.

First, due to the correlational nature of this study, it is impossible to determine cause-and-effect relationships between interpersonal stressors, attachment representations, and depression. For example, although the current study proposed that friendship and romantic stressors lead to anxious attachment representations in emerging adulthood, an alternative view might be that anxious attachment representations lead to stressors, or perceptions of stressors, in friendships and romantic relationships. Emerging adults with anxious attachment representations may perceive that there is more stress in their friendships and romantic relationships because they do not have a strong coping capacity and are less able to manage interpersonal stressors. It is also possible that these individuals elicit more interpersonal stress due to their intense needs for comfort and closeness from their partners. Indeed, some research has found that interpersonal stressors mediate the effects of insecure attachment on negative psychological outcomes (Hankin et al. 2005). Thus, future research should attempt to disentangle the reciprocal relationship between attachment representations and relational stressors, possibly with

experimental methods. For instance, a study in which interpersonal stress is elicited among dyads in a laboratory setting could shed light on short-term changes in anxious attachment representations that are due to stressors in friendships or romantic relationships. Furthermore, this type of study could examine the relative importance of stressors in friendships and romantic relationships to determine which type of relational stressor plays a larger role in determining attachment outcomes. Alternatively, future research could employ a longitudinal design to disentangle the associations among interpersonal stressors, attachment representations, and depression over time.

A second limitation of the study was the use of general attachment representations of close relationships. Some research suggests that attachment representations may differ for specific relationship types and with specific partners (Collins and Read 1994; Sibley and Overall 2008). If this is the case, it is possible that measures of specific relationship representations would be more useful in determining the extent to which attachment representations explain or influence the relationship between stressors in specific relationships and general depression. Specifically, stressors occurring in specific friend or romantic relationships may be more likely to influence relationship-specific representations than a higher-order global representation of others (Imamoğlu and Imamoğlu 2006). Additionally, stressors in friendships and romantic relationships might be more likely to lead to depression if representations in these specific relationships are high in avoidance or anxiety. Because romantic and friendship stressors were not directly correlated with general avoidance, it would be interesting to see whether these relationship-specific stressors are related to relationship-specific avoidance and anxiety. Thus, future research should consider utilizing separate measures of attachment representations for friendships and romantic partners to determine the extent to which relationship stressors are related to relationship-specific representations.

A third limitation of the study was the relative homogeneity of the sample. Approximately 89 % of participants were Caucasian, which might limit the current study's external validity. Indeed, research suggests that relationship experiences are perceived and handled differently in different cultures and may have distinct effects on attachment (e.g., Cingöz-Ulu and Lalonde 2007; Seepersad et al. 2008). Additionally, depression levels have been found to differ across cultures, with regard to definition, expression, and prevalence (Marsella 1978; Sun et al. 2010). Based on these findings, it is possible that the relationships between friendship and romantic stressors and depression would differ for different cultures and ethnicities. Furthermore, because the emerging adults in this study were attending a university, these individuals may not be representative of

all emerging adults. Specifically, research indicates that leaving home for college may elicit a unique set of relational stressors that may differ from the relational stressors of emerging adults who remain at home (Bernier et al. 2005). Thus, future research should consider examining these relationships in a more diverse group of emerging adults.

Conclusion

The current study shed light on the importance of attachment security in explaining and impacting the relationship between friendship and romantic stressors and depression. This study also has important practical implications. For instance, professional services offered by community groups or colleges should focus on building emerging adults' interpersonal competence in forming and maintaining close interpersonal relationships. This would be particularly useful for emerging adults' romantic relationships, as the current study indicates that romantic stressors are especially predictive of depression, even when controlling for attachment representations. Furthermore, because emerging adults' attachment anxiety mediated the relationship between experiences of interpersonal stressors and depression, it might be useful for professionals to establish supportive client–therapist relationships with depressed clients to promote secure attachment and adaptive coping strategies.

References

- Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks, CA: Sage Publications Inc.
- Ainsworth, M., Blehar, M. C., Waters, E., & Wall, S. (1978). *Patterns of attachment: A psychological study of the strange situation*. Oxford, England: Lawrence Erlbaum.
- Allen, J. P., Moore, C., Kuperminc, G., & Bell, K. (1998). Attachment and adolescent psychosocial functioning. *Child Development*, 69(5), 1406–1419.
- Allen, J. P., Porter, M., McFarland, C., McElhaney, K., & Marsh, P. (2007). The relation of attachment security to adolescents' paternal and peer relationships, depression, and externalizing behavior. *Child Development*, 78(4), 1222–1239.
- Alloy, L. B., Abramson, L. Y., Walshaw, P. D., & Neeren, A. M. (2006). Cognitive vulnerability to unipolar and bipolar mood disorders. *Journal of Social and Clinical Psychology*, 25(7), 726–754.
- Arbuckle, J. L. (2011). *AMOS 20 User's guide*. Chicago, IL: SPSS Inc.
- Baron, R., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182.
- Bernier, A., Larose, S., & Whipple, N. (2005). Leaving home for college: A potentially stressful event for adolescents with preoccupied attachment patterns. *Attachment & Human Development*, 7(2), 171–185.
- Blatt, S. J., & Homann, E. (1992). Parent-child interaction in the etiology of dependent and self-critical depression. *Clinical Psychology Review*, 12(1), 47–91.
- Bowlby, J. (1982). *Attachment and loss. Vol. 1: Attachment* (2nd ed.). New York, NY: Basic Books.
- Bradford, S. A., Feeney, J. A., & Campbell, L. L. (2002). Links between attachment orientations and dispositional and diary-based measures of disclosure in dating couples: A study of actor and partner effects. *Personal Relationships*, 9(4), 491–506.
- Brennan, K. A., Clark, C. L., & Shaver, P. R. (1998). Self-report measurement of adult attachment: An integrative overview. In J. A. Simpson & W. S. Rholes (Eds.), *Attachment theory and close relationships* (pp. 46–76). New York, NY: Guilford Press.
- Cassidy, J. (1994). Emotion regulation: Influences of attachment relationships. *Monographs of the Society for Research in Child Development*, 59, 228–283.
- Chango, J. M., McElhaney, K., Allen, J. P., Schad, M. M., & Marston, E. (2012). Relational stressors and depressive symptoms in late adolescence: Rejection sensitivity as a vulnerability. *Journal of Abnormal Child Psychology*, 40(3), 369–379. doi:10.1007/s10802-011-9570-y.
- Chow, C., & Buhrmester, D. (2011). Interdependent patterns of coping and support among close friends. *Journal of Social and Personal Relationships*, 28(5), 684–706. doi:10.1177/0265407510386134.
- Chow, C., Roelse, H., Buhrmester, D., & Underwood, M. K. (2011). Transformations in friend relationships across the transition into adulthood. In B. Laursen & W. A. Collins (Eds.), *Relationship pathways: From adolescence to young adulthood* (pp. 91–113). Thousand Oaks, CA: Sage Publications Inc. doi:10.4135/9781452240565.n5.
- Cingöz-Ulu, B., & Lalonde, R. N. (2007). The role of culture and relational context in interpersonal conflict: Do Turks and Canadians use different conflict management strategies? *International Journal of Intercultural Relations*, 31(4), 443–458. doi:10.1016/j.ijintrel.2006.12.001.
- Collins, W. A., & Madsen, S. D. (2006). Personal relationships in adolescence and early adulthood. In D. Perlman & A. Vangelisti (Eds.), *Handbook of personal relationships* (pp. 191–209). New York, NY: Cambridge University Press.
- Collins, N. L., & Read, S. J. (1994). Cognitive representations of attachment: The structure and function of working models. In K. Bartholomew & D. Perlman (Eds.), *Attachment processes in adulthood* (pp. 53–90). London: Jessica Kingsley Publishers.
- Cooper, M., Shaver, P. R., & Collins, N. L. (1998). Attachment styles, emotion regulation, and adjustment in adolescence. *Journal of Personality and Social Psychology*, 74(5), 1380–1397.
- Cusimano, A. M., & Riggs, S. A. (2013). Perceptions of interparental conflict, romantic attachment, and psychological distress in college students. *Couple and Family Psychology: Research and Practice*, 2(1), 45–59. doi:10.1037/a0031657.
- Derogatis, L. R., & Spencer, P. M. (1983). The Brief Symptom Inventory: An introductory report. *Psychological Medicine*, 13, 595–605.
- Dweck, C. S., & London, B. (2004). The role of mental representation in social development. *Merrill-Palmer Quarterly*, 50(4), 428–444.
- Elwood, L. S., & Williams, N. L. (2007). PTSD-related cognitions and romantic attachment style as moderators of psychological symptoms in victims of interpersonal trauma. *Journal of Social and Clinical Psychology*, 26(10), 1189–1209. doi:10.1521/jscp.2007.26.10.1189.
- Fraley, R., Heffernan, M., Vicary, A., & Brumbaugh, C. (2011). The experiences in close relationships-relationship Structures

- questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*, 23(3), 615–625. doi:10.1037/a0022898.
- Fraley, R., & Shaver, P. R. (2000). Adult romantic attachment: Theoretical developments, emerging controversies, and unanswered questions. *Review of General Psychology*, 4(2), 132–154. doi:10.1037/1089-2680.4.2.132.
- Furman, W. (2001). Working models of friendships. *Journal of Social and Personal Relationships*, 18(5), 583–602.
- Furman, W., & Simon, V. (1999). Cognitive representations of romantic relationships. In W. Furman, B. B. Brown, & C. Feiring (Eds.), *The development of romantic relationships in adolescence* (pp. 75–98). New York, NY: Cambridge University Press.
- Garrison, A. M., Kahn, J. H., Sauer, E. M., & Florczak, M. A. (2012). Disentangling the effects of depression symptoms and adult attachment on emotional disclosure. *Journal of Counseling Psychology*, 59(2), 230–239. doi:10.1037/a0026132.
- Geng, J., Zhou, C., & Jia, Q. (2008). The relationships among attachment working models, the sense of stress, coping strategies and negative moods among college students. *Chinese Mental Health Journal*, 22(5), 348–352.
- Hankin, B., Kassel, J., & Abela, J. (2005). Adult attachment dimensions and specificity of emotional distress symptoms: Prospective investigations of cognitive risk and interpersonal stress generation as mediating mechanisms. *Personality and Social Psychology Bulletin*, 31(1), 136–151.
- Holmberg, D., Lomore, C. D., Takacs, T. A., & Price, E. (2011). Adult attachment styles and stressor severity as moderators of the coping sequence. *Personal Relationships*, 18(3), 502–517. doi:10.1111/j.1475-6811.2010.01318.x.
- Imamoğlu, S., & Imamoğlu, E. (2006). Relationship between general and context-specific attachment orientations in a Turkish sample. *The Journal of Social Psychology*, 146(3), 261–274.
- Jerga, A. M., Shaver, P. R., & Wilkinson, R. B. (2011). Attachment insecurities and identification of at-risk individuals following the death of a loved one. *Journal of Social and Personal Relationships*, 28(7), 891–914. doi:10.1177/0265407510397987.
- Jinyao, Y., Xiongzhaoh, Z., Auerbach, R. P., Gardiner, C. K., Lin, C., Yiping, W., et al. (2012). Insecure attachment as a predictor of depressive and anxious symptomology. *Depression and Anxiety*, 29(9), 789–796. doi:10.1002/da.21953.
- Kamkar, K., Doyle, A., & Markiewicz, D. (2012). Insecure attachment to parents and depressive symptoms in early adolescence: Mediating roles of attributions and self-esteem. *International Journal of Psychological Studies*, 4(2), 3–18. doi:10.5539/ijps.v4n2p3.
- Kingery, J., Erdley, C. A., & Marshall, K. C. (2011). Peer acceptance and friendship as predictors of early adolescents' adjustment across the middle school transition. *Merrill-Palmer Quarterly*, 57(3), 215–243.
- Kobak, R., & Sceery, A. (1988). Attachment in late adolescence: Working models, affect regulation, and representations of self and others. *Child Development*, 59(1), 135–146.
- Kohn, P. M., & Milrose, J. A. (1993). The inventory of high-school students' recent life experiences: A decontaminated measure of adolescents' hassles. *Journal of Youth and Adolescence*, 22(1), 43–55.
- La Greca, A. M., & Moore Harrison, H. (2005). Adolescent peer relations, friendships, and romantic relationships: Do they predict social anxiety and depression? *Journal of Clinical Child & Adolescent Psychology*, 34(1), 49–61. doi:10.1207/s15374424jccp3401_5.
- MacKinnon, D., Krull, J., & Lockwood, C. (2000). Equivalence of the mediation, confounding and suppression effect. *Prevention Science: The Official Journal of the Society for Prevention Research*, 1(4), 173–181.
- Mackinnon, S. P., Sherry, S. B., Antony, M. M., Stewart, S. H., Sherry, D. L., & Hartling, N. (2012). Caught in a bad romance: Perfectionism, conflict, and depression in romantic relationships. *Journal of Family Psychology*, 26(2), 215–255. doi:10.1037/a0027402.
- Marchand-Reilly, J. F. (2009). Depressive symptoms in young adults: The role of attachment orientations and romantic relationship conflict. *Journal of Adult Development*, 16(1), 31–38. doi:10.1007/s10804-009-9049-z.
- Marsella, A. (1978). Thoughts on cross-cultural studies on the epidemiology of depression. *Culture, Medicine and Psychiatry*, 2(4), 343–357.
- Overall, N., Fletcher, G., & Friesen, M. (2003). Mapping the intimate relationship mind: Comparisons between three models of attachment representations. *Personality and Social Psychology Bulletin*, 29(12), 1479–1493.
- Saffrey, C., & Ehrenberg, M. (2007). When thinking hurts: Attachment, rumination, and postrelationship adjustment. *Personal Relationships*, 14(3), 351–368. doi:10.1111/j.1475-6811.2007.00160.x.
- Seepersad, S., Choi, M., & Shin, N. (2008). How does culture influence the degree of romantic loneliness and closeness? *Journal of Psychology*, 142(2), 209–220. doi:10.3200/JRLP.142.2.209-220.
- Seiffge-Krenke, I. (1995). *Stress, coping, and relationships in adolescence*. Hillsdale, NJ: Lawrence Erlbaum Associates Inc.
- Seiffge-Krenke, I. (2006). Coping with relationship stressors: The impact of different working models of attachment and links to adaptation. *Journal of Youth and Adolescence*, 35(1), 25–39. doi:10.1111/j.1532-7795.2010.00723.x.
- Seiffge-Krenke, I. (2011). Coping with relationship stressors: A decade review. *Journal of Research on Adolescence*, 35(1), 25–39. doi:10.1111/j.1532-7795.2010.00723.x.
- Seiffge-Krenke, I., Aunola, K., & Nurmi, J. (2009). Changes in stress perception and coping during adolescence: The role of situational and personal factors. *Child Development*, 80(1), 259–279. doi:10.1111/j.1467-8624.2008.01258.x.
- Sibley, C. G., & Overall, N. C. (2008). Modeling the hierarchical structure of attachment representations: A test of domain differentiation. *Personality and Individual Differences*, 44(1), 238–249. doi:10.1016/j.paid.200708.003.
- Smetana, J., Campione-Barr, N., & Metzger, A. (2006). Adolescent development in interpersonal and societal contexts. *Annual Review of Psychology*, 57(1), 255–284.
- Starr, L. R., & Davila, J. (2009). Clarifying co-rumination: Associations with internalizing symptoms and romantic involvement among adolescent girls. *Journal of Adolescence*, 32(1), 19–37. doi:10.1016/j.adolescence.2007.12.005.
- Sun, Y., Tao, F., Hao, J., & Wan, Y. (2010). The mediating effects of stress and coping on depression among adolescents in China. *Journal of Child and Adolescent Psychiatric Nursing: Official Publication of the Association of Child and Adolescent Psychiatric Nurses Inc*, 23(3), 173–180. doi:10.1111/j.1744-6171.2010.00238.x.
- Swenson, L. M., Nordstrom, A., & Hiester, M. (2008). The role of peer relationships in adjustment to college. *Journal of College Student Development*, 49(6), 551–567. doi:10.1353/csd.0.0038.
- Van Ryzin, M. J., Carlson, E. A., & Sroufe, L. (2011). Attachment discontinuity in a high-risk sample. *Attachment & Human Development*, 13(4), 381–401. doi:10.1080/14616734.2011.584403.
- Woodhouse, S. S., Ramos-Marcuse, F., Ehrlich, K. B., Warner, S., & Cassidy, J. (2010). The role of adolescent attachment in moderating and mediating the links between parent and adolescent psychological symptoms. *Journal of Clinical Child and Adolescent Psychology*, 39(1), 51–63. doi:10.1080/15374410903401096.
- Zuckerman, M. (1999). Diathesis-stress models. In M. Zuckerman (Ed.), *Vulnerability to psychopathology: A biosocial model* (pp. 3–23). Washington, DC: American Psychological Association. doi:10.1037/10316-001.