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Common and Distinct Correlates of Depression, Anxiety, and Aggression: Attachment and Emotion Regulation of Sadness and Anger

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Abstract
Drawing from attachment and emotion theories, we tested a model whereby emerging adults' anxious and avoidant attachment would have specific associations with dysregulation and suppression of sadness and anger and would be unique correlates of emotional and behavioral problems. Participants were 383 (47% men) students between 16 and 23 years ($M = 19.6$, $SD = 1.58$) who completed a questionnaire to assess attachment, emotion dysregulation and suppression, depressive and social anxiety symptoms, and aggressive behavior. In a path model, greater anxious attachment was associated with more emotion dysregulation, whereas greater avoidant attachment was associated with greater emotion suppression. Greater sadness dysregulation was uniquely and significantly associated with depression and social anxiety but not aggression, whereas greater anger dysregulation was associated with aggressive behavior but not depression and anxiety. Also, participants with elevated attachment insecurities reported heightened emotional and behavioral problems. Anxious attachment had the most pervasive impact on all forms of symptoms, either directly or indirectly via emotion dysregulation. Yet, there was also evidence that a focus on regulation of sadness, relative to anger, identified unique links with depression and social anxiety, relative to aggressive behavior.

Keywords Attachment · Emotion · Anxiety · Depression · Aggressive behavior · Emerging adulthood

In classic attachment theory, early childhood experiences with caregiving are described as the foundations for the formation of a general working model of relationships, which is also sometimes referred to as attachment orientation or attachment style (Bowlby 1969, 1973, 1980; Cassidy, 1994). By adolescence and into adulthood, the working model has been described as a general conception of the mental representations of the self (e.g., beliefs about one's worthiness) and others (e.g., expectations about the availability and responsiveness of others) (Mikulincer and Shaver 2007, 2012). Along with the development of a working model, early interactions, which include caregivers' assisting children in their nascent attempts to regulate emotions and, later, co-regulation and support in self-regulation, are also described as essential for the later formation of intra-individual emotion regulation (ER) skills and competencies (Brumariu 2015; Brumariu and Kerns 2013; Kobak et al. 2006; Kopp 1989; Morris et al. 2007; Skinner and Zimmer-Gembeck 2016; Zimmer-Gembeck and Skinner 2016; Zimmer-Gembeck et al. 2017). Thus, attachment and the subsequent regulatory capacities to manage (express) emotional reactions would be expected to co-vary with each other, since each has a foundation in the early caregiving environment. It would also be expected that attachment and ER would co-vary with each other even beyond childhood, despite later experiences and advances. In support of this notion, attachment orientation has been found to account for some of the individual differences in how toddlers, children, adolescents, and adults manage and regulate their emotions (Malik et al. 2015; Mikulincer and Shaver 2007; Wei et al.

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2005), with individuals classified as insecure showing more maladaptive ER and those classified as secure having ER advantages (Brumariu 2015; Brumariu and Kerns 2013; Kerns 2008; Marganska et al. 2013; Lyons-Ruth and Jacobvitz 2008; Zimmer-Gembeck et al. 2017).

Much of this emphasis on attachment and ER, and their interrelation, has been informative for identifying individuals who are on a maladaptive mental health or social trajectory (Brenning et al. 2012; Clear and Zimmer-Gembeck 2017; Kobak et al. 2006; Mikulincer and Shaver 2007; Wei et al. 2003). Studies have shown that insecure attachment and ER are independently associated with symptoms of depression, social anxiety, and behavior problems (Brenning and Braet 2013; Brenning et al. 2012; Mikulincer and Shaver 2007; Mikulincer 1998; Viana and Rabian 2008). Further Brenning and Braet (2013) pioneered the investigation of regulating specific emotions and tested a model of the associations between adolescents' attachment, ER of specific emotions, and psychological problems. The aim of the current study was to examine these associations among emerging adults, focusing on associations between insecure (anxious and avoidant) attachment orientation, and depressive symptoms, social anxiety symptoms, and aggressive behavior. Moreover, a second aim was to test the mediating role of ER of sadness and anger in these associations.

The present study was novel because of the focus on emerging adults, a time of life when ER strategies are becoming increasingly mature but may not yet have reached their optimal level (Aldao et al. 2010; Haga et al. 2009; Skinner and Zimmer-Gembeck 2007). Emerging adulthood is a time when there is a rapid escalation in autonomy from parents and an increased reliance on friendships and romantic relationships for support and information (Seiffge-Krenke 2011). Thus, the likelihood of new interpersonal stressors occurring during emerging adulthood is quite high, which can uniquely challenge working models of attachment and ER capacity, resulting in even stronger links of attachment and ER with symptoms of internalizing and externalizing disorders. We could locate no previous study that has examined associations between attachment, emotion-specific ER, and symptoms of psychopathology among emerging adults.

Attachment Orientation, ER, and Symptoms

There are many reasons to anticipate that anxious and avoidant attachment orientations would be associated with ER, but this association may depend on the specific form, aspect, or emotion of the regulation strategies under examination. In particular, studies have found that anxious and avoidant attachment can interfere with two forms of ER, including heightened signs of dysregulation and more use of suppression, but that this would differ depending on whether the focus is on anxious or avoidant attachment (Mikulincer and Shaver 2007). Individuals higher in an anxious attachment orientation have been described as hyperactivating, whereby they emotionally overreact and attempt to elicit increased attention from others when distressed (Wei et al. 2005). In other words, individuals higher in anxious attachment would display more negative emotions and, often excessively, seek closeness to others when experiencing stress. They would worry more intensely about the availability of the attachment figure (or close others) for support and soothing (Brenning and Braet 2013). This implies particular challenges with heightened emotion dysregulation.

Individuals with a more prominent avoidant orientation are described as deactivating, whereby they suppress negative emotions and distance themselves from others when distressed (Mikulincer et al. 2003). Deactivation implies that those with avoidant tendencies would be more likely to respond to problems by discounting the severity of their feelings, distancing themselves from others when distressed, and less often seeking or giving social support (Wei et al. 2005). Individuals high in avoidant attachment do not feel as comfortable depending on others, have a strong preference for emotional distance, and they minimize their generalized distress (Cassidy 1994). Thus, their ER pattern may be marked by more suppression of emotion in order to reduce displays that will evoke others' support. Further, emotion theories suggest ER may vary as a function of specific emotion type. For example, the differential emotions perspective where each emotion serves an adaptive social function or provokes a particular reaction from others (Izard 1991), along with the functionalist theory of emotion suggesting specific emotions, have specific social and relationship functions (e.g., Campos et al. 1994). Considering different social preferences among attachment orientations (i.e., emotional closeness or distance), and distinct emotions serving particular social or relational functions, we might expect ER of specific emotions to vary between individuals with different attachment orientations.

Considering both ER strategies and insecure attachment orientation may help to better account for symptoms of psychopathology than examining either in isolation. Most, if not all, forms of psychopathology involve restricted capacity for adaptive emotion recognition, expression or regulation, and maladaptive responses to negative emotions (Compas et al. 2001; Southam-Gerow and Kendall 2002). Therefore, ER is proposed as an explanation for when and why attachment orientation has such wide-ranging effects on adjustment, adaption, and psychopathology (e.g., see Brenning et al. 2012; Contreras et al. 2000; Kullik and Petermann 2013; Morris et al. 2007; Wei et al. 2003). In particular, the ER strategies that are more likely to be found among individuals higher in attachment insecurity are most likely to interfere with adaptive responding to stress that will boost the

development of symptoms of psychopathology in all forms (Mikulincer et al. 2003). To understand how attachment anxiety and avoidance may be associated with symptoms of depression, social anxiety, and behavior problems, however, it is useful to consider the specific emotions that are being regulated and how they may or may not be managed. In particular, difficulties with regulating sadness will likely be more prominent for individuals who exhibit more depressive and anxious symptoms, whereas difficulties regulating anger will likely be more prominent for individuals who exhibit more aggressive behavior (Zimmer-Gembeck et al. 2016). Taken together, the attachment model of ER suggests that anxious versus avoidant attachment should identify individuals who are more likely to dysregulate or suppress emotions, which in turn give an indication to the types of pathologies that may be experienced. However, previous studies have shown mixed evidence in supporting the pattern of suppression for individuals higher in attachment avoidance as related to emotional or behavioral problems in various child, adolescent, and adult samples (Malik et al. 2015; Marganska et al. 2013). We, however, posit that the particular emotion that is dysregulated or suppressed should help to better account for when and why each form of attachment is associated with depression, social anxiety, and aggressive behavior.

The Current Study

ER may be challenging for those who report heightened attachment insecurity (Mikulincer and Shaver 2007), and ER deficits play a prominent role in many forms of psychopathology (Compas et al. 2001; Southam-Gerow and Kendall 2002). Furthermore, this period of development is a significant transition where the onset of several interpersonal or psycho-social stressors may place additional strain on emerging adults' ER capacities (Seiffge-Krenke 2011; Skinner and Zimmer-Gembeck 2016). In the present study, we extended previous research by examining the unique pathways of vulnerability that anxious and avoidant attachment may confer on symptoms of depression, social anxiety, and aggression through, ER (dysregulation and suppression) of sadness and anger during the period of emerging adulthood. The following hypotheses were tested:

H1 Greater sadness and anger dysregulation will be associated with greater anxious attachment, given that individuals higher in anxious attachment strive to preserve or enhance closeness to others.

H2 Greater suppression of sadness and anger will be associated with greater avoidant attachment, given that individuals higher in avoidant attachment prefer emotional distance from others and self-reliance.

H3 Greater sadness dysregulation will be uniquely associated with depressive and social anxiety symptoms.

H4 Greater anger dysregulation will be uniquely associated with aggressive behavior.

H5 Depressive and social anxiety symptoms and aggressive behavior will be associated with greater anxious attachment via emotion dysregulation (especially sadness dysregulation), given the significant role of sadness in emotional problems. Note that we also tested the associations of avoidant attachment with all three outcomes via sadness and anger suppression, but made no specific hypotheses because of the mixed evidence in the literature supporting this indirect association.

Method

Participants

The 383 participants (181 young men, 202 young women) were undergraduate university students with a mean age of 19.6 years ($SD = 1.58$; between the ages of 16 to 23). Concerning family status, 68% of the participants were from intact families, whereas the remaining participants were from divorced or separated families, or families where one of the parents was deceased. Seventy percent of participants identified as being white/Caucasian, 19% had an origin in Asia, 2% identified as being Australian First People or Pacific Islander, while the remaining 9% identified as other.

Procedure

After receiving approval from the university Human Subjects Review Committee, participants were recruited from university campus common use areas (87.5%) or from a pool of first year psychology students (12.5%). Participants completed questionnaires under supervision of a researcher. First year psychology students received course credit for participation. All other participants received a chocolate bar after completing the questionnaire.

Measures

Attachment Orientation

Participants completed the Experiences in Close Relationships Scale-Revised-General Short Form (ECR-R-GSF; Wilkinson 2011), for the assessment of general relationship attachment anxiety and avoidance in adolescents and young adults. The anxiety scale (10 items) targets feelings of fear and abandonment and strong desires for closeness to others (e.g., "I find that other people don't want to be as close as I would like"). The avoidance scale (10 items) targets

discomfort with closeness and dependence on others (e.g., "I prefer not to show others how I feel deep down"). Items were rated on a 5-point scale from 1 (strongly disagree) to 5 (strongly agree), and Cronbach's αs were .86 and .79 for anxious and avoidant attachment, respectively.

Depressive Symptoms

Participants completed 20 items from the Beck Depression Inventory II (BDI-II; Beck et al. 1996) to measure the severity of depression symptoms (one item referring to suicide was not included). For each item, participants chose one of four responses that best described him or her (e.g., "I feel sad much of the time"), Cronbach's $\alpha = .91$.

Social Anxiety Symptoms

Participants completed the social anxiety scale for adolescents (SAS-A) (La Greca and Lopez 1998) to measure the subjective experience of social anxiety. The scale contained 18 descriptive self-statements (e.g., "I worry about doing something new in front of others"). Each item was rated on a 5-point scale from 1 (not true) to 5 (very true) according to how much the item was true for the participant, Cronbach's $\alpha = .93$.

Aggressive Behavior

Participants completed 17 items from the widely used Youth Self-Report (YSR: Achenbach and Rescorla 2001) to measure aggressive behavior (e.g., "I destroy things belonging to others"). Each item was rated on a 5-point scale from 1 (not true) to 5 (very true), Cronbach's $\alpha = .89$.

Sadness and Anger Dysregulation and Suppression

Self-reported ER strategies were assessed using the dysregulation (six items, e.g., "I often behave in a stressful or anxious way, even if I don't want to behave like that") and suppression (seven items, e.g., "I try to ignore feelings of stress or anxiety") subscales of the ER inventory (Roth et al. 2009). Items were adjusted to refer to emotions of sadness and anger. For example, the item "I try to ignore feelings of stress or anxiety" was changed to "I try to ignore feelings of sadness/anger." Response options ranged from 1 (strongly disagree) to 5 (strongly agree).

Items were submitted to an exploratory factor analysis with an orthogonal rotation (varimax). Using the criterion of an eigenvalue > 1, four factors were extracted, with items for the four proposed subscales of ER loading on the four factors. The factors accounted for 64% of the variance in the items. Sadness dysregulation items loaded on the first factor (eigenvalue = 7.3, loadings from .69 to .84). Anger dysregulation items loaded on the second factor (eigenvalue = 5.0, loadings from .71 to .80). Sadness suppression items loaded on the third factor (eigenvalue = 2.5, loadings from .64 to .79). Anger suppression items loaded on the fourth factor (eigenvalue = 1.7, loadings from .54 to .85). All crossloadings were less than .35. Items loading highly on each factor were averaged to form total scores, and Cronbach's α was .91 and .87 for sadness suppression and dysregulation, and .89 and .88 for anger suppression and dysregulation, respectively.

Overview of the Data Analyses

After computing *M*s, *SD*s, *t* tests to compare young men and women, and correlations between all measures, MPlus was used to test a concurrent path model. This model was fit to examine hypotheses pertaining to the direct effects of anxious and avoidant attachment on emotion-specific dysregulation and suppression, symptoms of depression and social anxiety, and aggressive behavior, as well as the indirect effects of attachment on symptoms and behaviors via ER. Based on bivariate correlations, significant associations between measures at each time point were freed (see Fig. 1). To assess model fit, goodness-of-fit indices (χ^2, χ^2 relative to sample size, comparative fit index—CFI, and root mean square error of approximation—RMSEA) were examined. For comparison to the primary model fit, we also fit models removing some or all paths from attachment to depression, social anxiety, and aggressive behavior.

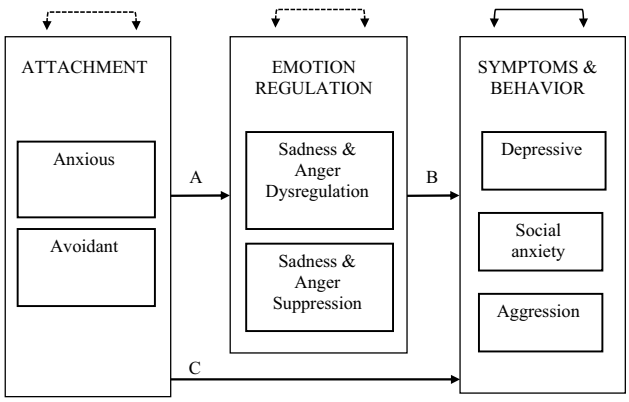

Fig. 1 An illustration of the tested model. *Note*. Solid directional arrows (A, B, and C) between sets of measures indicate that all paired associations were estimated in the path model. The solid two-headed arrow indicates that all covariances within a set of measures were freed. The hatched two-headed arrows indicate that covariances between attachment classifications and between emotion regulation subscales were freed with the exception of one nonsignificant ($p > .10$) association

Table 1 Correlations between all measures ($N = 383$)

Measure	1	2	3	4	5	6	7	8
1. Attachment anxiety	–							
2. Attachment avoidance	.37**	–						
3. Depressive symptoms	.45**	.30**	–					
4. Social anxiety symptoms	.60**	.31**	.52**	–				
5. Aggressive behavior	.36**	.15**	.51**	.44**	–			
6. Sad dysregulation	.43**	.17**	.47**	.42**	.27**	–		
7. Sad suppression	.22**	.39**	.19**	.14**	.15**	.20**	–	
8. Anger dysregulation	.34**	.13*	.36**	.36**	.42**	.56**	.16**	–
9. Anger suppression	.11*	.12*	.08	.12*	.04	.18**	.43**	.04

*$p < .05$; **$p < .01$

Table 2 Means and SDs for all participants and for young men and women separately, and tests of sex differences ($N = 383$)

Measure	Overall *M* (*SD*)	Young men *M* (*SD*) $n = 181$	Young women *M* (*SD*) $n = 202$	*t*(1381)
Anxious attachment	2.77 (.70)	2.77 (.71)	2.77 (.70)	.02
Avoidant attachment	2.87 (.60)	2.85 (.55)	2.89 (.64)	−.57
Depressive symptoms	.49 (.44)	.45 (.44)	.55 (.43)	−2.29*
Social anxiety symptoms	2.33 (.81)	2.24 (.81)	2.41 (.81)	−2.02*
Aggressive behavior	1.64 (.58)	1.76 (.66)	1.53 (.47)	4.05**
Sad dysregulation	2.65 (.91)	2.46 (.85)	2.82 (.92)	−3.98**
Sad suppression	3.00 (.84)	3.16 (.93)	3.17 (.88)	−.03
Anger dysregulation	2.75 (.92)	2.41 (.94)	2.44 (.89)	−.31
Anger suppression	3.05 (.86)	3.10 (.89)	3.00 (.83)	1.19

*$p < .05$; **$p < .01$

Results

Correlations Between Measures, Descriptive Statistics, and Sex Differences

Tables 1 and 2 present correlations, *M*s and *SD*s, and *t* tests to examine sex differences. As can be seen in Table 2, young women compared to men reported significantly higher depressive and social anxiety symptoms, less aggressive behavior, and more dysregulation of sadness.

A Model of Attachment, ER, Symptoms, and Behavior

Primary Model

The model of attachment, ER, and symptoms (see Fig. 1) had an excellent fit to the data, $\chi^2(1) = .00$, $p = .99$, CFI = 1.00, RMSEA = .000 (90% CI .000–.000), $p = 1.00$, and explained 33% of the variance in depression, 42% of the variance in social anxiety, and 25% of the variance in aggressive behavior. In this model all paths were estimated, with the exclusion of one covariance between anger dysregulation and anger suppression, which was not significant.

Table 3 Standardized associations of attachment and emotion regulation with symptoms and aggression (Path A in Fig. 1, see also Fig. 2 for an illustration) ($N = 383$)

Attachment	Emotion regulation			
	Sad dysregulation	Sad suppression	Anger dysregulation	Anger Suppression
Anxious	.42**	.09	.34**	.07
Avoidant	.01	.36**	.00	.10*

*$p < .05$; **$p < .01$; based on bootstrap bias-corrected confidence intervals, and associated 95% confidence intervals and *p* values

$\chi^2(1) = .00$, $p = .99$, CFI = 1.00, RMSEA = .000 (90% CI .000–.000), $p = 1.00$

Table 3 and Fig. 2 present the standardized associations of attachment with ER (i.e., pathway A, Fig. 1). Consistent with Hypotheses 1 and 2 and providing support for a

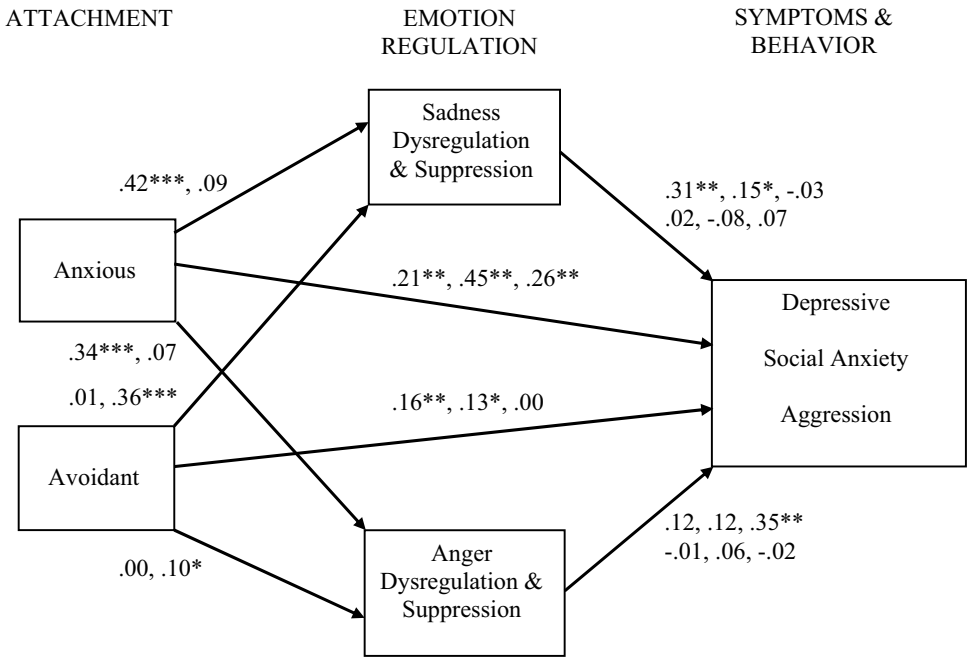

Fig. 2 An illustration of the standardized direct effects in the final model. *Note*. Multiple path estimates are shown on each path. For example, the path estimates on the path from anxious attachment to sadness dysregulation and suppression show the effect of anxious attachment on dysregulation followed by the effect of anxious attachment on suppression. Also, for example, for the path estimates from emotion regulation to symptoms, the first three path estimates are the effects of sadness dysregulation on each of the symptom measures (depression, social anxiety, and aggression); the second three path estimates are the effects of sadness suppression on each of the symptoms, respectively

differentiated pattern of associations between attachment and ER, attachment anxiety was uniquely and significantly associated with greater dysregulation of sadness and anger, whereas avoidant attachment was significantly associated with greater suppression of sadness and anger.

Table 4 presents the standardized direct, indirect, and total associations of attachment and ER with depression, social anxiety, and aggression (i.e., pathways B and C, Fig. 1). See also Fig. 2 which provides an illustration of the direct associations of attachment and ER with depression, social anxiety, and aggression. Supporting Hypotheses 3 and 4, greater sadness dysregulation was associated with more depressive and social anxiety symptoms, but was not significantly associated with aggressive behavior, whereas the opposite pattern was found for anger dysregulation. Providing support for Hypothesis 5, individuals higher in anxious attachment reported more symptoms of depression and social anxiety and more aggressive behavior directly and indirectly via emotion dysregulation. Finally, individuals higher in avoidant attachment reported more depressive and social anxiety symptoms, although avoidant attachment was not directly or indirectly associated with aggressive

Table 4 Standardized direct, indirect, and total associations of attachment and emotion regulation on symptoms and aggression (see also Fig. 2 for an illustration of the direct associations, $N = 383$)

Predictors	Direct associations (Paths B and C, Fig. 1)			Total indirect associations via all ER measures (Paths A × B, Fig. 1)[a]			Total Associations (C + A × B Paths, Fig. 1)		
	Dep	SA	Agg	Dep	SA	Agg	Dep	SA	Agg
Anxious	.21**	.45**	.26**	.18**	.10**	.11**	.39**	.55**	.37**
Avoidant	.16**	.13*	.00	.01	−.02	.02	.17**	.11	.02
Sad dysregulation	.31**	.15*	−.03	–	–	–	.31**	.15*	−.03
Sad suppression	.02	−.08	.07	–	–	–	.02	−.08	.07
Anger dysregulation	.12	.12	.35**	–	–	–	.12	.12	.35**
Anger suppression	−.01	.06	−.02	–	–	–	−.01	.06	−.02

Dep depression, *SA* social anxiety, *Agg* aggressive behavior, *Dys* dysregulation, *supp* suppression

See Table 3 for the estimates for Paths A in Fig. 1

[a]See text for a description of the significant indirect associations of attachment on symptoms and behavior via individual measures of ER (i.e., sadness dysregulation, sadness suppression, anger dysregulation, and anger suppression)

*$p < .05$. **$p < .01$; based on bootstrap bias-corrected confidence intervals and associated p values

χ^2 (1) = .00, $p = .99$, CFI = 1.00, RMSEA = .000 (90% CI .000–.000), $p = 1.00$

behavior. When indirect effects of attachment on symptoms and behavior via each measure of ER were examined (i.e., 24 individual indirect effects), two positive indirect effects stood out as significant: the indirect effect of anxious attachment on depressive symptoms via sadness dysregulation (.14, $p < .05$), and the indirect effect of anxious attachment on aggressive behavior via anger dysregulation (.15, $p < .01$).

Alternative Models

When we removed all paths from attachment to symptoms and behavior, the fit of the model was less than adequate, $\chi^2(7) = 130.31$, $p < .01$, CFI = .87, RMSEA = .215 (90% CI .183–.248), $p <= .01$. However, freeing the direct effects of anxious attachment on symptoms and aggressive behavior resulted in a good fitting model, $\chi^2(4) = 17.21$, $p = .002$, CFI = .99, RMSEA = .093 (90% CI .051–.140), $p = .05$. Thus, the addition of the direct effects of anxious attachment on symptoms and behavior (but not the direct effects of avoidant attachment on symptoms and behavior) was sufficient to produce a good fitting model.

Discussion

Attachment theory suggests that an individuals' attachment orientation will be essential for the formation of ER capacities and the development of psychopathology symptoms (Brumariu 2015; Brumariu and Kerns 2013; Kobak et al. 2006; Kopp 1989; Morris et al. 2007; Zimmer-Gembeck et al. 2017). In the multivariate path model tested here, there was support for the hypothesized associations of emerging adults' attachment (anxious and avoidant), emotion dysregulation, and emotion suppression with emotional and behavioral problems (i.e., depression, social anxiety, and aggressive behavior). Emerging and young adults who reported heightened anxious and avoidant attachment also reported more dysregulation and suppression of sadness and anger, with anxious attachment uniquely relevant for dysregulation and avoidant attachment uniquely relevant for suppression. Moreover, those who reported more sadness dysregulation had elevated depressive and social anxiety symptoms, whereas those who reported more anger dysregulation had elevated aggressive behavior. Thus, consistent with past research (Mikulincer and Shaver 2007; Mikulincer et al. 2003; Wei et al. 2005), the results supported the distinctive roles of anxious versus avoidant attachment in emotion dysregulation versus suppression. The results also reveal the importance of considering each of sadness and anger dysregulation in emotional or behavioral symptoms (Brenning and Braet 2013). Moreover, anxious attachment had unique and direct associations with emotional and behavioral problems, while there was less support for the distinctive role of avoidant attachment for understanding aggressive behavior.

Key Findings and Future Research Directions

Attachment, Regulation, Symptoms, and Behavior

As hypothesized (Hypothesis 1), individuals who reported more anxious attachment also reported more dysregulation of emotion, including sadness and anger, and those who reported more avoidant attachment reported more suppression of emotion. These findings support Shaver and Mikulincer's (2002) description of the role of attachment working models in ER, whereby individuals who are more anxiously attached may have a tendency toward greater dysregulation of emotion because displays of these emotions may be useful for gaining support from others when distressed. These findings align with neopsychoanalytic perspectives that emphasize the goals of emotion regulation or dysregulation (Sroufe 1995), whereby emotions and emotion regulation are functional for meeting goals or needs. With respect to our findings, anxious attachment is associated with heightened emotion dysregulation. This may be because individuals who endorse more anxious attachment do so because they have greater worries and concerns regarding the loss of intimacy with others and because greater intensity of emotional displays will likely draw attention from others and maintain some feeling of closeness (Sroufe 1995; Wei et al. 2005). Also, as described in adult attachment theory (Mikulincer and Shaver 2007), individuals who are higher in avoidant attachment tend to suppress their emotions more so than others, which may be a strategy for maintaining distance from others, consistent with their tendency to avoid intimacy, even when they are distressed and support may be helpful.

Our findings are also consistent with Winnicott's (1965) theory of attachment and the development of the false self. Winnicott described how a false self can emerge when a developing infant is not nurtured in an environment where the 'good enough' parent mirrors, holds, and responds to emotional upsets. In these circumstances, a child can internalize a representation of the mother as emotionally unavailable, critical, or possibly intrusive (Newman 2013; Winnicott 1965). Because this internalized object (i.e., the unavailable parent) has failed the child and provided its own source of emotional discomfort, over time, and across many poor interpersonal experiences, the false self serves the purpose; it protects the individual from further unsupportive emotional or interpersonal experiences. Therefore, our findings provide some support in the sense that when insecure attachment has developed, the false self (which may be integrated into the attachment internal working model) serves the purpose of protecting emerging and young adults' true

self via their utilization of unhelpful ways for managing negative emotions to safeguard against perceived threat. Thus, it is not surprising that young people who reported higher insecure attachment reported greater ER deficits, which in turn, according to both attachment theory (Bowlby 1969, 1980) and Winnicott's (1965) view of the development of the false vs. true self, should also be associated with symptoms of psychopathology.

Consistent with the above expected links between attachment and symptoms of psychopathology, another set of associations tested in our model was the direct and indirect (via emotion dysregulation and suppression) associations of attachment with symptoms of depression, social anxiety, and aggression. Our expectations here were partially supported. In particular, there was support for our hypothesis of a predominant role of anxious attachment and sadness dysregulation in depression and anxiety. We found that sadness dysregulation had associations with depression and social anxiety but not aggressive behavior, and anger dysregulation had an association with aggressive behavior but not depression and social anxiety. The focus on the regulation of two different emotions—sadness and anger—did facilitate an understanding of when dysregulation may coincide with different symptoms, and that anxious attachment may directly impact on symptoms but also may have an indirect association via its association with greater dysregulation of emotion. As suggested by Emde (1980), this may be the culmination of a developmental pattern whereby emotion dysregulation and the heightened emotional displays of sadness or anger that come with dysregulation bring others closer or keep others at a distance. This pattern of dysregulation, emotion displays, and associated behaviors increases the likelihood of following a trajectory marked by unmet intimacy and relationship goals, escalating distress, and symptoms of psychopathology.

Our findings were less clear for avoidant attachment and aggressive behavior, whereby we found no significant unique association between them (either direct or indirect). Instead, it was individuals who reported more anxious attachment, and not avoidant attachment, that reported more aggressive behavior. Further, avoidant attachment had small (but significant) associations with a higher level of depressive and social anxiety symptoms. These findings might be partly explained by what we did find regarding the unique associations of anxious and avoidant attachment with ER; these associations did not divide along the form of emotion—sad or angry—rather, they divided along the ER deficit—dysregulation or suppression, as predicted. This suggests that anxious attachment may be an indicator of dysregulation across a range of emotions, which accounts for its widespread direct and indirect (via ER) impact on all three forms of emotional and behavioral problems. In contrast, avoidant attachment is more of an indicator of a greater reliance on emotional suppression, which could explain its rather weak links with all forms of problems measured here as greater emotion suppression would inhibit the ability to report problems. Despite not being completely consistent with our hypotheses, the findings are consistent with some past research, which has shown that both dependent (i.e., anxious) and avoidant interpersonal styles in emerging adults are associated with social anxiety in relationships (Darcy et al. 2005). Moreover, other studies have also found that individuals who are avoidant tend to report high levels of anxiety and depression, due to low levels of trust within relationships and an increased tendency to distance themselves from support (Marganska et al. 2013; Muris et al. 2001).

Emotional Suppression and Dysregulation

It is not clear why emotional suppression did not play more of a role in symptoms in the present study. We did find fairly strong associations of avoidant attachment with sadness suppression. Yet, these associations appear weaker when compared to the conclusions of a past meta-analysis, which reported medium to large effects sizes for suppression with forms of psychopathology in adulthood (Aldao et al. 2010). One possibility is, given that most past studies have asked about suppression of "emotion" or "distress" in general, by focusing individuals on specific emotions in the present study, we might have identified that it is not suppression of the specific emotions of sadness or anger that is associated with heightened symptomology, but rather a tendency to suppress a *broad range* of feelings. Another possibility is the age of the participants. It is possible that self-reliance, which may be exhibited among those higher in avoidant attachment, is not as problematic for symptom development in emerging or early adulthood as compared to among older adults (Mikulincer et al. 2003). Emerging and young adulthood is often prior to the formation of committed relationships outside the home. For this age group, parents may still be significant sources of support, and it appears that youth internalize their experiences with their attachment figures, and are better able to use these symbolic representations as a source of personal strength or resilience, compared to older adults who rely on more external supports for coping with stress (Mikulincer et al. 2003). Thus, deficits in support seeking and giving skills or an overly avoidant pattern of behavior when under stress may not yet be detrimental to mental health. Further study is warranted to assess the developmental changes that may underpin this pathway of associations.

In contrast to the findings for emotion suppression, our results suggest that emotion dysregulation plays a substantial role in psychopathology, both directly and by channeling the negative impact of anxious attachment. Nevertheless, the rather small indirect effects, relative to the direct effects, in

the model suggests that attachment and emotion dysregulation have unique features that each explain symptomatology among emerging adults, but that there may also be other antecedents of emotion dysregulation that could be considered when expanding on the model tested here. As such, future research, preferably longitudinal, should consider other social situations, social experiences, and individual characteristics that may be foundations of the development of emotion dysregulation and result in the emergence or escalation of symptoms over time. The particular focus should be on what might predict sadness dysregulation rather than anger dysregulation and vice versus. One possibility is to focus on appraisals and attributions for negative events. For example, relying on self-blame when negative events occur could prompt more difficulties with internalized emotions such as sadness when compared to blaming others when negative events occur; other-blame might be more strongly associated with difficulty regulating externalized emotions, such as anger (Guerra et al. 2004; Sandstrom and Coie 1999; Taylor et al. 2013; Zimmer-Gembeck et al. 2016).

Future Research and Study Limitations

Future research should continue to focus on attachment and the specific emotion regulation strengths and weaknesses that may co-vary with attachment orientations or may follow from them. Mikulincer and Shaver (2007) proposed how attachment orientations should be associated with ER in particular ways, but they (and many researchers in the field of ER) tend to refer to distress and emotions in general, rather than identifying the specific emotions that are subject to regulation. As described in theory (e.g., Campos et al. 1994) and supported with the current findings, ER may vary as a function of specific emotion type. This is somewhat congruent with the differential emotions perspective which assumes that each distress emotion has a distinct adaptive social function and elicits particular reactions from a social partner or from the social world more generally (Izard 1991). Some descriptions of attachment theory also suggest that the experience of a specific emotion may differ and have different functions depending on an individual's attachment orientation goals. For example, the social function of anger might function to push others away or as an attempt to change the behavior of another person to maintain closeness (Bowlby 1973; Mikulincer 1998). This suggests that future research might not only focus on specific emotions, but might also need to try to capture the different functions of what might be assumed to be the same emotion, for example, trying to understand the meaning, display, and perceived function of anger for individuals high in anxious attachment as compared to those high in avoidant attachment.

Our investigation of the associations between attachment, ER, and symptoms of psychopathology filled several gaps in the literature by examining social anxiety along with depressive symptoms and aggressive behavior, by examining regulation of two different emotions, and by studying the associations in emerging adults. Nevertheless, several limitations should be acknowledged. First, generalizability may be compromised because the sample was limited to Australian university students. However, university students in Australia are diverse in socioeconomic and cultural background, but can be slightly younger than university students in other parts of the world. Second, self-report was the only method of data collection. Social desirability may be a factor in reporting and shared method variance may have resulted in stronger associations in some cases.

Conclusion

In summary, the findings build on previous research (e.g., Brenning and Braet 2013) to show that attachment anxiety and avoidance, as well as emotion dysregulation, in emerging adulthood are associated with elevated self-reported symptoms of emotional and behavioral problems. Differentiated pathways are also suggested. First, individuals higher in anxious attachment report more sadness and anger dysregulation, whereas individuals higher in avoidant attachment report more suppression of sadness and anger. Second, sadness as compared to anger dysregulation exhibited a different pattern of associations with depression and social anxiety relative to aggressive behavior. Continued attention to the dysregulation of specific emotions is a useful direction for future developmental psychopathology research, as this may be one way to begin to identify common and unique risks for the emergence and continuation of different forms of psychopathology. Such an approach is consistent with many aspects of developmental psychopathology (Cicchetti and Cohen 1995) and attachment theory (Brenning and Braet 2013; Mikulincer and Shaver 2007, 2012; Zimmer-Gembeck et al. 2017), as well as being consistent with functionalist and differential emotion theories (e.g., Campos et al. 1994; Izard 1991).

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Authors Contributions S.C. conceived of the study, participated in its design and coordination, conducted data collection, interpreted the data, and drafted the manuscript; A.G. drafted the manuscript and critically revised the manuscript; H.W. performed the statistical analysis and helped draft the manuscript. M.Z.G. was the overall supervisor of the project, conceived of the study, performed the statistical analysis and interpretation of the data, and drafted the manuscript. All authors read and approved the final manuscript.

Compliance with Ethical Standards

Conflict of interest The authors declared that they have no conflict of interest.

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