

Running Head: INTERPERSONAL AND TRANSDIAGNOSTIC APPLICATIONS OF
CONTRAST AVOIDANCE MODEL

INVESTIGATING TRANSDIAGNOSTIC AND INTERPERSONAL APPLICATIONS
OF THE CONTRAST AVOIDANCE MODEL THROUGH PATH ANALYSIS

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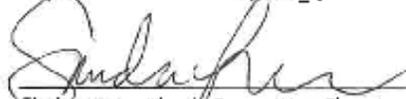
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INTERPERSONAL AND TRANSDIAGNOSTIC APPLICATION OF CONTRAST AVOIDANCE MODEL

Abstract

The current study aimed to evaluate the role of emotional contrast avoidance (CA; Newman & Llera, 2011) in relationships between insecure attachment and outcomes of psychopathological symptoms and interpersonal problems (IPs). It was hypothesized that 1) insecure attachment leads to CA tendencies, and 2) symptoms of both GAD and depression, as well as socially intrusive and socially avoidant IPs, may be mechanisms of CA – in that insecurely attached individuals employ diverse means to maintain a negative state of emotional arousal in order to avoid experiencing downward emotional shifts. A sample of undergraduate participants ($N = 346$) completed a set of self-report questionnaires that measured attachment anxiety, attachment avoidance, contrast avoidance, symptoms of depression, symptoms of GAD, and socially avoidant and intrusive IPs. The best-fit path analysis model demonstrated that contrast avoidance significantly mediated the effects of attachment anxiety and avoidance on all outcomes of interest in predicted ways. Specifically, CA was a significant mediator in relationships between (a) attachment anxiety and both GAD symptoms and socially intrusive IPs, and (b) attachment avoidance and both depressive symptoms and socially avoidant IPs. Findings support hypotheses that CA tendencies may develop due to negative attachment experiences, and that subsequent outcomes can be predicted by whether high levels of attachment anxiety or avoidance are present. Future research should test the efficacy of interventions targeting CA, or mechanisms of CA, in individuals with GAD and/or depression.

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Introduction

Across the lifespan, attachment styles are manifested in later adolescent and adult relationships (Einav, 2014). These attachment styles can be either secure or insecure; however, strategies that once served a purpose for navigating the infant-caregiver relationships marked by inconsistency or unavailability (i.e., insecurity) become increasingly maladaptive in later years. Such insecure attachment patterns have been shown to lead to difficulties with emotion regulation (e.g., Mikulincer, Shaver & Pereg, 2003), interpersonal problems (e.g., Prezworski, et al., 2011), and affect disorders (e.g., Muris, Meesters, van Melick, & Zwambag, 2001).

Previous research analyzing outcomes of insecure attachment has found distinct relationships between attachment difficulties, emotion regulation, interpersonal behaviors, and psychopathology (e.g., Marganska, Gallagher, & Miranda, 2013; Starr et al., 2014; Wei, Vogel, & Zakalik, 2005). The current study will explore the way in which insecure attachment (attachment anxiety and avoidance) relates to emotion regulation strategies (specifically emotional contrast avoidance [CA; Newman & Llera, 2011]), which may be responsible for the development of symptoms of GAD, symptoms of depression and interpersonal problems. Below we review the literature on each of these factors along with the relationships between them, and present a rationale for emotional contrast avoidance as a mediator for these predictive relationships.

Attachment Theory

Theories of attachment have proposed that infants' behaviors towards their caregivers are used to increase the probability of receiving protection and comfort (Bowlby, 1982). Of particular interest to attachment behaviors are the variations in

attachment security seen in caregiver-child relationships. Secure attachments are comprised of trust, responsiveness and consistency from caregivers. In early relationships featuring attachment security, caregivers act as a secure base, in which their children freely explore their surroundings, but also feel comfortable returning when they experience unfamiliar stimuli (Bowlby, 1982). Insecure children on the other hand have patterns of emotion, behavior, and attention that differ markedly from those who are secure (Ainsworth et al., 1978). Such differences have been studied based on the variable ways children use attachment behaviors to maintain or minimize contact with their caregivers.

The Strange-Situation study was comprised of experiments that measured child-caregiver attachment behaviors in scenarios where children were alone or with their mother and/or a stranger (Ainsworth & Bell, 1970). Such experiments were pivotal to the understanding and classification of attachment styles of those who were securely and insecurely attached. These various styles were reflected in the divergent behavioral displays of infants in an unfamiliar setting when caregivers and children were briefly separated and then reunited (Ainsworth, Blehar, Waters, & Wall, 1978; Main & Solomon, 1986). A majority of infants are securely attached and show distress when their mother leaves and warmth upon their mother's return; conversely, insecurely attached children demonstrated distinctly different patterns from their secure counterparts (Ainsworth, Bell, & Stayton, 1971; Ainsworth et al., 1978). These patterns include insecure-ambivalent (where the child shows distress upon separation and reunion), insecure-avoidant (where the child does not appear distressed by separation), or insecure-disorganized/disoriented responses (where the child appears to show both approach and

avoidance behavior toward their mother) (Ainsworth et al., 1978; Main & Solomon, 1986).

These variations in behavior are thought to reflect the child's *internal working models* of attachment (Bowlby, 1973; Bowlby, 1980; Bowlby, 1982). This refers to the child's underlying patterns of thinking and behaving toward their caregivers and other attachment figures that manifest as implicit or explicit rules they implement for attachment relationships. It is believed that insecurely attached individuals have organized attachment information differently than their securely attached counterparts (i.e., have developed distinctly different internal working models of attachment), based on unpleasant or inconsistent situations with their parents.

Newer classifications of attachment styles focus on overall attachment *anxiety* and *avoidance*. Attachment anxiety is the tendency to be preoccupied with relationships, yearn for closeness with others, and excessively fear rejection, whereas attachment avoidance is the tendency to maintain emotional independence while fostering excessive self-reliance (Bartholomew & Horowitz, 1991; Mikulincer et al., 2003). As such, secure attachment is considered to reflect low levels of both attachment anxiety and avoidance. Below we detail the behavioral patterns of mother-child dyads in the strange situation paradigm within the two types of insecure attachment: anxious and avoidant.

Anxiously attached infants (high in attachment anxiety and low in attachment avoidance) protest their mother's attempt to leave (crying, climbing, clambering) but have difficulty settling when their mother returns (i.e., demonstrate distress in both the presence and absence of mother) (Ainsworth et al., 1978). Behavioral observations have also shown anxiously attached children cry more than avoidantly and securely attached

infants during their mothers' absence and return (Zelenko et al., 2005). Such intense reactions suggest that anxiously attached children have internalized the inconsistencies in their attachment figures' behavior and consequently use hyperactive behavioral patterns as a way to get their emotional needs met in such an unpredictable environment (Shaver & Mikulincer, 2002; Mikulincer et al., 2003).

On the other hand, avoidant infants (low in attachment anxiety and high in attachment avoidance) do not seek closeness to their mothers and appear unaffected by their mother's absence. Similarly, these infants barely acknowledged their mother's return (Ainsworth et al., 1978). Compared to other attachment styles, the avoidantly attached infants rarely approach, cling, or hold on to caregivers and do not search for their attachment figures or cry when they are not present. In this way, avoidantly attached children may be demonstrating internalized views that caregivers are not available to them (Mikulincer et al., 2003).

Paradoxically, studies show that the internal emotions of avoidantly attached infants are incongruent with their lack of behavioral distress (Hill-Soderlund et al., 2008; Zelenko et al., 2005). One study showed that avoidantly attached infants had higher levels of vagal withdrawal (suggesting an internal stress response) during their mothers' absence than those who had secure or anxious attachment. Further, they also had higher salivary alpha amylase levels during pre- and post-test, suggesting overall greater tonic levels of arousal (Hill-Soderlund, et al., 2008). The presence of such physiological distress suggests that avoidantly attached children experience an aversive internal state, despite their lack of demonstrating distress at the behavioral level. This disconnect between avoidant children's expressed and felt emotions suggests that this attachment

group may mask their aversive internal experience in order to deal with negative events and regulate emotion.

An observation of parenting behaviors of the various attachment styles may shed light on the distinct behavioral patterns detailed above. Parenting that involves warmth, psychological autonomy and behavioral monitoring is strongly associated with secure attachment in both children and adolescents (Karavasilis, Doyle, & Markiewicz, 2003). Securely attached children have their needs met in an appropriate and consistent manner. Attachment research theorizes that anxiously attached children have received markedly inconsistent and unreliable patterns of caregiving. For instance, dissonant styles of parenting (i.e. a tendency to structure and influence their child's thoughts, but not monitor their actions) are common in parents of anxiously attached individuals. Karavasilis and colleagues (2003) found anxiously attached adolescents to identify their parents as less permitting of psychological autonomy and also less inclined to behaviorally monitor them. Avoidantly attached children, on the other hand, are theorized to have caregivers who are consistently unavailable. As such, attachment behaviors such as attending to and approaching their parents are rarely rewarded (Ainsworth, Blehar, Waters, & Wall, 1978). Indeed, children who are avoidantly attached are more likely to rate their parents as low in warmth and involvement as well as in behavioral control (Karavasilis et al., 2003).

Insecure Attachment Predicts

Anxiety and Depression

A wealth of research literature links insecure attachment style to the presence of a range of psychopathological problems. For instance, in a nationally representative

sample, adult insecure attachment predicted a spectrum of anxious and depressive disorders, including major depressive episodes and GAD, among others (Mickelson, Kessler & Shaver, 1997), and adults with GAD retrospectively report more role-reversed, enmeshed relationships with primary caregivers (Cassidy, 1995) using the Inventory of Adult Attachment (IAA) (Lichtenstein & Cassidy, 1991). Furthermore, insecurely attached individuals report higher levels of anxiety and depression when compared to those who are securely attached (Muris, Mayer and Meesters, 2000; Muris, Meesters, van Melick and Zwambag, 2001), and memories of being emotionally hurt or shamed by attachment figures were shown to have a direct effect on depressive symptoms (Matos, Pinto-Gouveia, & Costa, 2013). A study on insecurely attached children with excessive reassurance seeking tendencies found them to have higher levels of depressive symptoms (Abela, Hankin, Haigh, Adams, Vinokuroff, & Trayhern, 2005). Similarly, in three longitudinal studies with time points ranging from 8 weeks to 2 years, Hankin, Kassel, and Abela (2005) found insecure attachment to predict increases in depressive symptoms and concurrent anxiety symptoms.

Research also shows some differences between attachment anxiety and avoidance in predicting psychopathology. For example, longitudinal research has substantiated claims that anxious attachment predicts pathological anxiety symptoms (Bosquet and Egeland, 2006; Warren, Huston, Egeland, & Sroufe, 1997), and has been clearly associated with both depression and GAD (e.g., Hankin et al., 2005; Marganska et al., 2013; Muris et al., 2001; Shaver, Schachner, & Mikulincer, 2005). Avoidant attachment, on the other hand, has been primarily associated with depression (Hankin et al., 2005; Marganska et al., 2013), and was found to be a weaker predictor of anxiety symptoms

than anxious attachment in a meta-analysis of 46 attachment studies (Colonnesi et al., 2011).

Insecure Attachment and Subsequent

Emotion Regulation Difficulties

Insecurely attached individuals have difficulties controlling and regulating their emotions throughout their lifespan (Mikulincer et al., 2003). Insecure attachment styles predict emotional dysregulation, suggesting that individuals with such attachment styles have difficulties in regulating emotions, controlling impulsive behaviors and tolerating negative emotions (Marganska et al., 2013).

Individuals who are anxiously and avoidantly attached develop and maintain their emotional psychopathology in diverse ways. Attachment anxiety is characterized by a *hyperactivation* of attachment systems, in which negative emotions repeatedly cycle in the mind of the individual and result in an increase in response to the attachment-related stimuli (Shaver & Mikulincer, 2002). Attachment avoidance involves a *deactivation* of attachment systems, as the individual dismisses his or her desire for relationships, leading to a decrease in response to the attachment-related stimuli (Shaver & Mikulincer, 2002). In support of this research, anxious attachment leads to difficulties in goal-directed behavior, whereas avoidant attachment leads to lack of emotional awareness (Marganska et al., 2013). Such findings imply that individuals with avoidant attachment show shortfalls in identifying their own emotions, in contrast to the challenges with emotional reactivity in individuals who are anxiously attached. This dichotomy of regulatory strategies used by individuals with attachment anxiety and avoidance was hypothesized to be forged by early responses to attachment figures (Mikulincer et al., 2003).

Generally, insecure attachment precedes difficulties in regulating emotions, including non-acceptance of emotional responses, impulse control difficulties, limited access to emotion regulations strategies, and having a lack of emotional clarity (Marganska et al., 2013). Such evidence suggests insecurely attached individuals lack adaptive skills for managing and identifying their emotions, indicating a possible need for alternate ways of navigating their emotional fluctuations.

Research has shown that problems with emotion regulation can also link early attachment difficulties with later psychopathology. Lanciano and colleagues (2012) found a lower degree of emotional intelligence domains, such as perceiving, using, understanding, and managing emotions, to explain the relationship between attachment insecurities and depression-related rumination. In another study, attachment anxiety and avoidance both predicted depressive symptoms but these relationships were mediated by different emotion regulation strategies; anxious attachment was mediated by emotional reactivity, whereas avoidant attachment was mediated by emotional deactivation (Tasca et al., 2009). Complementary to such findings regarding emotional regulation and depressive symptoms, Marganska and colleagues (2013) found the lack of emotion regulation strategies (e.g. perceived deficiency in lack of strategies to manage emotions and tendencies to react to distress in an impulsive manner) to mediate the relationship between anxious attachment and symptoms of GAD.

Insecure Attachment Leads to

Interpersonal Problems

Another negative outcome associated with insecure attachment is an elevation in interpersonal problems. The Inventory of Interpersonal Problems-Circumplex Scale (IIP-

C; Alden, Wiggins & Pincus, 1990) has been used to classify individuals by their subjective level of distress in interpersonal relationships, as well as their idiosyncratic interpersonal behaviors contributing to their problems. The IIP-C classifies individuals into quadrants based on the degree to which they fall on two orthogonal dimensions, domineering to nonassertive (controlling, manipulating, aggressing toward others versus concealing needs from others, submissive, and unassertive with others), and cold to overly-nurturant (lack of affection, hesitation towards commitment in relationships, and unforgiving versus trying hard to please, overly generous, intrusive, and permissive in dealing with others). Insecure attachment is associated with more overall interpersonal distress and problems, whereas secure attachment is associated with less overall interpersonal distress and problems (Haggerty, Hilsenroth, Vala-Stewart, 2009).

The interpersonal presentations of avoidantly and anxiously attached individuals, however, are markedly different from one another. A study that measured attachment styles and interpersonal problems found avoidantly attached individuals tend to behave in cold and hostile ways, whereas anxiously attached individuals tend to behave in warm and dominant ways (Horowitz, Rosenberg, and Bartholomew, 1993). Such studies lend support to a hypothesis that cold/hostile behavior of avoidantly attached individuals may be an attempt to distance from others in order to reduce the chances of rejection and/or loss; this is possibly due to internal models of relationships marked by rejection. Inversely, the warm/dominant behavior of anxiously attached individuals may be an attempt to prevent rejection and/or loss by constantly intruding in the lives of others and frantically seeking to balance out any rifts in relationships that may occur over time; this is possibly due to internal models of relationships marked by inconsistency. Research

supports that individuals with maladaptive attachment styles learn to control their intrapersonal or interpersonal experience using rigid and inflexible patterns of behavior aimed at avoiding the possibility of rejection (Wei et al., 2005). However, these interpersonal strategies may paradoxically produce interpersonal rejection or loss.

Interpersonal Problems and Psychopathology

Problematic interpersonal strategies used by those with anxious and avoidant attachment styles may be intrinsically linked with GAD and/or depression. Indeed, adults with anxious and depressive disorders have been found to experience a range of interpersonal problems. Depression has been associated with social dissatisfaction, marital dissatisfaction and problematic interpersonal behaviors (Abela et al., 2005; Whisman, Sheldon, & Goering, 2000). Also, those with depressive disorders have reported greater overall distress from interpersonal problems than individuals without mental health disorders (Grosse Holtforth, Altenstein, Krieger, Fluckiger, Wright, & Caspar, 2014). In a national survey, Whisman (2007) found depressive disorder to predict marital distress among participants. Symptoms of anxiety, and especially GAD, also coincide with relationship distress and interpersonal dissatisfaction in marriage and other social relationships (Whisman, Sheldon, & Goering, 2000; Whisman, 2007; Zaider, Heimberg, & Iida, 2010). Interpersonal problems caused by GAD and depression may act as maintaining factors as well, as individuals with GAD report interpersonal issues regarding couple and family relationships as their most frequent content area of worry topics (Roemer, Molina, & Borkovec, 1997), and interpersonal dimensions that were not addressed in CBT for GAD predicted worse psychopathological outcomes (Borkovec, Newman, Pincus, & Lytle, 2002).

It is plausible that interpersonal patterns are a major factor explaining anxiety and depression comorbidity in individuals who are insecurely attached. This proposition is supported by research showing that excessive reassurance seeking in intimate partner relationships mediates the relationship between attachment anxiety and depression (Shaver et al., 2005). Moreover, Starr and colleagues (2014) found that both interpersonal oversensitivity (worrying about displeasing others or sensitivity to criticism) and chronic social stress explained the relationship between GAD and later depression.

Research has uncovered specific patterns of interpersonal strategies used by those with GAD and depression. Prezworski and colleagues (2011) explored the interpersonal subtypes of individuals with GAD and high worriers, finding that their problematic interpersonal behaviors are comprised of acting in intrusive, exploitable, nonassertive, and cold ways, with comparable patterns found by Salzer and colleagues (Salzer, Pincus, Winkelbach, Lechsenring, & Leibing, 2011). Erickson and Newman (2007) found participants screened as meeting GAD symptom criteria to over- or under-estimate the degree to which they used hostile-submissive behaviors (incompetence, harboring expectations of ridicule, being overly reserved) as well as submissive behaviors (unassertiveness that requires others to be more dominant). Further, participants meeting GAD criteria who worried more had a lower accuracy at estimating the negative impact they made, and received lower interpersonal ratings by confederates who interacted with them in the study (Erickson & Newman, 2007). Pincus and Borkovec (1994) also found individuals with GAD to exhibit their maladaptive behavioral tendencies in an inflexible manner that did not adapt to or account for dynamic interactions with others. In summary,

interpersonal problems among individuals with GAD manifest as rigid over-involvement (intrusive), excessive agreeableness (exploitable and nonassertive), and dismissiveness (cold). This suggests that individuals with GAD may attempt to avoid interpersonal friction/loss by overly managing the feelings of others, by backing down, or by backing away.

Individuals with depression show some overlap with GAD in terms of their interpersonal patterns. Using the IIP-C scale to study individuals with depression, Cain and colleagues (2012) found six interpersonal subtypes, including extraverted, dominant, arrogant, cold, submissive, and unassuming. However, most participants in the study were classified as cold, and were more likely to engage in dismissive and/or quarrelsome behavior. In a study on psychotherapy outpatients with predominantly depressive disorder, Grosse Holtforth and colleagues (2014) classified most of those who had distressing interpersonal patterns as submissive. Such studies show that the two predominant subtypes of individuals with are submissive and cold. This suggests that individuals with depression may either put others' needs before their own or create distance from others in order to minimize interpersonal friction and loss.

Unfortunately for both individuals with depression and GAD, behavioral patterns with the intended function to avoid interpersonal problems may have unintended consequences in producing or maintaining interpersonal problems. Paradoxically, this may lead to even more interpersonal distress and rigid adherence to interpersonal styles.

Experiential and Contrast Avoidance as a Mechanism of Emotion Dysregulation

One possible link between insecure attachment and the variety of negative outcomes discussed above is problematic emotion regulation strategies. For example, given their history of upsetting emotional experiences, it is likely that individuals with insecure attachment may use maladaptive emotion regulation strategies to avoid unwanted emotional experiences. Hayes and colleagues (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996) describe experiential avoidance as attempts to distance oneself from aversive experiences (ranging from sensory to imagined experiences), while trying to reduce the probability that the provoking stimuli will lead to such intense or unwanted experiences in the future. Use of experiential avoidance strategies in a rigid and/or inflexible manner can lead to long-term psychological and emotional consequences because the individual is not in contact with his or her everyday experiences and thus is impeded in his/her attempts at reaching goals (Kashdan, Barrios, Forsyth, & Steger, 2005).

One proposed mechanism of experiential avoidance that main explain this connection is Newman and Llera's (2011) Contrast Avoidance model, which focuses on avoidance of *shifts* in affect. This model was proposed to explicate the role of chronic worry as an attempt at emotion regulation in GAD, but may have transdiagnostic applications. The theory suggests that individuals with GAD have a lower tolerance for emotional shifts caused by negative events, and thus use worry to paradoxically maintain chronic negative emotionality, allowing them to avoid a negative contrast in emotions should a negative event occur. This theory was based on studies by Llera and Newman

(2010; 2014), during which participants with GAD and non-anxious controls were instructed to either worry, relax, or maintain a neutral mood prior to exposure to fearful, sad, and happy emotions through emotionally charged film clips. Compared to participants watching a relaxed movie clip, those in the worry condition had less of a change in negative emotionality (i.e., emotional contrast) when transitioning to a fearful clip, when compared to those who were relaxed prior to the clip. Negative emotionality was measured by both subjective negative affect and physiological arousal. Data indicated that both GAD and non-anxious participants in the worry condition experienced an increase in somatic activation and negative affect from baseline to the worry period, a state that was maintained across the fear exposure. Participants in relaxed and neutral mood conditions, on the other hand, experienced a stronger negative emotional shift, or contrast, upon watching the negative film clips.

Results of the study suggest that participants who worried prior to negative exposures did not avoid experiencing unwanted emotions, rather, they generated negative emotionality through worry, which allowed for an avoidance of a *shift* to negative emotions when exposed to aversive stimuli (Llera & Newman, 2010, 2014). Of interest, only participants with GAD reported this avoidance of a shift as helpful in coping with their subsequent emotions, whereas non-anxious controls did not find it to be helpful. Based on these findings, Newman and Llera (2011) concluded that individuals with GAD may be using worry as a defense mechanism to avoid aversive emotional contrasts, and perceive this as helpful in coping with negative events. However, they are also inhibiting themselves from fully experiencing the emotional shift associated with negative events. This may prevent the extinction of anxious symptoms, given that exposure to fearful

stimuli only results in reduction of anxious symptoms if individuals are able to access the full fear structure during exposures (see Foa & Kozak, 1986). If such emotional shifts are avoided, then anxious associations to feared events/stimuli are maintained.

Recent research suggests that the Contrast Avoidance model may be explored transdiagnostically to advance understanding of the etiology of various forms of psychopathology beyond GAD, in which negative emotionality may be produced and sustained by other mechanisms. For example, it has been hypothesized that depressed individuals may engage in behaviors similar to worry (e.g. rumination) that also serve to avoid the experience of emotional shifts by maintaining a chronically negative state (Newman, Llera, Erickson, Prezworski, & Castonguay, 2013; Newman, Llera, Erickson, & Prezworski, 2014). This was based on Nolen-Hoeksema and colleagues' (2008) theory of depression, in which rumination fosters hopelessness about negative life events, therefore inhibiting individuals from implementing solutions. This theory suggests that individuals who ruminate would prefer feeling hopeless and therefore certain about future events, rather than being uncertain about the possibility of having negative experiences or failing to improve situations with their chosen solutions. Newman and colleagues (2013) extended this theory by proposing that rumination might be a manifestation of contrast avoidance tendencies, being that individuals are producing a negative (ruminative) state that prevents them from experiencing events that are considerably more painful (e.g. feelings of failure when implementing a solution leads to negative or null outcomes). Therefore, contrast avoidance tendencies may be predictive of depression, due to the use of rumination as a method of experiential avoidance.

Newman and colleagues (2013; 2014) also hypothesized a trajectory by which insecurely attached children may develop sensitivity to negative emotional contrast experiences. Given that a history of inconsistent parenting may lead to the development of attachment anxiety, it is possible that these children live in a state of suspense, not knowing what type of parenting experience they are about to receive. Newman and colleagues (2013) propose that anxiously attached children learn to sustain negative emotionality to brace for unexpected negative attachment experiences. Avoidantly attached children, on the other hand, are consistently rejected by their parents and may begin to engender a chronically negative internal state in order to avoid the disappointment they would anticipate if they get their hopes up only to experience interpersonal rejection (Newman et al., 2013). This is supported by research showing that avoidantly attached children have markedly higher levels of tonic arousal than their secure and anxiously attached counterparts (Hill-Soderlund, et al., 2008), which indicates that they harbor consistently high levels of distress.

Preliminary research by Jamil and Llera (2015) found support for these predictions, in that contrast avoidance tendencies were shown to mediate the relationship between both anxious and avoidant attachment and GAD and depression symptoms in an adult sample. This supports the hypothesis that individuals learned to cope with inconsistent or unavailable caregivers through maintaining a state of intrapersonal negativity to prepare for aversive and/or discouraging events with them, which in turn predicts symptoms of GAD and depression (Newman et al., 2013; 2014).

Besides engaging in cognitive/affective behaviors such as worry and rumination, an additional possible mechanism by which insecurely attached individuals may be

avoiding emotional contrast is through the use of maladaptive interpersonal behaviors. As proposed by Newman and colleagues (2013; 2014), some individuals with insecure attachment may use cold behaviors to avoid negative affective shifts, therefore making a choice to distance themselves from others rather than establishing interpersonal connections that lead to feelings of vulnerability and potential rejection. With similar logic, some individuals may use unassertive social behaviors as a means to limit hostile responses from others. Others may instead utilize affiliative or warm behaviors that are intrusive, such as seeking to identify potential relationship conflicts and manage them in order to maintain tranquility and closeness with others (Newman et al., 2013; also, see Newman et al., 2014, for case studies of these interpersonal/emotional patterns).

Such interpersonal behaviors may function to avoid subsequent negative emotional shifts due to conflict, loss, disappointment, and so forth. However, paradoxically these behaviors may lead to a variety of their own interpersonal problems (Newman et al., 2013; 2014). Notably, insecurely attached individuals were more likely to experience negative affect and did not avoid negative consequences altogether by using these interpersonal strategies (Wei et al., 2005). Such findings are consistent with the Contrast Avoidance model.

The goal of the present study is to use path modeling to examine whether individuals who are insecurely attached (e.g. high attachment anxiety and attachment avoidance) have higher contrast avoidance (CA) tendencies, which subsequently predict psychopathological outcomes (e.g. anxiety and depression) as well as interpersonal problems (IPs) (e.g., intrusive and socially avoidant problems). The present study hypothesizes that the following paths will be significant in a measured path analysis

model (Figure 1): Attachment anxiety will predict CA tendencies, GAD symptoms and intrusive IPs, whereas attachment avoidance will predict CA tendencies, depressive symptoms and socially avoidant IPs. Symptoms of depression and GAD, GAD and intrusive IPs, and depression and socially avoidant IPs are hypothesized to covary. We predict that the relationships between attachment anxiety and avoidance and all outcome variables will be mediated by CA.

Methods

A variety of self-report questionnaires were used to measure variables of interest in the current study. Path analysis was used to test the hypothesized relationships between variables of interest.

Participants

Participants were 354 undergraduate students at a Mid-Atlantic University who were recruited and rewarded course credit through a psychology research pool for their voluntary participation in the study. In terms of gender, 264 identified as being female (74.6%), 88 as male (24.86%), 1 as transgender (0.3%), and 1 as gender non-binary (0.3%). The average participant age was 19.59 ($SD = 3.03$), and participants were relatively ethnically diverse. Specifically, there were 229 Caucasian (64.7%), 82 African American (23.2%), 21 Asian American (5.9%), 8 biracial (2.3%), and 6 Latina/o (1.7%) participants. Eight participants identified that their race as an unspecified “other” (2.3%).

Questionnaire Measures

The survey of the current study consisted of seven inventories, which measured anxious and avoidant attachment, emotional contrast avoidance, GAD symptoms, depressive symptoms, intrusive IPs and socially avoidant IPs.

Attachment Anxiety and Avoidance.

The Relationship Scales Questionnaire (RSQ; Griffin & Bartholomew, 1994) was used to measure attachment insecurity, through questions that inquired about attachment avoidance and attachment anxiety. The RSQ is a 30 item scale, with items on a 5-point Likert-scale ranging from 1 (“Not at all like me”) to 5 (“Very like me”). The RSQ is a versatile measure that can group individuals by attachment style (e.g., secure, ambivalent, avoidant/dismissive, and fearful/disorganized) or measure levels of attachment anxiety and avoidance continuously by utilizing a subset of questions (Kurdek, 2002; Roisman et al., 2007; Simpson, Rholes, & Nelligan, 1992). As such, eight items comprise the attachment avoidance subscale (e.g. “I find that others are reluctant to get as close as I would like”; alphas ranged from .72 - .74) and five items comprise the attachment anxiety subscale (e.g. “I prefer not to depend on others.” alphas ranged from .74 - .77) (Griffin and Bartholomew, 1994). Both scales are continuous.

Emotional Contrast Avoidance.

The Contrast Avoidance Questionnaire – General Emotion (CAQ-GE; Newman & Llera, *under review*) was used to measure the degree to which participants report using general behaviors to avoid negative emotional contrast experiences (e.g., focusing on the negative aspects of a situation to generate a bad mood). Participants used a 5-point Likert scale ranging from “not at all true” to “absolutely true” to answer a series of questions regarding emotional contrast experiences. The measure is comprised of four scales measuring 1) preference for feeling bad to avoid negative emotional contrast (e.g., “I maintain a negative mood because it makes it easier to cope when bad things happen”), 2) enabling positive emotional contrast (e.g., “I would rather anticipate the worst outcome

than be blindsided”), 3) discomfort with emotional shifts (e.g., “It really throws me off when I suddenly feel very bad”), and 4) expecting positive outcomes and comfort with emotional shifts (*all reverse-scored*) (e.g., “I make an effort to expect positive things, even if they might not happen”). The CAQ-GE demonstrated strong psychometric properties, including internal consistency reliability ($\alpha = .926$) and test-retest reliability ($r = .93$) in previous research (Llera & Newman, under review). Tests of construct validity were also strong, indicating that the CAQ-GE was more strongly correlated with convergent measures than divergent measures. Further, the CAQ-GE successfully distinguished between those with clinical levels of GAD symptomatology and non-anxious participants (Llera & Newman, under review).

GAD symptom severity.

The Generalized Anxiety Disorder Questionnaire measured participants’ severity of GAD symptoms (GAD-Q-IV; Newman, Zuellig, Kachin, Constantino, Przeworski, Erickson, Cashman-McGrath, 2002). The GAD-Q-IV classifies respondents as having GAD symptomatology based on DSM-IV criteria *and* yields a total score (i.e., continuous data) for GAD symptomatology. The measure has 5 yes/no questions (e.g. "Do you experience excessive worry?"), a written section that inquires respondents' primary worry topics, a 6 symptom checklist, and 2 Likert scale items regarding the respondent's distress and inference of worry on a 9-point scale. The total GAD-Q-IV score ranges from 0 – 13. As compared to structured interviews, the GAD-Q-IV has detected GAD in participants with specificity and sensitivity rates at 83% and 89%, respectively (Newman et al., 2002). Internal consistency for the GAD-Q-IV has been good ($\alpha = .94$). The GAD-Q-IV

has shown high test-retest reliability across a 2-week time period, with 92% of participant scores showing stability across time periods (Newman et al., 2002).

Depressive symptoms.

The BDI-II (Beck, Steer, & Brown, 1996) is comprised of 21-items which measure the degree to which depressive symptoms are experienced by the respondent within the past two weeks. The total score is comprised of all items, each rated on a 4 point Likert-scale from 0 to 3, with higher scores reflecting greater levels of depression. The measure is designed to capture depression criteria featured in the DSM-IV. It has displayed construct validity with the clinician ratings (Beck et al., 1996). The measure has demonstrated convergent validity with other instruments in measuring depressive symptoms, and divergent validity in a lower association with anxious symptoms (Steer, Ball, & Ranieri, 1997). Additionally, the BDI-II has demonstrated good Internal consistency in its factor and total scores (Whisman, Perez, & Ramel, 2000). In the current study, participants were instructed not to respond to item number 9, which measures suicidal ideation (SI). The item was eliminated because participants' identifying information was kept anonymous. As such, appropriate crisis intervention measures could not have been followed if SI was endorsed by an unidentifiable person.

Interpersonal Problems.

The Intrusive and Socially Avoidant subscales of the Inventory of Interpersonal Problems Circumplex Scale (IIP-C; Alden, Wiggins, & Pincus, 1990) were used to assess the degree to which participants endorse such types of problems in their relationships with others. The entire IIP-C is comprised of 64 items, which measure 8 types of IPs (e.g., Domineering, Vindictive, Cold, Socially Avoidant, Nonassertive, Exploitable,

Overly Nurturant, and Intrusive) through 8-item subscales. Respondents rate the degree to which they over- or underuse interpersonal behaviors on a 5-point Likert-scale from 0 (not at all) to 4 (extremely). As such, eight items comprised the Intrusive subscale (e.g., I open up to people too much) as well as the Socially Avoidant subscale (e.g., It is hard for me to express my feelings to other people directly). The IIP-C has demonstrated good reliability for each of the circumplex subscales (Cronbach's alphas ranged from .72 - .85) (IAS-R; Wiggins, Trapnell, & Phillips, 1988).

Procedure

Participants were recruited through an Undergraduate Psychology Research Pool at their University. Participants entered the computer laboratory and presented their University Identification Card to the research assistant hosting the session to ensure they would be rewarded course credit for their voluntary participation in the study.

Participants sat down at a computer station of their choice and listened to a verbal summary of the study given by the research assistant. Participants then accessed the questionnaire online through Qualtrics software (Snow & Mann, 2013), which began with reading and agreeing to a written informed consent for the study. At each computer, a hardcopy of the BDI-II with a random participant ID number was provided to each participant. Participants entered their randomly assigned number in their online survey responses so that their BDI-II data could be matched to other measures. Participants were instructed not to write their demographic information on the hardcopy of the BDI-II in order to maintain anonymity. Upon completion of the paper form of the BDI-II and all online measures, participants placed their BDI-II's in a tray, and were provided a

debriefing form regarding the study and the contact information of the primary investigators.

Statistical Analyses

There were 354 total participants. However, we excluded 8 participants who were missing substantial amounts of data (i.e., 25% or more). All remaining participants were included in subsequent analyses ($N = 346$). Missing data were evaluated across all variables, which found 1.07% of data to be missing. Expectation Maximization (EM) was used to impute missing data values (Domadia, Ardeshana, & Bhatt, 2014). Descriptive statistics, intercorrelations, and internal consistency for all variables are displayed in Table 1.

The path models were analyzed using Mplus 7.3 (Muthén & Muthén, 1998-2013). Analyses of the model were based on maximum likelihood (ML) estimation with accompanying bias-corrected confidence intervals (CI) derived from 10,000 bootstrapping sampling distributions (MacKinnon, Fairchild, & Fritz, 2007). Such bias-corrected CIs are recommended to adjust for imbalance in CI distributions due to non-normality in variable effect statistics, which may lead to asymmetry in coverage above and below the estimated effect size (MacKinnon, Lockwood, & Williams, 2004). The current models (As shown in Figure 1) consisted of two exogenous variables: attachment anxiety and attachment avoidance; and five endogenous variables: CA, GAD symptoms, depressive symptoms, intrusive IPs, and socially avoidant IPs. To obtain adequate statistical power, Tanaka (1987) recommend having a 20 to 1 ratio between sample size to the number of free parameters in a model, whereas other research by Bentler and Chou

(1987) argues only a 5 to 1 ratio is necessary. The sample size of the current study falls in between these two suggestions, with a 15 to 1 ratio of sample size to free parameters.

Goodness of fit for the models were evaluated using the standardized root mean square residual (SRMR), comparative fit index (CFI), Tucker-Lewis Index (TLI), and root mean square error of approximation (RMSEA). Recommended values for adequate model fit are as follows: CFI and TFI values of .90 to .95 or higher (Bentler, 1990), although fit tends to decline as the number of variables increases (Kenny & McCoach, 2003); root mean square error of approximation (RMSEA) values of $\leq .06$ (Hu & Bentler, 1999; MacCallum, Browne, & Sugawara, 1996); and SRMR values $< .08$ (Hu & Bentler, 1999). Taking into consideration the absolute, parsimonious, and incremental fit, Hu and Bentler (1999) suggest evaluating the SRMR and at least one other index of model fit to ensure appropriate fit of a model.

Once the models were assessed for goodness of fit, direct and indirect paths of the models were assessed. Direct effects of the models (see Figure 2) were considered significant if their corresponding beta values had p -values significant at the .05 level. Indirect effects were calculated to test the hypotheses that CA tendencies would mediate the relationships between attachment anxiety and related outcomes (i.e., GAD symptoms and intrusive IPs) *and* the relationships between attachment avoidance and related outcomes (i.e., depressive symptoms and avoidant IPs). Significance of indirect effects were tested using both Sobel's test (e.g., Baron and Kenny, 1986) as well as bias-corrected CIs based on bootstrap sampling distributions (MacKinnon et al., 2007) in Mplus 7.3. Indirect/mediating effects were deemed significant if their beta values

produced a Sobel test statistic with significance at the .05 level and bias-corrected confidence intervals that did not cross zero.

To ensure that the current model (Model 1) effectively captured covariance between variables, its model fit indices were compared against two competing models (Models 2 and 3; Figures 3 and 4, respectively). Model 2 is a modification of Model 1, and hypothesizes that symptoms of GAD and depression predict intrusive and socially avoidant IPs directly. Model 3 was a modification of Model 2, and tested the hypothesis that intrusive and socially avoidant IPs directly predict GAD and depression.

Results

Path Analysis

The model fit statistics are featured in Table 2. Results of Model 1 fit analyses overall support the viability of this model. Considering both the SRMR and CFI values were well within the acceptable range, it was determined that the measurement model provided adequate fit to the data (Hu & Bentler, 1999), despite explaining significantly less covariance across variables when compared to a saturated model with all paths specified.

Standardized and unstandardized results for Model 1 are presented in Figures 2a and 2b, respectively. As shown, attachment anxiety was predictive of CA tendencies ($\beta = 0.349, p < .001, 95\% \text{ CI } [.24, .46]$), GAD symptoms ($\beta = 0.108, p < .05, 95\% \text{ CI } [.02, .20]$), and intrusive IPs ($\beta = 0.347, p < .001, 95\% \text{ CI } [.23, .46]$). Additionally, attachment avoidance was a significant predictor of CA tendencies ($\beta = 0.321, p < .001, 95\% \text{ CI } [.20, .43]$), depressive symptoms ($\beta = 0.197, p < .001, 95\% \text{ CI } [.12, .27]$), and socially avoidant IPs ($\beta = 0.164, p < .01, 95\% \text{ CI } [.06, .27]$). Further, contrast avoidance was a significant

predictor of GAD symptoms ($\beta = 0.486, p < .001, 95\% \text{ CI } [.52, .67]$), intrusive IPs ($\beta = 0.132, p < .01, 95\% \text{ CI } [.03, .23]$), depressive symptoms ($\beta = 0.449, p < .001, 95\% \text{ CI } [.48, .63]$), and socially avoidant IPs ($\beta = 0.183, p < .001, 95\% \text{ CI } [.07, .29]$).

Additionally, GAD and depressive symptoms had significant covariance ($\beta = 0.434, p < .001, 95\% \text{ CI } [.331, .526]$), as well as depression and socially avoidant IP ($\beta = 0.093, p < .05, 95\% \text{ CI } [.003, .183]$). However, symptoms of GAD and Intrusive IPs did not significantly covary ($\beta = 0.-0.013, p > .05, 95\% \text{ CI } [-.11, .08]$). This model explained 31.7% of variance in CA tendencies, 42.8% of variance in GAD symptoms, 45.6% of variance in depressive symptoms, 18.2% of variance in intrusive IPs, and 8.9% of variance in socially avoidant IPs.

The indirect effects for this model are summarized in Table 3. Contrast Avoidance mediated the effects of attachment anxiety on symptoms of GAD and intrusive IPs. Direct pathways remained significant between attachment anxiety and both GAD ($\beta = 0.108, p < 0.05, 95\% \text{ CI } [.02, .20]$) and intrusive IPs ($\beta = 0.347, p < .001, 95\% \text{ CI } [.23, .46]$) when controlling for the indirect effects. Similarly, CA mediated the relationships between attachment avoidance and symptoms of depressive symptoms as well as socially avoidant IPs. Related direct pathways between attachment avoidance and depressive symptoms as well as socially avoidant IPs remained significant when controlling for the indirect effects, ($\beta = 0.197, p < .001, 95\% \text{ CI } [.12, .27]$; ($\beta = 0.164, p < .01, 95\% \text{ CI } [.06, .27]$, respectively). Thus, CA acted as a partial mediator across all specified relationships between attachment avoidance and anxiety and outcomes of GAD symptoms, depressive symptoms, and both intrusive and socially avoidant IPs.

The fit indices of Model 1 were compared with those of Models 2 and 3. Both Model 2 and Model 3 demonstrated poorer model fit than Model 1 across all model fit indices (See Table 2), and did not meet aforementioned standards (Bentler, 1990; Hu & Bentler, 1999; Kenny & McCoach, 2003; MacCallum, Browne, & Sugawara, 1996). Conclusions made from such comparisons were further corroborated by higher Akaike Information Criterion (AIC) and Sample-Adjusted Bayesian Information Criterion (SABIC) in Model 2 and Model 3 when compared to Model 1. Notably, lower criterion scores indicate better fit in path models that are non-nested (Akaike, 1987; Kass & Raftery, 1995; Raftery, 1995). The reviewed fit indices of Models 2 and 3 were very poor, and therefore they are not interpreted further. As such, Model 1 was retained as the best fitting model.

Discussion

The current study sought to contribute to growing literature on the contrast avoidance (CA) model (Newman & Llera, 2011) by empirically evaluating its theorized role in the relationships between insecure attachment (i.e., anxiety and avoidance) and symptoms of GAD and depression, as well as IPs (Newman et al., 2013; 2014). Results of manifest path analyses demonstrated statistical significance for all specified paths of a causal model (Figure 2), supporting the major hypotheses of the present study. Namely, attachment anxiety and avoidance predict contrast avoidance tendencies, which in turn predict negative outcomes, such as symptoms of GAD and depression, as well as intrusive and socially avoidant IPs. Further, with contrast avoidance as a partial mediator, attachment anxiety indirectly predicted symptoms of GAD and intrusive IPs, whereas attachment avoidance indirectly predicted symptoms of depression and socially avoidant

IPs. Depressive symptoms and GAD symptoms as well as depression and socially avoidant IPs showed significant covariance in the current model, as predicted. However, GAD symptoms did not significantly covary with intrusive IPs in the current model, which was inconsistent with specified hypotheses. Findings of the current study suggest that attachment experiences are catalysts in the development of CA, and are influencers of how CA manifests in psychopathological (i.e., worry/GAD or rumination/depression) and interpersonal (i.e., intrusive or socially avoidant) domains.

The current study corroborates previous findings that insecure attachment directly predicts symptoms of GAD, depression and IPs (e.g., Cassidy, 1995; Hankin et al., 2005; Mickelson et al., 1997). In harmony with previous research, the current study found attachment anxiety predictive of anxiety symptoms (e.g., Bosquet and Egeland, 2006; Warren et al., 1997) and attachment avoidance predictive of depressive symptoms (e.g., Hankin et al., 2005; Marganska et al., 2013). Pathways between attachment anxiety and intrusive IPs were significant, as well as between attachment avoidance and socially avoidant IPs. Such results strengthen conclusions made by previous studies, such as Horowitz and colleagues (1993), who have found anxious attachment predictive of warmth and dominance, and attachment avoidance to be predictive of coldness and self-reliance. In regard to the present study, the inclusion of CA as a mediator between insecure attachment and the aforementioned outcome variables tested hypotheses proposed by Newman and colleagues (2013; 2014). This suggests individuals with unpredictable or dismissive parents develop aversions to emotional shifts and learn to enact strategies that sustain stable levels of negative emotionality, thereby preventing such emotional shifts from occurring in the future. The failure of Models 2 and 3 (Figures

3 and 4) to explain covariance between variables do not support the alternate hypotheses that intrusive and socially avoidant IPs directly lead to symptoms of GAD and depressive symptoms, or vice versa.

Results of the study suggest that the ways in which insecurely attached individuals avoid experiencing emotional contrasts may differ depending on their levels of attachment anxiety and avoidance. Findings indicate that individuals with attachment anxiety may learn to control intra- and inter-personal distress caused by inconsistent experiences with caregivers through worry about unpredictable negative events, thereby emotionally bracing themselves for a potential negative outcome. Such “bracing” maintains stable, but negative, emotionality that deters emotional contrasts/shifts from occurring (Llera & Newman, 2010; 2014; Newman & Llera, 2011). Interpersonally, anxiously attached individuals with CA may have developed intrusive behaviors (e.g., excessive reassurance seeking or violating interpersonal boundaries) as a way to insert themselves in close proximity to their unpredictable caregivers (Newman et al., 2013; 2014).

Alternatively, results show those with higher levels of attachment avoidance, who were likely regularly dismissed or rejected by attachment figures, are more likely to have de-activating cognitive and interpersonal strategies of CA. Specifically, their higher level of depressive symptoms may be due to higher levels of rumination, as they are likely expecting disappointing outcomes and choose not to problem solve. Furthermore, they do not experience an emotional contrast when a negative event does occur, as their negative expectations were consistent with the negative outcome (Newman et al., 2013; Nolen-Hoeksema et al., 2008). Interpersonally, avoidantly attached individuals, who were

consistently dismissed or rejected by attachment figures, may choose not to enter relationships altogether in order to prevent interpersonal rejection or instability that would cause emotional contrasts (Gerhart et al., 2014; Newman et al., 2013; 2014).

It is important to note the paradoxical nature of these theorized mechanisms of CA. Although they are intended to prevent individuals from experiencing downward emotional or relational shifts, they may cause persistent psychological and social dysfunction (Wei et al., 2005). Further, by attempting to avoid emotional shifts, these behaviors likely maintain negative beliefs about an individual's ability to cope with such emotional contrasts. Thus, an individual employing contrast avoidant behaviors also likely has difficulty experiencing sustained positivity, as this would leave them feeling vulnerable and emotionally unprepared for upcoming emotional shifts.

The supported model had some additional important implications. First, the number of GAD and depressive symptoms endorsed by participants had significant covariance in the present model, reiterating the well-researched comorbidity between the two disorders (Cummings, Caporino, & Kendall, 2014; Moffitt et al., 2007). In harmony with previous research detailing a positive relationship between depressive symptoms and avoidant IPs (e.g., Grosse Holtforth et al., 2014), there was significant covariance between both variables in the current model. In contrast to previous research, however, GAD symptoms did not significantly covary with intrusive IPs. As such, individuals with GAD may be utilizing an array of IPs (e.g., Prezworski, etc., 2011; Saltzer et al., 2011), rather than displaying solely Intrusive IPs across relationships.

Notably, the direct effects between attachment anxiety and symptoms of GAD and intrusive IPs, as well as between attachment avoidance and symptoms of depression

and socially avoidant IPs were still significant when the mediating effects of contrast avoidance were accounted for. As such, other processes outside of contrast avoidance may account for the additional variance in outcome variables that were not accounted for by the direct and indirect effects of contrast avoidance in the present model. Namely, other methods of experiential avoidance (Hayes et al., 1996), such as paradoxical thought suppression techniques, may be learned through attachment experiences and exacerbate worry and rumination (Mikulincer, Dolev, & Shaver, 2004). Additionally, variables in the current analyses were measured continuously rather than categorically. As such, higher levels of attachment insecurity and subsequent contrast avoidance tendencies may only result in diagnosable psychopathology (e.g., GAD, Major Depressive Episodes, Personality Disorders) in extreme cases, more likely in those with extreme levels of attachment insecurity and/or CA tendencies.

Results of the study have implications on psychological research and practice. This study illuminates the role of contrast avoidance in the relationships between attachment insecurity and outcomes of emotional symptomatology and interpersonal distress. Results provide support for transdiagnostic and interpersonal applications of the CA model. Furthermore, these findings highlight the importance of targeting attachment experiences and related internal working models in therapy in combination with fears of contrast avoidance experiences, as a way to prevent a variety of negative outcomes. Thus, results of the current study emphasize the importance of exploring interventions that ameliorate CA tendencies.

Moreover, the study implies that components of GAD (e.g., worry) and depression (e.g., rumination) as well as intrusive and socially avoidant IPs (e.g., attempts

to avert interpersonal conflict/rejection) may be mechanisms of averting negative emotional contrast experiences. As such, the goals of these cognitive and interpersonal strategies may be targeted and explored in mental health treatment, as they are likely maintaining factors of psychopathology. Currently, gold standard therapies for treating anxious and depressive symptoms, such as cognitive behavioral therapies (CBT), are not addressing either CA or IPs (Newman, Castonguay, Borkovec, & Molnar, 2004). However, Interpersonal and Emotion-Focused Processing Psychotherapy (I/EP) (Newman et al., 2004), was designed to address such underlying factors of emotional disorders (Erickson, Newman, & McGuire, 2014; Newman, Jacobson, & Castonguay, 2014). I/EP techniques assess client's problematic emotional and behavioral processes through a functional analysis and informal exploration (Newman et al., 2004). In subsequent sessions, I/EP provides clients with in-vivo interpersonal processing, emotional exposure, and skills training in conjunction with homework assignments to correct such maladaptive emotive and relational processes (Newman et al., 2004). A particular benefit of I/EP is its ability to be used in conjunction with CBT, a combination that has so far proved moderately effective for participants with GAD (Newman, Castonguay, Borkovec, Fisher, & Nordberg, 2008; Newman et al., 2011). However, the I/EP techniques do not directly target emotional contrast avoidance. Therefore, this approach may be improved by incorporating psychoeducation about contrast avoidance beliefs, in addition to specific exposure techniques aimed at creating contrast experiences within the session (see Newman et al., 2014).

Strengths of the current study include the use of path analysis to examine multilevel interactions among variables, a relatively large and ethnically diverse sample

($N = 346$), the transdiagnostic application of CA to depression, measurement of specific domains rather than general levels of IPs, and comparison of the current model to competing models to ensure goodness of fit. Results of the current study should be interpreted with its limitations in mind. First and foremost, both intrusive and socially avoidant IPs had low internal consistency (Cronbach's alphas were .582 and .535, respectively), which fell below the .70 value recommended to prevent measurement error from skewing results (Pedhazur, 1982). Measures used in the current study were self-report and relied upon participants' insight and honesty (Brener, Billy, & Grady, 2003). The cross-sectional/correlational design of the current study suggests, rather than proves, causation between variables. The study's sample were fairly homogenous, as most participants were female, college educated, and in young adulthood. As such, results of the study may not generalize to the larger population. To better understand findings from the current study, future research should utilize longitudinal methodology on a more diverse population. The current study speculates that CA leads to symptoms of GAD and depression because they feature worry and rumination, respectively. Future studies should include measures of worry and rumination in their models in order to specify that these cognitive mechanisms are responsible for the observed variance among GAD and depression.

Conclusion

The present study is an application of the Contrast Avoidance model to interpersonal behaviors and psychopathology in individuals who are insecurely attached. Particularly, the current study tests a model in which contrast avoidance mediates the relationship between insecure attachment (attachment anxiety and avoidance) and

symptoms of GAD, symptoms of depression, and interpersonal problems. The current study adds to current literature by applying the Contrast Avoidance model to depression, and to interpersonal problems seen in insecurely attached individuals, as well as individuals with GAD and depression. Results of the current study may have implications on our current understanding of the trajectory of insecure attachment, as it relates to emotion regulation, interpersonal problems and psychopathological symptoms.

Table 1. Descriptive Statistics, Intercorrelations, and Cronbach’s Alphas for All Study Variables.

Variables	Descriptive		Zero-Order Correlations							
	<i>M</i>	<i>SD</i>	1	2	3	4	5	6	7	
1. Att. Anxiety	12.46	4.95	0.837							
2. Att. Avoidance	17.93	5.21	0.414	0.794						
3. CA	2.29	0.68	0.482	0.465	0.931					
4. GAD symptoms	4.48	3.83	0.456	0.336	0.643	0.906				
5. Depressive symptoms	12.88	10.04	0.497	0.463	.650	0.684	0.931			
6. Intrusive IP	19.04	6.27	0.411	0.038 (<i>ns</i>)	0.299	0.249	0.268	0.582		
7. Socially Avoidant IP	22.94	6.92	0.220	0.249	0.260	0.218	0.278	0.209	0.535	

Note. Cronbach’s alphas are in boldface. All correlations were significant at the $p < .01$ level unless specified as non-significant by (*ns*). CA = Contrast Avoidance; IP = Interpersonal Problems.

Table 2. Fit Indices for all Models.

Model	χ^2 (<i>df</i>)	CFI	TLI	RMSEA	SRMR	AIC	SABIC (adjusted for <i>n</i>)
Model 1	45.839 (7)	0.948	0.851	0.127	.048	9100.750	9116.255
Model 2	265.256 (9)	0.656	0.236	0.287	0.173	9316.167	9330.324
Model 3	94.182 (9)	0.886	0.746	0.165	0.072	9145.092	9225.867

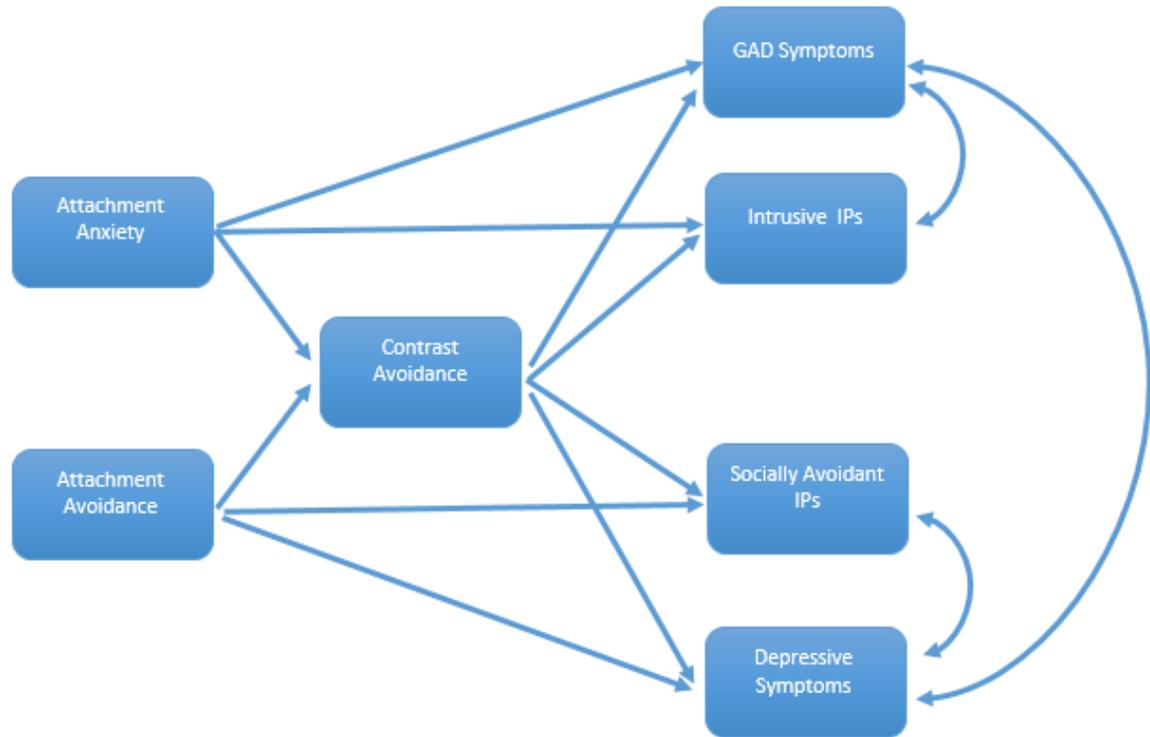
Note. *p*-values <.001 are in boldface.

Table 3. Statistics for the indirect effects of the best fit model.

Path (CA as Mediator)	Indirect effect (SE)	<i>p</i> -value	95% CIs
Att. Anxiety to GAD Symptoms	0.208 (0.038)	< .001	.14, .29
Att. Anxiety to Intrusive IP	0.046 (0.020)	.021	.01, .09
Att. Avoidance to Depressive Symptoms	.180 (0.033)	< .001	.12, .25
Att. Avoidance to Socially Avoidant IP	.059 (0.021)	.005	.02, .11

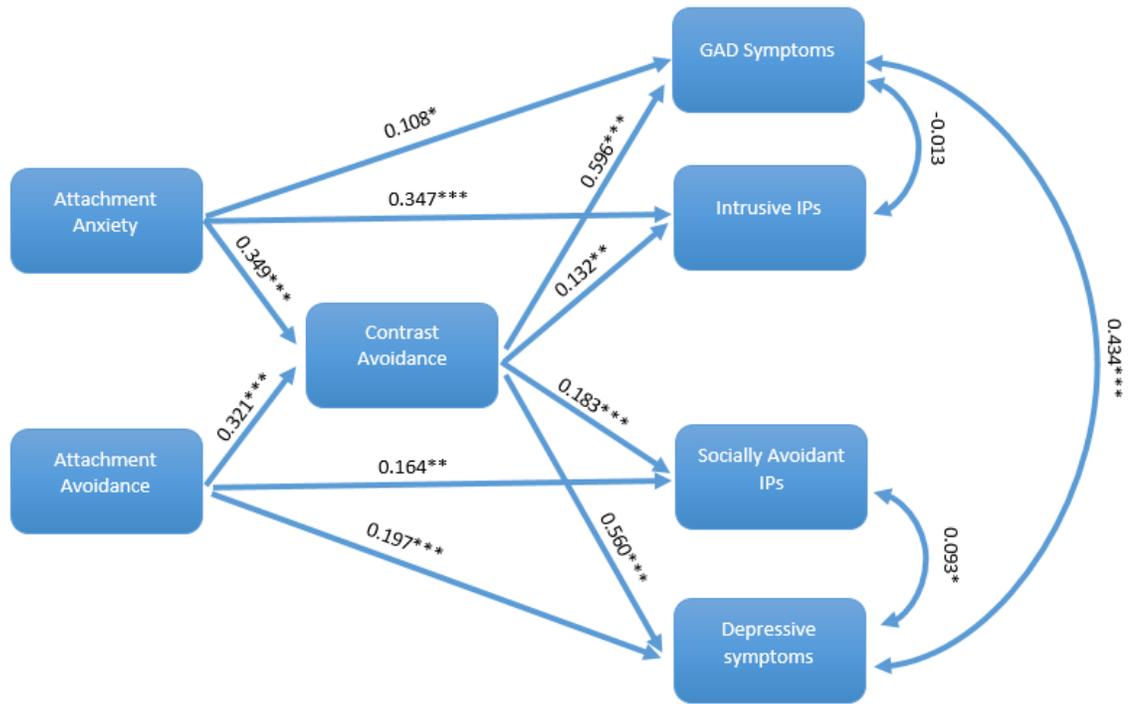
Note. Confidence intervals are bias-corrected. *p*-value corresponds to the Sobel's test of indirect pathways. CA = Contrast Avoidance; IP = Interpersonal Problems.

Figure 1. Measured path analysis model being tested.



Note. Straight lines represent a direct effect between variables, whereas curved lines represent covariation between variables. IPs = Interpersonal Problems.

Figure 2a. Measured path analysis model being tested.

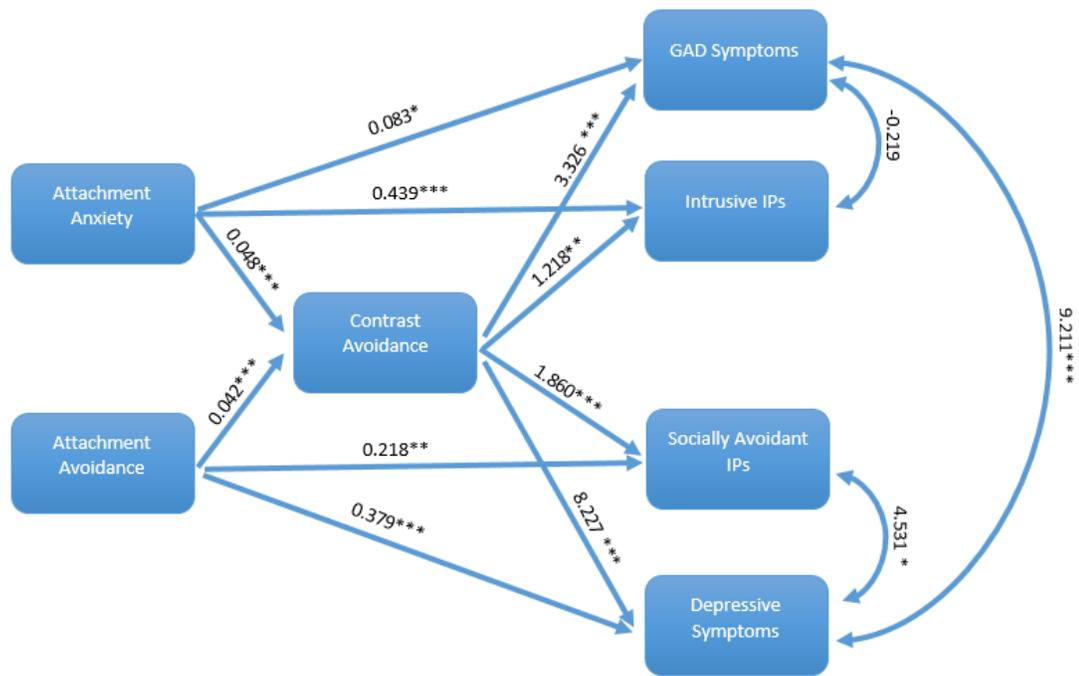


Note. Effect statistics are standardized Beta effect sizes. Straight lines represent a direct effect between variables, whereas curved lines represent covariation between variables.

IPs = Interpersonal Problems.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

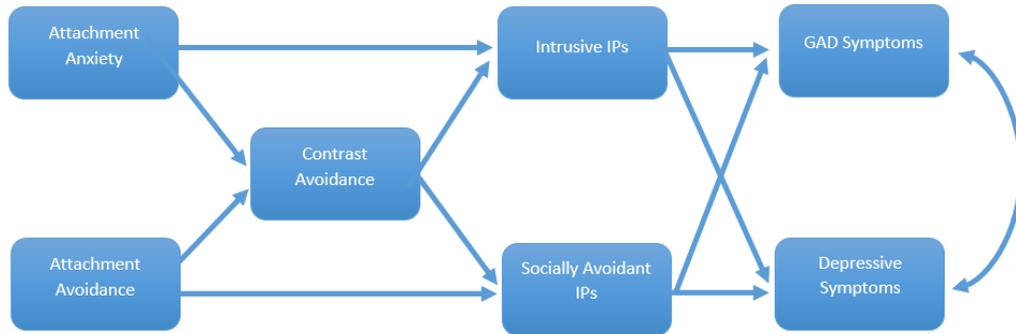
Figure 2b. Measured path analysis model being tested.



Note. Effect statistics are unstandardized Beta effect sizes. Straight lines represent a direct effect between variables, whereas curved lines represent covariation between variables. IPs = Interpersonal Problems.

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Figure 4. Measured path analysis comparison model (Model 3).



Note. Straight lines represent a direct effect between variables, whereas curved lines represent covariation between variables.

Appendix A

Relationship Scales Questionnaire

Please read each of the following statements and rate the extent to which you believe each statement best describes your feelings about close relationships. (you may wish to use a 5– to 9-point scale from not at all like me to very much like me)

1. I find it difficult to depend on other people.
2. It is very important to me to feel independent.
3. I find it easy to get emotionally close to others.
4. I want to merge completely with another person.
5. I worry that I will be hurt if I allows myself to become too close to others.
6. I am comfortable without close emotional relationships.
7. I am not sure that I can always depend on others to be there when I need them.
8. I want to be completely emotionally intimate with others.
9. I worry about being alone.
10. I am comfortable depending on other people.
11. I often worry that romantic partners don't really love me.
12. I find it difficult to trust others completely.
13. I worry about others getting too close to me.
14. I want emotionally close relationships.
15. I am comfortable having other people depend on me.
16. I worry that others don't value me as much as I value them.
17. People are never there when you need them.
18. My desire to merge completely sometimes scares people away.
19. It is very important to me to feel self-sufficient.
20. I am nervous when anyone gets too close to me.
21. I often worry that romantic partners won't want to stay with me.
22. I prefer not to have other people depend on me.
23. I worry about being abandoned.
24. I am somewhat uncomfortable being close to others.
25. I find that others are reluctant to get as close as I would like.
26. I prefer not to depend on others.
27. I know that others will be there when I need them.
28. I worry about having others not accept me.
29. People often want me to be closer than I feel comfortable being.
30. I find it relatively easy to get close to others.

Appendix B

Contrast Avoidance Questionnaire

1. I don't let myself feel good, because at any time something bad could happen and take the good feeling away
2. Sometimes I would rather just feel bad now, instead of having to wait and see how things are going to turn out
3. I prefer to feel bad now so I don't have to endure losing my happiness later
4. I try to stay focused on the bad things that could happen, because it prevents me from feeling emotionally vulnerable
5. I feel bad now so that I can lessen the heartache later
6. Allowing myself to feel happy leaves me vulnerable to feeling terrible in the end
7. I would rather feel down than have to go through life experiencing ups and downs
8. I focus on the negative because at least I know not much can happen that could make me feel worse
9. I maintain a negative mood because it makes it easier to cope when bad things happen
10. When something bad happens, I try to look on the bright side so I can get back to feeling good
11. Despite the fact that bad things might happen, I would rather focus on the possibility of positive outcomes
12. It doesn't scare me if I lose my happy mood, because I know it will come back eventually
13. I make an effort to expect positive things, even if they might not happen
14. I don't mind being unprepared for life's ups and downs, because I just roll with the punches
15. I am comfortable with the fact that emotions will shift in response to life's events
16. I accept all of my emotional states as a normal part of life
17. I prefer to expect the worst and then be pleasantly surprised, rather than experience a drop in my emotions if something bad happens
18. I am more appreciative of the good things that come if I am pessimistic about the outcome beforehand
19. It is better to expect the worst and get the best than to expect the best all along
20. If I see the glass as half empty, I will appreciate it more when it's full
21. I enjoy success the most when I expected failure
22. I would rather anticipate the worst outcome than be blindsided
23. I would rather expect the worst than be unprepared
24. I predict and prepare for the worst possible outcome so I am less emotionally distraught when it actually happens
25. I find it most rewarding to expect the worst and have something good happen in the end
26. When my emotions fluctuate it makes me feel out of control
27. If I'm feeling good, I could really be thrown off by a negative event
28. I feel uneasy with emotional changes
29. I don't like it when external events control my ups and downs

30. It really throws me off when I suddenly feel very bad
31. I feel disoriented when I shift suddenly to a bad mood
32. When my emotions go up and down, it makes me uncomfortable
33. Strongly fluctuating emotions are particularly unpleasant for me

Appendix C

GAD-Q-IV

1. Do you experience excessive worry?
NO = A YES = B
2. Is your worry excessive in intensity, frequency, or amount of distress it causes?
NO = A YES = B
3. Do you find it difficult to control your worry (or stop worrying) once it starts?
NO = A YES = B
4. Do you worry excessively and uncontrollably about minor things such as being late for an appointment, minor repairs, homework, etc.?
NO = A YES = B

Please list the most frequent topics about which you worry excessively and uncontrollably.

- a) _____
- d) _____
- b) _____
- e) _____
- c) _____
- f) _____

5. Please indicate how many separate topics you worry about excessively and uncontrollably, as listed above.
 - a. No topics of worry
 - b. One topic
 - c. Two topics
 - d. Three topics
 - e. Four topics
 - f. Five topics
 - g. Six or more topics
6. During the last six months, have you been bothered by excessive and uncontrollable worries more days than not?
NO = A YES = B
7. During the past six months, have you been bothered by restlessness or feeling keyed up or on edge more days than not?
NO = A YES = B
8. During the past six months, have you been bothered by difficulty falling/staying asleep or restless/unsatisfying sleep more days than not?

NO = A YES = B

9. During the past six months, have you been bothered by difficulty concentrating or your mind going blank more days than not?

NO = A YES = B

10. During the past six months, have you been bothered by irritability more days than not?

NO = A YES = B

11. During the past six months, have you been bothered by being easily fatigued more days than not?

NO = A YES = B

12. During the past six months, have you been bothered by muscle tension more days than not?

NO = A YES = B

13. How much do worry and these physical symptoms interfere with your life, work, social activities, family, etc.?

0 – Not at all

1

2 – Mildly

3

4 – Moderately

5

6 – Severely

7

8 – Very Severely

14. How much are you bothered by worry and these physical symptoms (how much distress do they cause you)?

0 – Not at all

1

2 – Mild Distress

3

4 – Moderate Distress

5

6 – Severe Distress

7

8 – Very Severe Distress

Appendix D

Beck Depression Inventory-II

Instructions: This questionnaire consists of 21 groups of statements. Please read each group of statements carefully, and then pick out the one statement in each group that best describes the way you have been feeling during the past two weeks, including today. Click on the number beside the statement you have picked. If several statements in the group seem to apply equally well, choose the highest number for that group. Be sure that you do not choose more than one statement for any group, including Item 16 (Changes in Sleeping Pattern) or Item 18 (Changes in Appetite).

1. Sadness

- 0 I do not feel sad.
- 1 I feel sad much of the time.
- 2 I am sad all the time.

2. Pessimism

- 0 I am not discouraged about my future.
- 1 I feel more discouraged about my future than I used to be.
- 2 I do not expect things to work out for me.
- 3 I feel my future is hopeless and will only get worse.

3. Past failure

- 0 I do not feel like a failure.
- 1 I have failed more than I should have.
- 2 As I look back, I see a lot of failures.
- 3 I feel I am a total failure as a person.

4. Loss of Pleasure

- 0 I get as much pleasure as I ever did from things I enjoy.
- 1 I don't enjoy things as much as I used to.
- 2 I get very little pleasure from the things I used to enjoy.
- 3 I can't get any pleasure from the things I used to enjoy.

5. Guilty Feelings

- 0 I don't feel particularly guilty.
- 1 I feel guilty over many things I have done or should have done.
- 2 I feel quite guilty most of the time.
- 3 I feel guilty all of the time.

6. Punishment Feelings

- 0 I don't feel I am being punished.
- 1 I feel I may be punished.
- 2 I expect to be punished.
- 3 I feel I am being punished.

7. Self-Dislike

- 0 I feel the same about myself as ever.
- 1 I have lost confidence in myself.
- 2 I am disappointed in myself.
- 3 I dislike myself.

8. Self-Criticalness

- 0 I don't criticize or blame myself more than usual.
- 1 I am more critical of myself than I used to be.
- 2 I criticize myself for all of my faults.
- 3 I blame myself for everything bad that happens.

9. Suicidal Thoughts or Wishes

- 0 I don't have any thoughts of killing myself.
- 1 I have thoughts of killing myself, but I would not carry them out.
- 2 I would like to kill myself.
- 3 I would kill myself if I had the chance.

10. Crying

- 0 I don't cry anymore than I used to.
- 1 I cry more than I used to.
- 2 I cry over every little thing.
- 3 I feel like crying, but I can't.

11. Agitation

- 0 I am no more restless or wound up than usual.
- 1 I feel more restless or wound up than usual.
- 2 I am so restless or agitated that it's hard to stay still.
- 3 I am so restless or agitated that I have to keep moving or doing something.

12. Loss of Interest

- 0 I have not lost interest in other people or activities.
- 1 I am less interested in other people or things than before.
- 2 I have lost most of my interest in other people or things.
- 3 It's hard to get interested in anything.

13. Indecisiveness

- 0 I make decisions about as well as ever.
- 1 I find it more difficult to make decisions than usual.
- 2 I have much greater difficulty in making decisions than I used to.
- 3 I have trouble making any decisions.

14. Worthlessness

- 0 I do not feel I am worthless.
- 1 I don't consider myself as worthwhile and useful as I used to.
- 2 I feel more worthless as a compared to other people.
- 3 I feel utterly worthless.

15. Loss of Energy

- 0 I have as much energy as ever.
- 1 I have less energy than I used to have.
- 2 I don't have enough energy to do very much.
- 3 I don't have enough energy to do anything.

16. Changes in Sleeping Pattern

- 0 I have not experienced any change in my sleeping pattern
- 1a. I sleep somewhat more than usual.
- 1b. I sleep somewhat less than usual.
- 2a. I sleep a lot more than usual.
- 2b. I sleep a lot less than usual.
- 3a. I sleep most of the day.
- 3b. I wake up 1 – 2 hours early and can't get back to sleep.

17. Irritability

- 0 I am no more irritable than usual.
- 1 I am more irritable than usual.
- 2 I am much more irritable than usual.
- 3 I am irritable all the time.

18. Changes in Appetite

- 0 I have not experienced any change in my appetite.
- 1a. My appetite is somewhat less than usual.
- 1b. My appetite is somewhat greater than usual.
- 2a. My appetite is much less than before.
- 2b. My appetite is much greater than usual.
- 3a. I have no appetite at all.
- 3b. I crave food all the time.

19. Concentration Difficulty

- 0 I can concentrate as well as ever.
- 1 I can't concentrate as well as usual.
- 2 It's hard to keep my mind on anything for very long.
- 3 I find I can't concentrate on anything.

20. Tiredness or Fatigue

- 0 I am no more tired or fatigued than usual.
- 1 I get more tired or fatigued more easily than usual.
- 2 I am too tired or fatigued to do a lot of the things I used to do.
- 3 I am too tired or fatigued to do most of the things I used to do.

21. Loss of Interest in Sex

- 0 I have not noticed any recent change in my interest in sex.
- 1 I am less interested in sex than I used to be.
- 2 I am much less interested in sex now.
- 3 I have lost interest in sex completely.

Appendix E

Inventory of Interpersonal Problems-Circumplex Scale

Inventory of Interpersonal Problems-Circumplex Items:

The following are things you find hard to do with other people.

It is hard for me to...

1. trust other people
2. say no to other people
3. join in on groups
4. keep things private from other people
5. let other people know what I want
6. tell a person to stop bothering me
7. introduce myself to new people
8. confront people with problems that come up
9. be assertive with another person
10. let other people know when I am angry
11. make a long-term commitment to another person
12. be another person's boss
13. be aggressive toward other people when the situation calls for it
14. socialize with other people
15. show affection to people
16. get along with people
17. understand another person's point of view
18. express my feelings to other people directly
19. be firm when I need to be
20. experience a feeling of love for another person
21. set limits on other people
22. be supportive of another person's goals in life
23. feel close to other people
24. really care about other people's problems
25. argue with another person
26. spend time alone
27. give a gift to another person
28. let myself feel angry at somebody I like
29. put somebody else's needs before my own
30. stay out of other people's business
31. take instructions from people who have authority over me
32. feel good about another person's happiness
33. ask other people to get together socially with me
34. feel angry at other people
35. open up and tell my feelings to another person
36. forgive another person after I've been angry

- 37. attend to my own welfare when somebody else is needy
- 38. be assertive without worrying about hurting another person's feelings
- 39. be self-confident when I am with other people

The following are things you do too much.

- 40. I fight with other people too much
- 41. I feel too responsible for solving other people's problems
- 42. I am too easily persuaded by other people
- 43. I open up to people too much
- 44. I am too independent
- 45. I am too aggressive toward other people
- 46. I try to please other people too much
- 47. I clown around too much
- 48. I want to be noticed too much
- 49. I trust other people too much
- 50. I try to control other people too much
- 51. I put other people's needs before my own too much
- 52. I try to change other people too much
- 53. I am too gullible
- 54. I am overly generous to other people
- 55. I am too afraid of other people
- 56. I am too suspicious of other people
- 57. I manipulate other people too much to get what I want
- 58. I tell personal things to other people too much
- 59. I argue with other people too much
- 60. I keep other people at a distance too much
- 61. I let other people take advantage of me too much
- 62. I feel embarrassed in front of other people too much
- 63. I am affected by another person's misery too much
- 64. I want to get revenge against people too much

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Research Questions

1. Are higher levels of insecure attachment (i.e., attachment anxiety and avoidance) antecedents of contrast avoidance tendencies?
2. What pathological outcomes (e.g., GAD symptoms, depressive symptoms, interpersonal problems) do contrast avoidance tendencies predict?
3. Do contrast avoidance tendencies explain relationships between insecure attachment and negative outcomes (e.g., GAD symptoms, depressive symptoms, interpersonal problems)?

IRB Approval Letter



APPROVAL NUMBER: 15-A073

To: Alex Shiflett
121 Dumbarton Road Apartment C
Baltimore MD 21212

From: Institutional Review Board for the Protection of Human
Subjects Bethany Willis-Hepp, Member

Date: Monday, April 06, 2015

RE: Application for Approval of Research Involving the Use of
Human Participants

Office of Sponsored Programs
& Research

Towson University
8000 York Road
Towson, MD 21286-0001
t. 410 704-2236
f. 410 704-4494

Thank you for submitting an Application for Approval of Research Involving the Use of Human Participants to the Institutional Review Board for the Protection of Human Participants (IRB) at Towson University. The IRB hereby approves your proposal titled:

The Emotional Contrast Avoidance Model: a Transdiagnostical Explanation of Emotional Regulation Responses

If you should encounter any new risks, reactions, or injuries while conducting your research, please notify the IRB. Should your research extend beyond one year in duration, or should there be substantive changes in your research protocol, you will need to submit another application for approval at that time.

We wish you every success in your research project. If you have any questions, please call me at (410) 704-2236.

CC: R. Muffi; S. Llera
File

Thesis Proposal Approval Form

Thesis and Dissertation Guidelines | 26

TOWSON UNIVERSITY
OFFICE OF GRADUATE STUDIES

THESIS COMMITTEE APPROVAL FORM

Student's Name

Ryan Muff

Chairperson, Thesis Committee

Sandra Llera

Signature

SANDRA LLERA

Typed name

Member

Greg Chasson

Signature

Greg Chasson

Typed name

Member

Jonathan Mattanah

Signature

Jonathan Mattanah

Typed name

Member

Signature

Typed name

Note: Please attach a description of the affiliation and credentials of any non-Towson University members of the Committee, and the members' *curriculum vita*.

Approved by

Graduate Program Director

Elizabeth C. Katz

ELIZABETH C. KATZ, Ph.D.

Signature

4/17/15

Date

Department Chairperson

Stephanie S. Mason

Signature

4/21/15

Date

Dean of Graduate Studies

Janet Y. DeHany

Signature

4/22/15

Date

Note: It is the responsibility of the student to obtain all signatures *before beginning the proposal*.

Informed Consent Form

CONSENT FORM

Thank you for participating in this study! By clicking the statement below, I agree to participate in a study entitled “Why the Emotional Rollercoaster? Exploring Attachment Patterns and Emotion Regulation” which is being conducted by Alexandra Shiflett, Ryan Muffi, and faculty sponsor Sandra J. Llera, Ph.D. of the Psychology Department, Towson University. I understand that the purpose of this study is to examine the relationship between attachment, depression, anxiety, interpersonal behavior, and emotion regulation tendencies. The study will explore the underlying mechanism of the development and maintenance of emotional and interpersonal strategies, and will further build upon the foundation to advance treatments and interventions.

I understand that I will be expected to complete a packet of questionnaires which will take 45 minutes-1 hour. The survey includes questions regarding worry, depression, emotion regulation tendencies, rumination, alexithymia, and attachment style. I have the option to voluntarily participant in this study in exchange for 2 course credit through Towson University’s Psychology Research Pool.

I have been informed that any information obtained in this study will be anonymous. I understand that my Towson ID will only be collected to insure I receive course credit, but that none of my answers will be connected to my identity. I understand that the information I provided through the responses cannot be traced back to me. Under this condition, I agree that any information obtained from this research may be made public, provided that I am in no way identified and my name is not used.

I understand that there is minimal psychological risk or discomfort directly involved with this study. If I feel uncomfortable with a question, I am being given the option to skip that question or withdraw from the study altogether. My participation is completely voluntary and I am free to withdraw my consent and discontinue participation in this study at any time. If I feel some emotional distress or concerns due to the sensitive nature of the questions, I have been given information to contact Towson University’s Counseling Center at 410-704-2512 or stop by the Counseling Center to arrange for a private meeting to discuss my concerns.

If I have any questions or problems that arise in connection with my participation in this study, I should contact Alexandra Shiflett (443) 876-2197 at ashil1@students.towson.edu, Ryan Muffi , (301) 639-5375 at rmuffi@students.towson.edu or Dr. Sandra J. Llera at (410)-704-5475 or at sllera@towson.edu. If I have any questions regarding the ethical nature or approval of the study, I should contact Dr. Debi Gartland, Chairperson of the Institutional Review Board for the Protection of Human Participants at Towson University at (410) 704-2236.

CURRICULUM VITA

Ryan Muffi



EDUCATION

M.A. Candidate (2016) Towson University (Degree to be conferred Dec 2016)
Master of Arts in Psychology, Clinical Concentration

B.A. (2014) Towson University
*Bachelor of Science with Departmental Honors in
Psychology, Summa Cum Laude*

RESEARCH EXPERIENCE

Master's Thesis (July 2016)
Department of Psychology, Towson University
Title: *'Transdiagnostic and Interpersonal Applications of the Contrast Avoidance Model
Through Path Analysis.'*

Graduate Research Assistant (May 2014 – Present)
Department of Family Studies and Community Development, Towson University

Research Assistant (September 2013 – September 2014)
The Site for OCD & Autism Research (SOAR), Towson University

Undergraduate Honors Thesis (May 2014)
Department of Psychology, Towson University
Title: *'Grin and Bear it: The Role of Personality in the Relationship between Work
Characteristics and Emotional Labor'*

PROFESSIONAL PRESENTATIONS

Muffi, R., & Llera, S. (2015). Maladaptive interpersonal behaviors as a method of emotional contrast avoidance in individuals with higher levels of attachment anxiety and avoidance. Poster presented at the 49th annual convention of the Association for Behavioral and Cognitive Therapies, Chicago, IL

Muffi, R., & Earnest, D. (2015). Grin and bear it: The role of work characteristics and personality in emotional labor. Poster presented at the Towson University Office of Undergraduate and Graduate Research Exposition, Towson, MD

TEACHING EXPERIENCE

Graduate Teaching Assistant, Family Community Program Development (G)
Spring 2016

Graduate Teaching Assistant, Applied Family Relationships (G),
Fall 2015 (6 weeks)

Graduate Teaching Assistant, Sex Differences; Psychological Perspectives (UG),
Spring 2015

Undergraduate Teaching Assistant, Adolescent Psychology (UG),
Fall 2012

INVITED ENGAGEMENTS

Guest Speaker, Family Resources Course – Family Studies (UG), *Towson University*
April 25 & April 26, 2016

Master of Ceremonies, Disability Awareness Workshop, *Towson University*
October 25, 2015

Key Note Speaker, Psi Chi Induction Ceremony, *Towson University*
December 7, 2014

Master of Ceremonies, Disability Awareness Workshop, *Towson University*
October 15, 2014

Student Presenter, Innovation in Education Showcase, *Towson University*
April 23, 2013

Student Representative, College of the Liberal Arts Admissions Open House, *Towson University*
October 25, 2013

CLINICAL EXPERIENCE

Clinical Intern (September 2015 – May 2016)
The Pro Bono Counseling Project, Towson, MD

Telephone Counselor (May 2014 – Present)
Baltimore County Crisis Response System: Affiliated Santé Group, Timonium, MD

Practicum Student (Summer Semester) (June – September 2013)
Kennedy Krieger Institute (KKI); Neurobehavioral Outpatient Unit, Columbia, MD

SERVICE EXPERIENCE

Public Relations Coordinator, National Alliance on Mental Illness (NAMI) on Campus
Towson University, *May 2014 – June 2015*

President, Psi Chi & Psychology Club,
Towson University, *May 2013 – May 2014*

Mental Health Advocate, The Student Support Network
Towson University, *October – December 2013*

AWARDS AND HONORS

Travel Award (\$500), Towson University Graduate Student Association (*Fall 2015*)
Research Award (\$228), Towson University Graduate Student Association (*Spring 2015*)
Towson University Departmental Achievement Award, Psychology (*Spring 2014*)
Latin Honors Summa Cum Laude, Towson University (*Spring 2014*)
Departmental Honors, Towson University Psychology Department (*Spring 2014*)
Academic Excellence Award, MACUHO (*Spring 2013, Fall 2013*)
Study Abroad Scholarship (\$1,000), Towson University Foundation, Inc. (*Winter 2013*)
Honorable Mention (\$100), Auburn Engineers 6th Ergonomics Design Competition (*Fall 2012*)
Dean's List, Towson University (*Spring 2010 – May 2014*)

MEMBERSHIPS

Association for Behavioral and Cognitive Therapies (Student), *November 2014 – Present*
Maryland Psychological Association Graduate Students, *September 2014 – Present*
National Alliance on Mental Illness (Metro Baltimore, MD), *September 2014 – Present*
American Psychological Association (Student), *September 2013 – Present*
Psi Chi National Honor Society in Psychology, *December 2012 – Present*
National Society of Collegiate Scholars, *September 2011 - Present*

