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Mindfulness Mediates Associations Between Attachment and Anxiety Sensitivity

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Abstract Mindfulness (tendency to attend to present experience without expectation or judgment) is generally considered to be an adaptive way of responding to emotional experience. Anxiety sensitivity can be conceptualized as a maladaptive response (fear) to arousal-related somatic sensations commonly associated with anxiety. Emotion regulation strategies are learned in the context of early attachment relationships, and adult attachment styles have been linked to both mindfulness and anxiety sensitivity. This study examined whether mindfulness facets (observe, describe, act with awareness, accept without judgment) would mediate associations between attachment and the dimensions of anxiety sensitivity (physical, social, cognitive concerns). Multiple mediation analyses showed that observe mediated the relation between attachment anxiety and physical concerns, and accept mediated the relation between attachment anxiety and social concerns. Accept, aware, and observe each mediated the relation between attachment anxiety and cognitive concerns. Only accept mediated the association between attachment avoidance and the three anxiety sensitivity dimensions. Findings suggest the importance of measuring mindfulness as a multidimensional construct, and the value of assessing attachment style and incorporating mindfulness elements in interventions designed to reduce anxiety sensitivity.

Keywords Attachment · Emotion regulation · Mindfulness · Anxiety sensitivity · Multiple mediation

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Introduction

Strategies for responding to and regulating emotional experience are learned in the context of attachment relationships (Cassidy 1994). According to attachment theory, early experiences with a caregiver contribute to the development of expectancies ("internal working models") for how others will respond when one is in distress, and beliefs about one's own ability to manage distress (Bowlby 1969, 1973). Insecure attachment in adults is conceptualized along two continuous orthogonal dimensions: anxiety and avoidance (Brennan et al. 1998). Attachment anxiety reflects a fear of rejection, abandonment, and partner unavailability. People high in attachment anxiety tend to underregulate negative emotions in order to accomplish attachment goals (i.e., attain interpersonal closeness by exaggerating and sustaining emotional distress). In contrast, people high in attachment avoidance tend to overregulate negative emotions through denial and distortion in order to accomplish attachment-related goals, such as maintaining emotional distance and independence (Bartholomew and Horowitz 1991; Shaver and Mikulincer 2007).

Attachment anxiety, as characterized by exaggerated appraisal and hypervigilance toward internal indicators of distress, is reminiscent of how individuals high in anxiety sensitivity respond to somatic arousal. Anxiety sensitivity is the fear of arousal-related somatic sensations commonly associated with anxiety, due to the belief that these sensations signify impending harm (Reiss 1991). Anxiety sensitivity includes three dimensions: physical concerns, i.e., the belief that anxiety symptoms signify physical harm or illness; cognitive concerns, i.e., the belief that anxiety symptoms portend loss of cognitive control or "going crazy"; and social concerns, i.e., the belief that anxiety symptoms will cause social embarrassment and rejection. Evidence suggests that anxiety sensitivity contributes to the development and maintenance of a variety

of anxiety disorders and depression (reviewed in Olatunji and Wolitzky-Taylor 2009).

Anxiety sensitivity appears to be a partially heritable, relatively stable dispositional trait (Zavos et al. 2012). Retrospective and cross-sectional studies suggest that catastrophic beliefs about the meaning of anxiety symptoms develop through operant and vicarious learning experiences in the context of childhood attachment relationships (Scher and Stein 2003; Stewart et al. 2001; Watt et al. 1998). Within the framework of attachment theory, anxiety sensitivity can thus be conceptualized as an attachment-acquired internal working model (or set of expectations) regarding the interpersonal and intrapersonal consequences of arousal-related somatic sensations. Indeed, several studies have confirmed a positive correlation between insecure attachment (particularly attachment anxiety) and anxiety sensitivity in adolescents and adults (Viana and Rabian 2008; Watt et al. 2005; Weems et al. 2002). The factors underlying this association have yet to be clarified.

One pathway between attachment and anxiety sensitivity may involve dispositional mindfulness. Mindfulness, i.e., attending to present-moment experience without the influence of evaluative or reactive cognitions (Brown et al. 2007), may explain the relationship between an individual's internal working models for arousal-related sensations and how the individual experiences and responds to these sensations. This raises the possibility that mindfulness mediates the association between attachment and anxiety sensitivity. Whereas anxiety sensitivity has been linked to insecure attachment, mindfulness may develop through secure attachment: a mindful caregiver attends openly and receptively to an infant's needs, engendering both secure attachment and a mindful orientation to experience (see Snyder et al. 2012). In adults, mindfulness is negatively related to both the anxiety and avoidance dimensions of attachment (Cordon and Finney 2008; Shaver et al. 2007; Walsh et al. 2009), suggesting that interpersonal security may promote the ability to attend to and accept experience by liberating resources that would otherwise be occupied with maintaining safeness (Ryan et al. 2007). Mindfulness has been found to be inversely related to anxiety sensitivity in both clinical and normative samples (Luberto et al. 2011; McCracken and Keogh 2009; McKee et al. 2007; Tanay et al. 2011). In other words, the extent to which attachment patterns (and corresponding internal working models) lead to "fear of fear" (anxiety sensitivity) may be mediated by an individual's capacity for openness to, acceptance of, and nonreactivity to experience in general.

Mediation models imply causal direction; we hypothesized that attachment anxiety contributes to anxiety sensitivity and that this is influenced by mindfulness. Very little empirical research to date—all of it correlational—has examined the connections between attachment, anxiety sensitivity, and mindfulness. The ordering of variables was therefore premised on the theoretical understanding that adults have attachment-acquired internal working models that operate as an organizing framework for emotional experience (including anxiety) from moment-to-moment (Cassidy 1994) and that mindfulness may develop through secure attachment relationships (Snyder et al. 2012). Furthermore, it seemed reasonable to presume that anxiety sensitivity would develop through a "mindless" process, i.e., reacting with judgment to arousal sensations.

This study was impelled by the question: does mindfulness explain relations between the dimensions of adult attachment (anxiety and avoidance) and anxiety sensitivity (physical, cognitive, and social concerns) in a normative sample of young adults? We measured four facets of mindfulness including the tendencies to observe inner experience, describe experience with words, act with awareness, and accept experience without judgment. We predicted that (1) people high on attachment anxiety would report high anxiety sensitivity; (2) the tendency to observe experience would mediate this association through positive correlations with both attachment anxiety and anxiety sensitivity; (3) the tendency to maintain awareness of experience and the tendency to accept experience would mediate this association through negative correlations with both attachment anxiety and anxiety sensitivity; and (4) any association between attachment avoidance and anxiety sensitivity would be weak, and not mediated by mindfulness facets.

Method

Participants

Participants were 505 undergraduate students (335 W, 170 M) enrolled in introductory psychology courses at a small university in Canada. Participants had a mean age of 18.7 years (SD= 2.5, range=17–45 years), and the majority were of European-Canadian descent (82.8 %).

Procedure

All measures were embedded in a larger questionnaire packet administered to introductory psychology students. The position of individual measures within the questionnaire was randomized and varied across participants. Participants gave informed consent and received partial course credit in exchange for participation.

Measures

Experiences in Close Relationships Questionnaire—Revised (ECR-R; Fraley et al. 2000). The ECR-R includes two 18-item subscales measuring the dimensions underlying adult romantic attachment styles: anxiety and avoidance. Participants

responded to each item using a 7-point scale that ranged from 1 (*disagree strongly*) to 7 (*agree strongly*). The ECR-R has good test-retest reliability (86 % shared variance over 6 weeks; Sibley and Liu 2004) and good convergent and divergent validity (Fairchild and Finney 2006). Internal consistency in the present sample was high for anxiety (α=.92) and avoidance (α=.91).

Anxiety Sensitivity Index-3 (ASI-3; Taylor et al. 2007). The ASI-3 is an 18-item questionnaire scored using scale ranging from 0 (*very little*) to 4 (*very much*). The questionnaire yields a score for each anxiety sensitivity dimension: physical concerns (e.g., "It scares me when my heart beats rapidly"); cognitive concerns (e.g., "When my thoughts seem to speed up, I worry that I might be going crazy"); and social concerns (e.g., "I worry that other people will notice my anxiety"). The ASI-3 has demonstrated convergent, discriminant, and criterion-related validity (Taylor et al. 2007). In the present sample, internal consistency was good for the total (α=.87), physical (α=.82), cognitive (α=.83), and social (α=.74) scores.

Kentucky Inventory of Mindfulness Skills (KIMS; Baer et al. 2004). The KIMS is a 39-item self-report measure. Participants indicate on a scale from 1 (*never or very rarely true*) to 5 (*almost always or always true*) their agreement with statements capturing different aspects of mindful behavior. The KIMS has four subscales each covering a different mindfulness facet. "Observe" measures the tendency to observe sensations, thoughts, and emotions (e.g., "I notice when my moods begin to change"). "Describe" measures the tendency to describe one's experience with words. "Act with awareness" (or "aware") measures the tendency to engage in present-moment activities and experience without distraction. "Accept without judgment" (or "accept") measures the tendency to experience the present without analyzing, evaluating, or judging one's experience. The four scales have adequate test-retest reliability (r=.65 to r=.86; Baer et al. 2004) and have repeatedly demonstrated convergent and discriminant validity (e.g., Baer et al. 2004; Dekeyser et al. 2008). Internal consistency in the present sample was high for observe (α=.84), describe (α=.86), aware (α=.81), and accept (α=.74).

Data Analyses

Bivariate Pearson correlations between attachment dimensions, mindfulness facets, and anxiety sensitivity dimensions were conducted to establish basic associations between all variables. Listwise deletion was used, in order to maintain consistency with subsequent mediation analyses, which requires a complete dataset. Multiple mediation analyses were conducted to test the hypothesis that multiple mindfulness facets mediate the associations between attachment dimensions and anxiety sensitivity dimensions. Mediation analyses generally test the total effect of a predictor variable (X) on a criterion variable (Y), which consists of both a direct effect and an indirect effect through a mediator (M). Multiple mediation estimates the specific indirect effects of several possible mediators (M_i) and their combined indirect effect (see Fig. 1). Following Preacher and Hayes (2008) and Shrout and Bolger (2002), the nonparametric bootstrapping approach was used to assess the significance of indirect effects. In the present study, 5000 samples were drawn with replacement from the dataset to generate a distribution of the indirect effects, point estimates, and 95 % confidence intervals. Indirect effects were considered significant if the confidence intervals did not contain zero. SPSS *Process* macros from Hayes (2013) were used.

Results

Correlational Analyses

Bivariate correlations between dimensions of adult attachment, mindfulness, and anxiety sensitivity are reported in Table 1 (Bonferroni correction, p=.05/36=.001). Attachment anxiety correlated positively with all three anxiety sensitivity dimensions. In contrast, attachment avoidance was positively correlated only with anxiety sensitivity-cognitive concerns. Attachment anxiety was negatively related to aware and accept, while attachment avoidance was negatively correlated with describe only. Examination of the correlations between the three anxiety sensitivity dimensions and the four mindfulness dimensions revealed a negative correlation between anxiety sensitivity-social concerns and accept. Anxiety sensitivity-cognitive concerns also were negatively correlated with accept and aware. Both anxiety sensitivity-physical concerns and anxiety sensitivity-cognitive concerns were positively correlated with observe.

Mediation Analyses

Results of mediation analyses for the effect of attachment anxiety and avoidance on the three anxiety sensitivity dimensions are summarized in Table 2.

There was a significant total indirect effect of attachment anxiety through the combined dimensions of mindfulness on anxiety sensitivity-physical concerns, on anxiety sensitivity-cognitive concerns, and on anxiety sensitivity-social concerns. Specific indirect effects indicate mediation through a specific mindfulness facet, above and beyond the total indirect effect (see Fig. 1). For anxiety sensitivity-physical concerns, the only significant specific indirect effect was through observe. As predicted, both the "a" pathway (effect of attachment

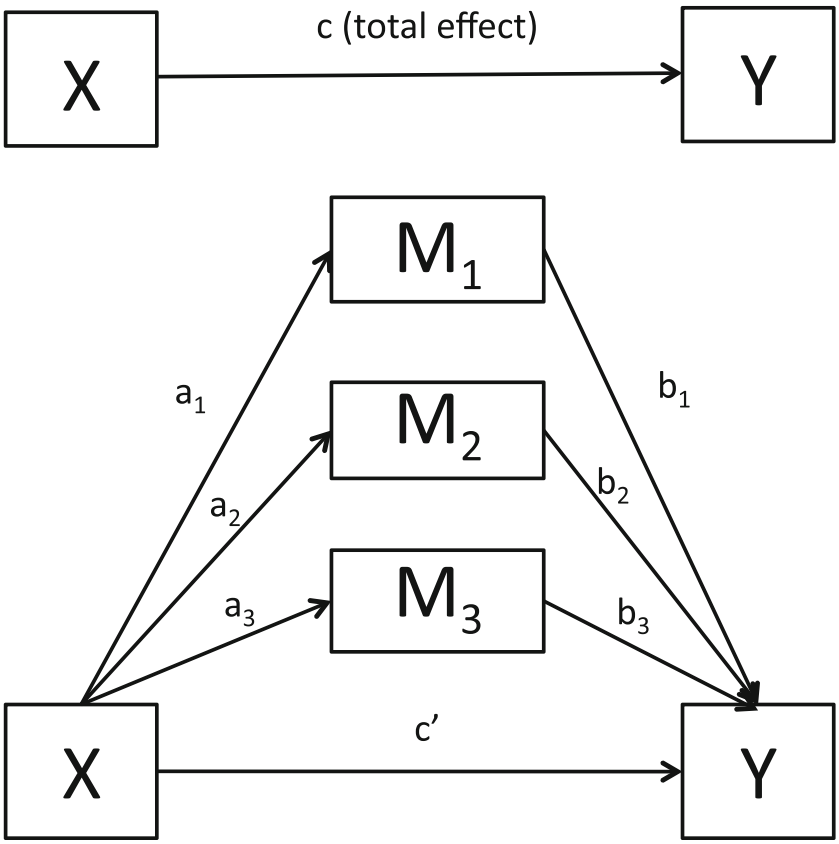

Fig. 1 Multiple mediation design with three mediators. X (predictor variable) influences Y (criterion variable) through M_i mediator variables. The c pathway represents the total effect of X on Y. It consists of the following: the direct effect of X on Y (c′); the specific indirect effects of X on Y through M_i (each a_ib_i pathway). The sum of the specific indirect effects represents the total indirect effect of X on Y. Figure adapted from Preacher and Hayes (2008), page 881

anxiety on observe) and the "b" pathway (effect of observe on anxiety sensitivity-physical concerns) were positive. For anxiety sensitivity-cognitive concerns, specific indirect effects through observe, aware, and accept were each significant. Pairwise contrasts revealed that the effect through accept was the strongest specific indirect effect. For anxiety sensitivity-social concerns, only the specific indirect effect through accept was significant.

There was a significant total indirect effect of the mindfulness dimensions on the associations of attachment avoidance with anxiety sensitivity-physical concerns, anxiety sensitivity-cognitive concerns, and anxiety sensitivity-social concerns. The specific indirect effect of attachment avoidance on all three of the anxiety sensitivity dimensions through accept was significant. Specific indirect effects through observe, describe, and aware were not significant.

Table 1 Correlations among attachment dimensions, anxiety sensitivity, and mindfulness

Variable	1	2	3	4	5	6	7	8	9
1. ECR-R Anxiety	-								
2. ECR-R Avoidance	.38*	-							
3. ASI-3 Physical	.23*	−.01	-						
4. ASI-3 Cognitive	.35*	.19*	.50*	-					
5. ASI-3 Social	.31*	.11	.47*	.47*	-				
6. KIMS-Observe	.11	−.05	.16*	.20*	.11	-			
7. KIMS-Describe	−.09	−.16*	−.02	−.05	−.06	.35*	-		
8. KIMS-Aware	−.22*	−.08	−.13	−.18*	−.14	.13	.20*	-	
9. KIMS-Accept	−.46*	−.14	−.24*	−.43*	−.39*	−.38*	.06	.22*	-

ECR-R Experiences in Close Relationships-Revised (Fraley et al. 2000), *ASI-3* Anxiety Sensitivity Index-3 (Taylor et al. 2007), *KIMS* Kentucky Inventory of Mindfulness Skills (Baer et al. 2004)

*$p<0.001$ following Bonferroni correction (.05/36)

Table 2 Multiple mediation of the effect of attachment on anxiety sensitivity dimensions through the facets of mindfulness (5000 bootstrap samples)

IV	Mediator	DV	Total effect (c path)	Direct effect (c′ path)	Effect of IV on M_i (a_i path)	Effect of M_i on DV (b_i path)	Total indirect effect ($\Sigma_i[a_ib_i]$ paths)		Specific indirect effect (a_ib_i path)	
							Point est.	BC 95 % CI	Point est.	BC 95 % CI
ECR-Anxiety	KIMS-Observe	ASI-Phys	.0494***	.0313**	.0436*	.0649*	.0182*	.0072–.0311	.0027*	.0003–.0077
	KIMS-Describe				−.0286*	−.0162			.0005	−.0011–.0035
	KIMS-Aware				−.0632***	−.0634			.0040	.0000–.0093
	KIMS-Accept				−.1568***	−.0692*			.0182	−.0004–.0227
	KIMS-Observe	ASI-Cog	.0710***	.0369***	.0436*	.0433	.0343*	.0238–.0458	.0019*	.0001–.0057
	KIMS-Describe				−.0286*	−.0163			.0005	−.0008–.0032
	KIMS-Aware				−.0632***	−.0607*			.0039*	.0003–.0087
	KIMS-Accept				−.1568***	−.1778***			.0380*	.0186–.0386
	KIMS-Observe	ASI-Soc	.0754***	.0392***	.0436*	−.0078	.0362*	.0233–.0517	−.0003	−.0040–.0023
	KIMS-Describe				−.0286*	−.0106			.0003	−.0019–.0031
	KIMS-Aware				−.0632***	−.0262			.0017	−.0031–.0066
	KIMS-Accept				−.1568***	−.2206***			.0345*	.0213–.0492
ECR-Avoid	KIMS-Observe	ASI-Phys	−.0021	−.0097	−.0204	.0607*	.0076*	.0006–.0158	−.0012	−.0057–.0008
	KIMS-Describe				−.0548***	−.0228			.0012	−.0019–.0059
	KIMS-Aware				−.0240	−.0763			.0018	−.0001–.0059
	KIMS-Accept				−.0501**	−.1150***			.0058*	.0019–.0122
	KIMS-Observe	ASI-Cog	.0417***	.0296***	−.0204	.0436*	.0121*	.0031–.0221	−.0009	−.0042–.0006
	KIMS-Describe				−.0548***	−.0083			.0005	−.0027–.0041
	KIMS-Aware				−.0240	−.0740*			.0018	.0000–.0055
	KIMS-Accept				−.0501**	−.2149***			.0108*	.0038–.0190
	KIMS-Observe	ASI-Soc	.0277*	.0126	−.0204	−.0099	.0151*	.0055–.0262	.0002	−.0010–.0033
	KIMS-Describe				−.0548***	−.0093			.0005	−.0036–.0051
	KIMS-Aware				−.0240	−.0412			.0010	−.0005–.0052
	KIMS-Accept				−.0501**	−.2677***			.0134*	.0048–.0238

ASI-Phys anxiety sensitivity physical concerns, *ASI-Cog* anxiety sensitivity cognitive concerns, *ASI-Soc* anxiety sensitivity social concerns, *ECR-Anxiety* attachment anxiety, *ECR-Avoid* attachment avoidance, *BC 95 % CI* bias-corrected 95 % confidence interval, *point est.* point estimate, *c, c′, a, and b* paths are unstandardized coefficients

*$p<.05$

**$p<.01$

*** $p<.001$

Discussion

This exploratory study provides evidence for the role of mindfulness, as a multidimensional construct, in accounting for relations between the dimensions of adult attachment (anxiety and avoidance) and anxiety sensitivity (physical, cognitive, and social concerns) in a normative sample of young adults. Attachment anxiety, which is characterized by the underregulation of emotion (Shaver and Mikulincer 2007), was associated with all three dimensions of anxiety sensitivity. As expected, individuals high in attachment anxiety showed a reduced tendency to accept experience without judgment and to maintain awareness of experience without distraction. This suggests an overall tendency to evaluate experience (e.g., arousal-related sensations) as threatening and to be hypervigilant about potential threat.

Attachment avoidance, on the other hand, was associated with anxiety sensitivity-cognitive concerns only. The deactivating style (denial and distortion of anxiety-related thoughts and feelings) characteristic of avoidant attachment may engender more fear of the cognitive consequences of arousal (e.g., loss of control, going crazy). People with high attachment avoidance were less likely to label inner experience with words, although it remains unclear whether this reflects a reduced *ability* or a reduced *tendency* to describe inner experience. Indeed, alexithymia (i.e., difficulty identifying and labeling emotions) has been linked to both attachment dimensions (Fossati et al. 2009; Malinckrodt and Wei 2005; Meins et al. 2008). Perhaps it is not surprising then that high attachment avoidance was associated with low levels of understanding inner experience and ability (or willingness) to communicate about that experience (describe). This may reflect the interpersonal distrust and distance characteristic of avoidant attachment. These results are consistent with previous studies that found negative correlations between unifactorial mindfulness scores and both attachment dimensions (Cordon and Finney 2008; Walsh et al. 2009).

Results revealed that the mindfulness facets most relevant for understanding anxiety sensitivity were observe and accept. People high in all anxiety sensitivity dimensions appeared *less* accepting of experience without judgment, befitting their tendency to evaluate arousal-related sensations as catastrophic and to be feared. In contrast, there was a *heightened* tendency to observe thoughts, sensations, and emotions among people high in physical and cognitive (but not social) concerns. This suggests that observe taps into some form of hypervigilance to threatening intrapersonal (i.e., sensorimotor, cognitive, emotional) experiences among those who fear potential physical and psychological consequences of arousal-related somatic sensations.

Finding this bidirectional pattern in a largely nonmeditating student sample is consistent with previous research indicating that self-focused attention (i.e., observe) functions differently in those with (vs. without) other mindfulness skills (e.g., accept, not judge, and not react) (Baer et al. 2006, 2008; Lilja et al. 2013). Mindfulness practice facilitates unbiased observation of all stimuli. For nonmeditators, observe appears to capture self-focused attention that is biased toward unpleasant or threatening information (Baer et al. 2006). Baer et al. (2008) found that, in nonmeditating students, observe was related to negative psychological symptoms, while all other mindfulness facets were related to well-being. Similarly, in the present sample, the tendency to observe inner experience correlated positively with anxiety sensitivity-physical and cognitive concerns, whereas accept correlated negatively with the anxiety sensitivity dimensions, apparently indicating a biased tendency to notice and judge sensations related to anxiety.

Results of the mediation analyses, in particular the specific indirect effects, supported this interpretation. Specific indirect effects indicate mediation through a specific mindfulness facet above and behind the total indirect effect through mindfulness. For the effects of attachment anxiety on anxiety sensitivity-physical concerns and social concerns, there was a specific indirect effect through observe. In other words, people high in attachment anxiety reported higher tendencies to observe sensations, thoughts, and feelings, and this (hyper)vigilance partially accounted for heightened fear of the physical and psychological consequences of arousal sensations. In contrast, there was no specific indirect effect through observe on anxiety sensitivity-social concerns. It may be that people high in social concerns are more vigilant for interpersonal information, whereas observe assesses the tendency to notice intrapersonal experiences (i.e., sensations, somatic feedback, thoughts, and feelings).

As predicted, attachment anxiety was related to higher cognitive concerns through the specific indirect effect of *lower* scores on acting with awareness and accepting without judgment. Similarly, people with high attachment anxiety also reported higher social concerns, and this association was mediated by accept. In other words, people with high attachment anxiety tend to evaluate arousal as threatening and, consequently, try to divert their attention or change the experience. In doing so, their fears are reinforced, and they miss the opportunity to learn that such sensations are fleeting and nonthreatening—hence, their higher anxiety sensitivity scores.

Contrary to predictions, the association between attachment avoidance and anxiety sensitivity was mediated by the mindfulness dimension of accepting without judgment. To understand this finding, it is important to recall that attachment avoidance is characterized by deactivating emotion regulating strategies (Shaver and Mikulincer 2007). These strategies may entail maladaptive distortion or denial of negative affect (i.e., the opposite of accept) that prevents complete processing of emotional experience (Foa and Kozak 1986). Consequently, arousal may be misunderstood and feared or may escalate because of incomplete processing of the underlying emotion.

Thus, even though the correlations between attachment avoidance and anxiety sensitivity dimensions are relatively small compared to those between attachment anxiety and anxiety sensitivity, it makes sense that low acceptance (i.e., denial, distortion) partly accounts for those associations.

Taken together, the results of the present study indicate that dispositional mindfulness is an important emotion-regulating factor that can influence the relationship between adult attachment and anxiety sensitivity, a well-established risk factor for psychopathology. Two facets of mindfulness, in particular—observe and accept—appear to play key roles in this regard. These findings illustrate the importance of considering mindfulness when assessing an individual's emotion regulation profile. Whereas attachment patterns are not so amenable to change (especially as we get older), targeting mediators such as mindfulness may be a better way to proceed if we are to reduce the likelihood of negative outcomes, such as high anxiety sensitivity. Enhancing mindfulness, especially acceptance perhaps, may facilitate better understanding of attachment experiences and mitigate the impact of insecure attachment.

The present study contributes to the mounting evidence that mindfulness is not only multifaceted, but that some facets (observe vs. accept) operate differently in different populations (i.e., meditators vs. nonmeditators). Moreover, different facets may render distinct effects on emotion regulation and the development or maintenance of psychopathology. This underlines the importance of using multifaceted mindfulness measures in both research and clinical practice. Although we do not yet know whether being able to *measure* multiple mindfulness facets indicates that there are distinct mindfulness *skills* (Lilja et al. 2013), these findings highlight the potential clinical utility of assessing specific mindfulness facets in the treatment of psychopathology associated with anxiety sensitivity. For example, individuals high in attachment anxiety and anxiety sensitivity (especially those also high in observe) may benefit from acceptance-based training versus focusing solely on observing immediate experience. Individuals high in attachment avoidance and/or anxiety sensitivity-cognitive concerns, on the other hand, may benefit more from developing the capacity to observe and label experience.

The present findings must be considered in light of certain limitations. First, our use of a convenience sample of undergraduates permitted exploration of a multiple mediation model (which requires a large sample) but limits generalizability. Secure attachment may be over-represented in university samples, so further research with community and clinical samples is needed to verify whether these associations occur in populations with more varied attachment distributions, and—in the case of clinical samples—whether anxiety-related symptomatology fits with this mediation model. In addition, self-report mindfulness questionnaire items may have idiosyncratic meanings; the KIMS Observe scale may capture self-focused attention rather than a mindful quality of "noticing" experience (Bergomi et al. 2013). Nonetheless, the present study's reliance on self-report measures (at least for mindfulness) is consistent with the current state of mindfulness research, as reflected by ongoing attempts to define and operationalize the construct. Finally, all mediation models infer temporal causality; however, findings based on cross-sectional data such as ours cannot rule out alternative temporal orderings of the variables (Gelfand et al. 2009). Our cross-sectional design precludes conclusions about the developmental basis of mindfulness and anxiety sensitivity in the context of attachment relationships. Prospective studies are required.

In summary, the present study explored how adults with attachment-related expectancies (internal working models) about the intrapersonal and interpersonal consequences of distress might interpret (and fear) the experience of anxiety according to those internal working models. Results suggest that certain facets of mindfulness can explain whether the experience of anxiety is experienced "mindlessly," through the filter of attachment-related expectancies, or whether the experience of anxiety is experienced openly, directly, and without evaluation as threatening.

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