CONSTRUCT VALIDITY OF THE AFFECT SENSITIVITY NOMOLOGICAL NET

A THESIS

SUBMITTED TO THE GRADUATE SCHOOL

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS

FOR THE DEGREE

MASTER OF ARTS

BY

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JULY, 2018

Acknowledgments

I would like to acknowledge and express my gratitude to a number of people without whom this project would not have been possible.

To Drs. Anjolii Diaz and Johnathan Forbey, my committee members, thank you for your recommendations, valuable insights, and unique perspectives, and for encouraging me to think more deeply about the concepts under study.

To Dr. Tayla Lee, my committee chair and advisor, thank you for two wonderful years of mentorship, for investing your time and energy in me, for shaping my scientific thinking, and for advancing me along the first few steps of my academic career.

To my friends and family members, for your unwavering love and support, for co-commiserating and collaborating with me, and for always being just a phone call or text message away.

To Mom and Dad, for always believing in me, for encouraging me to self-care, for always letting me know that I am loved, and for your constant generosity.

Finally, to Caitlin, my love, for being a wonderful partner, and for acting as the most amazing co-pilot I could ever ask for as we navigate life and take off into the great unknown together.

Construct Validity of the Affect Sensitivity Nomological Net

Epidemiological studies of psychopathology have established that specific disorders or specific types of disorders demonstrate consistent patterns of covariation. For example, individuals with disorders characterized by distress (e.g., Major Depressive Disorder [MDD], Dysthymia, Generalized Anxiety Disorder [GAD]) or excessive fear (e.g., Social Phobia [SP], Panic Disorder [PD], Obsessive-Compulsive Disorder [OCD]) demonstrate increased odds of having another comorbid distress or fear disorder (Kessler, Chiu, Demler, & Walters, 2005) or a Substance Use Disorder (SUD; Grant et al., 2005; Kushner et al., 2005) compared to those without such disorders. Indeed, previous studies have taken extensive steps to assess and report the patterns and prevalence rates of various comorbid disorders, such as those just described, in a nationally representative samples of adults (Alonso et al., 2004; Kessler et al., 2005; Steel et al., 2014). However, simply identifying consistent patterns of comorbidity does not provide sufficient explanation for the development or maintenance of commonly covarying disorders. Instead, there is a need to approach the study of psychological dysfunction transdiagnostically and examine etiological mechanisms that are shared amongst disorders (Watkins, 2015). Doing so could assist researchers and clinicians in constructing frameworks for understanding disorders by their putative mechanisms as opposed to simply as clusters of symptoms, potentially resulting in more effectively targeted treatments.

Components of Affect Sensitivity as Potential Mechanisms

Components of a nomological network of personological vulnerability factors related to sensitivity and intolerance of affect, informally dubbed the Affect Sensitivity nomological net, have been suggested as potential transdiagnostic mechanisms across various forms of psychopathology (Bernstein, Zvolensky, Vujanovic, & Moos, 2009; Zvolensky, Leyro, Bernstein, & Vujanovic, 2011). The constructs within this hierarchical model are displayed in Figure 1 as ovals connected to additional ovals by directional arrows, indicating that the higher-order construct accounts for variance within the connected lower-order constructs. This hierarchical model of Affect Sensitivity was first proposed by Bernstein et al. (2009), who employed exploratory factor analysis to determine that anxiety sensitivity (AS) and distress intolerance (DI), two similar affective constructs described in greater detail below, load onto a common higher-order factor, labeled Affect Sensitivity.

Affect sensitivity. Affect Sensitivity, a psychopathological vulnerability broadly representing reactivity to negative affective states, is conceptualized as the higher-order factor within the nomological net. Previous research has, in most cases, defined Affect Sensitivity almost solely as a higher-order factor bifurcating into AS and DI (Bernstein et al., 2009). However, Affect Sensitivity may reflect a general sensitivity to affect, with AS and DI serving as narrower facets of the broader construct (Bernstein et al., 2009). Congruent with this definition, Allan et al. (2015) speculated that increased sensitivity and reactivity to negative affective states could act as a domain-general risk for psychopathological development. Along similar lines to this past definition, Affect Sensitivity can also be conceptualized as an individual difference factor reflecting the speed with which one enters a negative affective state in response to arousing stimuli (Baumann, Kaschel, & Kuhl, 2007). However, a precise, consensus definition of Affect Sensitivity that has been subject to empirical scrutiny is largely absent from previous studies of the construct due to an overt focus on Affect Sensitivity's lower-order dimensions.

Because a precise operationalization of Affect Sensitivity has not been offered in previous studies, the discriminant validity of this construct remains an under-investigated area of research. Nonetheless, Baumann et al. (2007) posit that Affect Sensitivity is distinct from the conceptually similar construct of affect regulation, an individual's ability to regulate their reactions to negative affective states. Specifically, the authors argue that Affect Sensitivity describes one's disposition or tendency to enter into an affectively aroused state. In contrast, affect regulation reflects an individual's ability to leave or control their affect post-arousal.

Anxiety sensitivity (AS). In Bernstein et al.'s (2009) model, Affect Sensitivity bifurcates into two similar, yet theoretically independent, constructs. The first of these two factors is anxiety sensitivity (AS), which is generally defined as a disposition toward fear of arousal-related sensations associated with anxiety or fear (Taylor et al., 2007). This fear is accompanied by beliefs that such sensations may result in adverse physical, cognitive, or social consequences (Reiss, 1991; Reiss & McNally, 1985; Taylor et al., 2007). Essentially, past researchers have conceptualized AS as an "anxiety amplifier," in that individuals with elevated levels of AS may interpret arousal-related sensations characteristic of anxiety or fear as harmful, which further intensifies these anxiety or fear experiences (Taylor et al., 2007). Past authors have also posited that elevated standing on AS does not necessarily involve associative learning from prior experiences of fear or panic (Reiss & McNally, 1985). From this operationalization, AS is both an affective and cognitive construct (McNally, 1989).

Previous research has demonstrated the AS construct can be divided into three sub-dimensions, representing physical, cognitive, and social concerns (referred to as P-AS, C-AS, and S-AS, respectively) (Olthuis et al., 2014; Taylor et al., 2007; Wheaton, Deacon, McGrath, Berman, & Abramowitz, 2012). Specifically, these three dimensions relate to fear of the physical health consequences of arousal-related sensations (e.g., a racing heart leading to a heart attack), fear of cognitive consequences associated with arousal-related sensations (e.g., mental incapacitation), and fear of publicly observable symptoms of arousal leading to social rejection or condemnation (Olthuis et al., 2014; Wheaton et al., 2012).

Past research has indicated that AS is distinguishable from conceptually similar constructs. For example, several studies have found that AS is distinct from both trait anxiety, or the innate tendency to respond to various stressors with fear and anxiety, as well as frequency of anxiety symptoms (Bernstein et al., 2009; Reiss & McNally, 1985; Zinbarg, Brown, Barlow, & Rapee, 2001). Moreover, previous research establishes that AS predicts behaviors characteristic of fear disorders (e.g., panic disorder symptomology) above and beyond trait anxiety (McNally, 1989; Reiss, 1997; Reiss & McNally, 1985).

Distress intolerance (DI). The second component of Affect Sensitivity is distress intolerance (DI)[1]. Previous research has offered competing conceptualizations of DI that differ in their focus on emotional, behavioral, or physiological aspects of distress (Zvolensky et al., 2011). However, these competing perspectives each generally conceptualize DI as an individual's perceived ability to withstand and endure experiential distress (Bernstein et al., 2009; Clen, Mennin, & Fresco, 2011; Leyro, Zvolensky, & Bernstein, 2010; Zvolensky et al., 2011). Of particular note, Simons and Gaher (2005) specifically define DI as an individual's ability to withstand negative emotional states. Given the emotional and affect-based conceptualizations of both Affect Sensitivity and AS, this definition would seem to be the most appropriate conceptualization for understanding DI's relations to other emotion-related constructs within this same nomological net.

Using Simon and Gaher's (2005) definition, DI may contribute to the development and maintenance of psychological dysfunction by acting as an "amplifier" of distressing experiences, similar to AS's proposed etiological contribution to psychopathology. Essentially, individuals with an elevated standing on DI possess unchanging views of emotional distress as threatening, unacceptable, or otherwise aversive, perceive themselves as unable to effectively regulate emotional experiences, and become reluctant to experience negative emotions (Clen et al., 2011). DI is also operationally defined as distinct from similar constructs within its nomological network (Zvolensky et al., 2011). For example, although DI is commonly studied in relation to emotion dysregulation (e.g., McHugh, Reynolds, Leyro, & Otto, 2013), DI is conceptualized as an individual difference factor reflecting intolerance of distress, whereas emotion regulation reflects more general difficulties in regulation of affective states (Carver, Lawrence, & Sheier, 1996). However, further research is necessary to lend empirical support to these distinctions.

Relations to Psychological Outcomes

The constructs within the Affect Sensitivity nomological net each represent possible transdiagnostic mechanisms that have been proposed to account for patterns of comorbidity between specific disorders, such as those occurring between disorders characterized by distress, fear, and substance misuse (Allan et al., 2015; Bernstein et al., 2009; Wolitzky-Taylor et al., 2015; Zinbarg, Brown, Barlow, & Rapee, 2001). These constructs have been theorized to contribute to disorder development in similar ways. Essentially, when fear or distress occur, associated sensations are interpreted as harmful or intolerable, thereby exacerbating or "amplifying" fear and distress (Bernstein et al., 2009). This process, in turn, increases the tendency to engage in behaviors aimed at reducing undesirable emotional or physical sensations associated with fear and distress. These behaviors can include both internalizing behaviors, such as rumination (Magidson et al., 2012), and impulsive behaviors, such as substance abuse (Buckner, Keough, & Schmidt, 2007) and non-suicidal self-injury (Anestis, Pennings, Lavender, Tull, & Gratz, 2013). Given the role of Affect Sensitivity and related constructs in disorder development, examining the association between these constructs and psychopathological phenomena could assist in constructing a framework for understanding these disorders and their covariation by their underlying mechanisms as opposed to constellations of observable symptoms.

Affect sensitivity. As mentioned previously, Affect Sensitivity has not received strong empirical attention as a construct independent of AS and DI in previous research. As a result, there is a dearth of research regarding psychopathological outcomes associated with Affect Sensitivity. The few studies examining Affect Sensitivity have found that the construct is moderately associated with negative affectivity, anxious-arousal, and anhedonic depression (Bernstein et al., 2009). Additionally, individuals with elevated Affect Sensitivity were demonstrated to have significantly greater odds of presenting with a distress disorder (e.g., MDD, dysthymia, GAD), fear disorder (e.g., PD, SP, specific phobia), or SUD compared to individuals without elevated Affect Sensitivity (Allan et al., 2015). As such, it is plausible that Affect Sensitivity is broadly related to behaviors characteristic of both dimensions of internalizing disorders (i.e., anhedonia and ruminative worry for distress disorders, anxiety and panic in fear disorders; Lee, Sellbom, & Hopwood, 2017), although further research is necessary to provide further support for these associations.

Anxiety sensitivity. Given the large number of disorders that include anxiety-related emotions and the process by which AS "amplifies" these experiences of anxiety, it follows that elevated AS has been implicated across several different forms of internalizing psychopathology (Weems, 2011). Indeed, previous empirical studies have found that scores on measures of AS are moderately to strongly associated with measures of distress and fear disorder symptomology in a meta-analysis of several studies utilizing both clinical and non-clinical samples (Naragon-

Gainey, 2010). Past authors have also suggested that, although AS is broadly related to internalizing disorders, the construct is particularly central to PTSD and PD, as individual diagnosed with these disorders demonstrate elevated AS compared to both individuals without these diagnoses or those diagnosed with other anxiety disorders (Gillihan, Farris, & Foa, 2011; Olatunji & Wolitzky-Taylor, 2009). Previous studies have also demonstrated that scores on measures of AS are moderately to strongly associated with measures of other internalizing-related phenomena, such as suicidal ideation (Capron, Cougle, Ribeiro, Joiner, & Schmidt, 2012), rumination (Starr & Davila, 2011), and deficits in emotion regulation (Sippel et al., 2014).

Although most commonly associated with internalizing forms of psychopathology, AS has also been linked to some externalizing-related phenomena. Specifically, AS has been associated with negative urgency, or the tendency to act impulsively in the presence of negative affective states (Weitzman, McHugh, & Otto, 2011), drinking to cope motivations (Berenz et al., 2016; DeMartini & Carey, 2011), and alcohol abuse (Chavarria et al., 2015). Additionally, among a non-clinical adolescent sample, AS completely mediated the relationship between trait anxiety and alcohol abuse (Wolitzky-Taylor et al., 2015), suggesting that AS contributes to alcohol-related problems above and beyond trait anxiety. Likewise, among a non-clinical sample young adult sample, AS predicted future AUD development after controlling for trait anxiety and previous levels of AUDs/SUD symptomology (Schmidt, Buckner, & Keough, 2007). One potential explanation for these findings is that individuals with elevated AS may utilize alcohol to regulate affect and dampen physiological arousal associated with fear or anxiety experiences (Wolitzky-Taylor et al., 2015).

AS lower-order dimensions. Similar to the higher-order AS factor, the lower-order dimensions of AS have been linked to distress and fear disorder symptomology (Naragon-

Gainey, 2010). However, past empirical studies also demonstrate that lower-order AS dimensions incrementally contribute to the prediction of specific types of internalizing dysfunction above and beyond the higher-order AS dimension (Wheaton et al., 2012). For example, among clinical samples, P-AS and S-AS demonstrated stronger discriminant validity in predicting PD and SP respectively, when compared to prediction of these disorders by the global AS factor (Taylor et al., 2007). From a diagnostic perspective, Allan, Capron, Raines, and Schmidt (2014) used structural equation modeling to determine that P-AS was uniquely associated with fear disorders, C-AS was uniquely associated with distress disorders, and S-AS was uniquely associated with SP. Additionally, in clinical outpatient samples, C-AS has been related to suicidal ideation after controlling for depressive symptomology (Allan et al., 2014; Capron, Norr, Macatee, & Schmidt, 2013).

Distress intolerance. Similar to Affect Sensitivity and AS, DI is associated with a variety of psychopathological outcomes. Elevated DI predicts a greater number of psychological symptoms, while lower levels (i.e., greater distress tolerance) are associated with less subjective distress and fewer psychological symptoms (Leyro et al., 2010). Previous empirical studies among adult clinical samples have supported this notion, as individuals with elevated DI demonstrated increased odds of presenting with a fear or distress disorder (Allan et al., 2015). DI has also demonstrated moderate-to-strong associations with panic, obsessive-compulsive symptoms, worry, and social anxiety (Keough et al., 2010). Additionally, similar to AS, DI is meaningfully related to a number of internalizing-related phenomena, including rumination (Magidson et al., 2012), suicidal ideation (Capron et al., 2013), non-suicidal self-injury (Nock & Mendes, 2008), deficits in emotion regulation, and behavioral avoidance (McHugh et al., 2013).

DI has also been implicated in problematic substance use outcomes. Among an adult clinical sample, individuals with elevated DI demonstrated increased odds of presenting with a SUD (Allan et al., 2015). Additionally, the construct is also related negative urgency (Kaiser, Milich, Lynam, & Charnigo, 2012), as well as coping motivations for alcohol and cannabis use (Howell, Leyro, Hogan, Buckner, and Zvolensky, 2010; Simons & Gaher, 2005; Zvolensky et al., 2009). Previous empirical evidence also suggests that, like AS, DI contributes to substance use outcomes above and beyond internalizing disorder symptomology. For example, amongst a young adult normative sample, DI completely mediated the relationship between depressive symptomology and alcohol or cannabis misuse (Buckner et al., 2007). Similar to other constructs within the Affect Sensitivity nomological net, individuals with elevated DI may also experience increased motivation to regulate affect, which could result in the problematic use of alcohol or other substances to achieve this goal. However, longitudinal studies examining the development of these psychological difficulties is necessary to provide empirical support for this assertion.

Limitations of Past Research

The constructs of Affect Sensitivity, AS, lower-order AS dimensions, and DI are personological vulnerabilities that are implicated as potential etiological mechanisms across a broad spectrum of psychopathological outcomes. However, previous research has demonstrated inconsistent results regarding convergent and discriminant validity of these constructs, often conflating or poorly discriminating between various constructs within this nomological network. For example, Allen et al. (2015) found similar significant and meaningful associations between Affect Sensitivity, AS, and DI and fear disorders. In another example, multiple studies indicate that none of the three lower-order dimensions of AS are correlated with SUD symptomology beyond the higher-order AS dimension (Allan et al., 2015; Chavarria et al., 2015), suggesting that the division of AS into lower-order dimensions is superfluous. However, other evidence suggests that the lower-order AS dimensions differentially moderate the relationship between trait anxiety and illicit substance use among young adults (Dixon, Stevens, & Viana, 2014). Additionally, the higher-order Affect Sensitivity construct is conceptualized as a unique construct that subsumes AS and DI, yet previous empirical studies have not sufficiently examined the role of Affect Sensitivity in psychopathological and related outcomes outside of its lower-order AS and DI dimensions. This lack of research on the Affect Sensitivity construct is problematic, as it is unknown whether some outcomes are better predicted by a broad sensitivity to affect as opposed to the more narrow facets of AS and DI. These patterns of comparable associations across constructs and inconsistent findings across studies obfuscates the convergent and discriminant validity of constructs within this nomological network. Practically, this hinders our ability to draw meaningful conclusions about the etiological contributions of these mechanisms to specific disorders and outcomes.

Another problem with this research is that many studies examining Affect Sensitivity and related constructs have exclusively focused on their relations to diagnostic outcomes or examine their associations with psychopathological outcomes in the context of nosological systems that conceptualize disorders as discrete entities (e.g., the Diagnostic and Statistical Manual of Mental Disorders; American Psychiatric Association, 2013). Although these studies still produce etiologically relevant information about the transdiagnostic nature of these constructs, the inherent flaws in these existing nosologies (see Widiger & Crego, 2015 for an extensive review) limit the meaningful conclusions that can be drawn regarding the etiological role of Affect Sensitivity, AS, and DI.

Addressing these limitations through continued empirical study of facets within Affect Sensitivity nomological net is important for several reasons. The previously demonstrated associations between constructs within the Affect Sensitivity nomological net indicates that these constructs are, to some degree, conceptually relevant to psychopathological outcomes, including comorbid psychological difficulties. Further elucidating the role of each construct in various psychopathological outcomes could provide enhanced etiological explanation for comorbid disorders, both within and across psychopathological spectra.

Current Study

Given the limitations of previously discussed empirical studies, the primary goal of the current was to examine the convergent and discriminant validity of Affect Sensitivity, AS, DI, and lower-order AS dimensions. Specifically, per Cronbach and Meehl's (1955) guidelines for examining construct validity, this included examining the structure of the Affect Sensitivity nomological net, the role of Affect Sensitivity in relevant outcomes, and the convergent and discriminant validity of constructs across each level of the nomological net.

To achieve this goal, models of the underlying structure of the Affect Sensitivity nomological net were tested. Based on previous findings from Bernstein et al.'s (2009) model, it was hypothesized that a two-factor solution, with AS and DI loading onto a higher order Affect Sensitivity factor as illustrated in Figure 1, would demonstrate a better fit to data than a single Affect Sensitivity factor. Furthermore, based on previous factor analyses from Taylor et al. (2007), it was hypothesized that a three-factor AS model, with AS dividing into P-AS, C-AS, and S-AS as depicted in Figure 2, would provide a better fit to data than a global AS factor.

Using factor scores derived from the best fitting models, the unique patterns of association between constructs within the nomological net and various psychological phenomena were examined. It was also hypothesized that Affect Sensitivity, AS, and DI would demonstrate differential patterns of association with various outcomes, as outlined in Table 1. Specifically, as described earlier, AS and DI have demonstrated similar associations with phenomena such as substance use behaviors (Buckner et al., 2007; Chavarria et al., 2015), drinking to cope motivations (Berenz et al., 2016; Howell et al., 2010), impulsive behaviors during negative emotional states (Weitzman et al., 2011), poor emotion regulation (McHugh et al., 2013; Sippel et al., 2014), and avoidance coping (McHugh et al., 2013). Thus, because these constructs represent non-specific psychological phenomena, it is hypothesized that the higher- Affect Sensitivity factor, which may reflect a non-specific sensitivity to affect, will demonstrate the strongest associations with these outcomes as compared to the AS and DI subfactors. Likewise, based on contemporary models of psychopathology (Krueger & Markon, 2006; Lee et al., 2017) in which a broad liability towards internalizing dysfunction bifurcates into fear and distress components, it is hypothesized that AS will demonstrate stronger associations than DI with fear-related constructs, such as agoraphobic cognitions, frequency of fear experiences, fear of social interactions, and somatization. It is also hypothesized that DI will demonstrate stronger associations than AS with distress-related constructs, such as demoralization, experiences of negative affect, rumination, and worry.

Finally, it is hypothesized that P-AS, C-AS, and S-AS will demonstrate more specific patterns of association as compared to the global AS factor with fear-related outcomes, as seen in Table 2. Because P-AS is conceptualized as fear of physical sensations of hyperarousal (Olthuis et al., 2014; Wheaton et al., 2012), it is hypothesized that P-AS will demonstrate stronger associations with fear of physical arousal compared to C-AS and S-AS. Likewise, because C-AS relates specifically to fear of cognitive consequences of anxiety (Olthuis et al., 2014; Wheaton et al., 2012), it is hypothesized that C-AS will demonstrate stronger associations with fear of loss of cognitive control compared to P-AS and S-AS. Lastly, because S-AS is conceptualized as fear of the social consequences of anxiety (Olthuis et al., 2014; Wheaton et al., 2012), it is hypothesized that S-AS will demonstrate stronger associations with fear of social interactions compared to P-AS or C-AS.

Method

Participants

Participants in the study were 332 undergraduate students at a large Midwestern university. To reduce error variance in analyses, participants were excluded from the study if they produced an invalid Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF; Ben-Porath & Tellegen, 2008/2011) profile (see "Measures"). In line with recommendations from the MMPI-2-RF User's Manual (Ben-Porath & Tellegen, 2008/2011), invalid profiles were defined as having a Cannot Say (CNS-r) greater than or equal to 15, a Variable Response Inconsistency (VRIN-r) or True Response Inconsistency (TRIN-r) greater than or equal to 80, an Infrequent Responses (F-r) score equal to 120, Infrequent Psychopathology Responses (Fp-r), Infrequent Somatic Response (Fs), Symptom Validity Scale-Revised (FBS-r), or Response Bias (RBS) scores greater than or equal to 100, an Uncommon Virtues (L-r) score greater than or equal to 80, or an Adjustment Validity (K-r) score greater than or equal to 70. This procedure excluded 47 (14.2%) participants. Participants were also excluded if they were missing 10% or more of the data on the Anxiety Sensitivity Index-3 (ASI-3; Taylor et al., 2007) or Distress Tolerance Scale (DTS; Simons & Gaher, 2005), which are measures of AS and DI used in the current study (see "Measures"). This procedure excluded four additional participants (1.4%). Differences in demographic characteristics of participants included and excluded from the study were tested using *t*-tests and chi-square analyses. There were no significant differences in participants included or excluded from the study based on age ($t[330] = 0.21$, $p = .84$, $d = .03$), racial or ethnic group membership ($\chi^2[2] = 4.58$, $p = .10$, $\varphi = .12$), or gender ($\chi^2[1] = 0.42$, $p = .52$, $\varphi = .04$). After these exclusions, the final sample consisted of 281 participants, including 81 (28.8%) men and 200 (71.2%) women with ages ranging from 18 to 26 ($M_{age} = 18.92$, $SD = 1.11$). In terms of racial and ethnic group membership, 241 (85.8%) identified as White, 24 (8.5%) as Black, and 16 (5.7%) as a member of another or unidentified racial or ethnic group.

Measures

Measure for Screening Invalid Protocols.

Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF). The MMPI-2-RF (Ben-Porath & Tellegen, 2008/2011) is a 338 item, true/false broadband self-report inventory assessing personality, psychopathology, and social/behavioral functioning. Substantive scales on the MMPI-2-RF are arranged in a hierarchical manner, with Higher-Order (H-O) scales reflecting dysfunction in broad domains of psychopathology (i.e., emotional, behavioral, and thought dysfunction), Restructured Clinical (RC) scales measuring specific facets of personality and psychopathological dysfunction, and Specific Problems (SP) scales measuring narrow yet clinically significant attributes that are specific facets of constructs represented by the RC scales. The MMPI-2-RF has been subject to extensive empirical study, with results of these studies supporting the reliability and construct validity of the H-O, RC, and SP scales (see Ben-Porath, 2012 for an extensive review). RC and SP scales used in the current study are described below in the Outcome Measures section. Validity Scales used to screen for invalid profiles (see Participants section above) are described in the next paragraph.

The MMPI-2-RF also contains Validity Scales used to evaluate individual test protocols and, in turn, the quality of information provided by participants. Specifically, CNS-r is used to measure the number of nonresponses to items on the MMPI-2-RF. Next, VRIN-r measures random responding to test items without regard to item content. In contrast, TRIN-r measures patterns of indiscriminately answering test items as “true” or “false,” regardless of item content. MMPI-2-RF Validity Scales also measure participant’s attempts to overreport or underreport psychological difficulties. First, in terms of overreporting, F-r reflects the extent to which participants endorsed rare psychopathological symptoms. Second, Fp-r measures endorsement of items answered infrequently by individuals with severe, genuine psychopathology. Third, Fs and FBS each measure endorsement of somatic complaints infrequently reported by individuals with genuine physical ailments. Lastly, RBS measures unusual responding that is potentially indicative of noncredible memory complaints. Underreporting is measured on the MMPI-2-RF using L-r, which measures endorsement of unusually virtuous behaviors, and K-r, which measures reports of above-average psychological adjustment. Like the measure’s substantive scales, the MMPI-2-RF validity scales have also been subject to extensive empirical study with past research generally supporting the ability of scores on these scales to screen for protocol invalid or noncredible responding (see Ben-Porath, 2012 for a review).

Affect Sensitivity Nomological Net Constructs.

Anxiety Sensitivity Index-3 (ASI-3). The ASI-3 (Taylor et al., 2007) is an 18-item instrument measuring AS and its specific subdimensions. The ASI-3 contains three 6-item subscales reflecting an empirically supported three-factor model of AS: P-AS (e.g., “When I feel pain in my chest, I worry that I am going to have a heart attack”), C-AS (e.g., “When my thoughts seem to speed up, I worry that I might be going crazy”), and S-AS (e.g., “I worry that other people will notice my anxiety"). Scores on the composite scale and subscales of the ASI-3 have previously demonstrated good internal consistencies amongst a non-clinical college student sample (α = .79-.84; Taylor et al., 2007). Global and subscale scores on the ASI-3 have previously demonstrated moderate to strong correlations with measures of worry, obsessive-compulsive symptoms, social anxiety, and panic, supporting the convergent validity of scores on the ASI-3 (Wheaton, Deacon, McGrath, Berman, & Abramowitz, 2012). Additionally, the subscales of the ASI-3 have previously demonstrated a differential pattern of association with specific diagnoses (e.g., S-AS and SAD, P-AS and PD; Taylor et al., 2007), further supporting the validity of these scores.

Distress Tolerance Scale (DTS). The DTS (Simons & Gaher, 2005) is a 15-item instrument measuring the capacity to withstand and experience negative emotional states. Unlike other DI scales, which conceptualize DI as intolerance of uncertainty or the perceived capacity to withstand physical distress (Zvolensky et al., 2011), Simons and Gaher's measure (2005) focuses exclusively on the emotional or affective components of DI, consistent with the definition adopted for the current study. Scores on DTS subscales and the instrument as a whole have demonstrated adequate reliability amongst non-clinical samples (α = .70-.84; Simons & Gaher, 2005; Zvolensky et al., 2011). Previous empirical studies have found that DTS scores demonstrated moderate negative associations with scores on measures of affect dysregulation. Additionally, DTS scores also demonstrated moderate positive associations with mood acceptance and mood regulation, supporting the convergent validity of the measure (Simons & Gaher, 2005). Furthermore, in comparison to these observed relationships, associations between DTS scores and measures of mood were markedly smaller, supporting the discriminant validity of the measure's scores.

Outcome Measures.

Agoraphobic Cognitions Questionnaire (ACQ). The ACQ (Chambless, Caputo, Bright, & Gallagher, 1984) is a 14-item instrument measuring the frequency of thoughts concerning negative consequences of experiencing anxiety. Specifically, previous factor analyses have suggested a two-factor solution for the measure, with items relating to loss of control (e.g., "I am going to go crazy") or physical consequences of experiencing anxiety (e.g., "I am going to throw up"). Total and subscale scores on the ACQ demonstrated good internal consistency among the current sample (Total Score α = .88; Loss of Control α = .83; Physical Consequences α = .81). Additionally, scores on the ACQ have previously demonstrated positive correlations with frequency of panic, as well as scores on measures of depression and anxiety (Chambless et al., 1984). The scale has also been demonstrated to successfully discriminate between individuals with and without diagnoses of agoraphobia (Chambless et al., 1984).

Alcohol Use Disorders Identification Test (AUDIT). The AUDIT (Saunders, Aasland, Babor, de la Fuente, & Grant, 1993) is a 10-item instrument measuring hazardous and harmful alcohol consumption, with items assessing alcohol dependence, adverse psychological reactions to alcohol consumption, and alcohol-related problems. Internal consistency for scores on the AUDIT amongst the current sample was good (α = .82). Scores on the AUDIT have been previously related to both other alcohol problem screening instruments and biomarkers of AUD, demonstrating the convergent validity of the instrument (de Meneses-Gaya et al., 2009). Score on the AUDIT have also successfully discriminated between university students diagnosed with an AUD and healthy controls, supporting the diagnostic validity of the measure (de Meneses-Gaya et al., 2009).

AXY of the MMPI-2-RF. The SP Anxiety (AXY) scale of the MMPI-2-RF is a five-item scale measuring experiences of pervasive anxiety, including both expectancies that a given stimulus will elicit anxiety and interpretations of anxiety sensations as indicative of future harm. Internal consistency for scores on AXY among the current sample were low ($\alpha = .56$). However, this internal consistency coefficient is comparable to that reported in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011) and is likely a function of the small number of items on the scale, which lowers internal consistency estimates (Streiner, 2003). As outlined in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), scores on AXY were associated with scores on measures of fearfulness and therapist ratings of anxiety symptoms among mental health outpatients, supporting the convergent validity of these scale scores.

Brief Approach/Avoidance Coping Questionnaire (BACQ). The BACQ (Finset, Steine, Haugli, Steen, & Laerum, 2002) is a brief 12-item instrument that measures an individual's tendency to engage in either approach or avoidance styles of coping, as evidenced by self-reported cognitions, emotions, and actions. Although the measure contains subscales assessing approach coping, resignation and withdrawal, and diversion, the instrument is designed such that composite scores measure a general dimension of coping conceptualized as an approach-avoidance dichotomy (Finset et al., 2002). Internal consistency for composite scores on the BACQ among the current sample was adequate ($\alpha = .70$). Additionally, composite scores on the BACQ have previously demonstrated strong positive correlations with collateral measures of approach-based coping styles (e.g., seeking emotional social support, active coping, positive reinterpretation) and moderate negative correlations with collateral measures of avoidance-based coping styles (e.g., behavioral and mental disengagement), supporting the convergent validity of these scores.

BRF of the MMPI-2-RF. The SP Behavior-Restricting Fears (BRF) scale of the MMPI-2-RF is a nine-item scale measuring experiences of fear that inhibit daily functioning. Internal consistency for scores on BRF among the current sample were low (α = .55) but is again comparable to that reported in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011) and may be a function of the small number of items on the scale (Streiner, 2003). As outlined in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), scores on BRF were correlated with scores on measures of agoraphobic symptoms among mental health outpatients, supporting the convergent validity of these scale scores.

Body Sensations Questionnaire (BSQ). The BSQ (Chambless et al., 1984) is a 17-item instrument measuring the extent to which an individual is frightened by sensations associated with autonomic arousal (e.g., heart palpitations, nausea, dizziness, shortness of breath). Scores on the BSQ demonstrated excellent internal consistency amongst the current sample (α = .91). Scores on the BSQ have previously demonstrated positive correlations with frequency of panic and collateral measures of depression. BSQ scores also successfully discriminate between individuals with and without diagnoses of agoraphobia (Chambless et al., 1984). Although the ACQ (just described) and BSQ both measure beliefs and fears that occur as one experiences anxiety-related sensations, correlations between the two measures are low amongst non-clinical samples ($r = .20$; Peterson & Plehn, 1999), suggesting that the two measures tap into similar, yet conceptually distinct, constructs (i.e., beliefs about the negative consequences of anxiety experiences for the ACQ versus fear of physical anxiety symptoms in the BSQ).

Catastrophic Cognitions Questionnaire (CCQ). The CCQ (Khawaja, Oei, & Baglioni, 1994) is a 21-item measure assessing the dangerousness one associates with unpleasant emotions, physical changes, or thinking difficulties. The instrument contains three subscales relating to catastrophizing experiences in three distinct dimensions: emotive (e.g., feeling edgy, being miserable), physical (e.g., having an accident, being injured), and cognitive (e.g., mind not functioning normally) experiences. In the current sample, internal consistencies for the total score and subscale scores were good (Total Score $\alpha = .89$; Emotional Catastrophes $\alpha = .76$; Physical Catastrophes $\alpha = .78$; Cognitive Catastrophes $\alpha = .82$). Scores on the subscales of the CCQ have previously demonstrated moderate to strong correlations with scores on measures of anxiety, agoraphobic cognitions, and reactions to bodily sensations amongst a nonclinical student sample, supporting their convergent validity (Khawaja et al., 1994). Additionally, individuals presenting for treatment for anxiety-related difficulties demonstrated elevated scores on the CCQ compared to healthy controls, further supporting the validity of these scores.

COG of the MMPI-2-RF. The SP Cognitive Complaints (COG) scale of the MMPI-2-RF is a 10-item scale which measures cognitive difficulties such as problems with attention, memory and concentration. Internal consistency for scores on COG among the current sample were adequate ($\alpha = .72$). As described in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), scores on COG were associated with scores on measures of concentration difficulties and preoccupation with physical health concerns among a mental health outpatient sample, supporting the convergent validity of these scale scores. Additionally, scores on COG have been previously associated with failures in perception and memory among a college student sample (Forbey, Lee, & Handel, 2010) and subjective cognitive complaints without legitimate cognitive dysfunction among a sample of non-head injury disability claimants (Gervais, Ben-Porath, & Wygant, 2009).

Coping Motives subscale of the Drinking Motivations Questionnaire-Revised (DMQ-R). The DMQ-R (Cooper, 1994) is a 20-item scale measuring different types of drinking motives. Of particular interest to the current study, the measure contains a five-item subscale assessing an individual's tendency to consume alcohol because of coping motivations (e.g., to forget about problems or reduce distress). Internal consistency for scores on the Coping Motivations subscale among the current sample was good (α = .88). Supporting their validity, previous studies have demonstrated positive associations between scores on the DMQ-R, drinking frequency, and alcohol-related problems (Kuntsche et al., 2006).

Cannabis Use Disorders Identification Test (CUDIT). The CUDIT (Adamson & Sellman, 2003) is a 10-item instrument measuring hazardous and harmful cannabis use, adapted from the AUDIT. The instrument measures frequency of cannabis use, negative psychological reactions to cannabis, and cannabis-related problems. Internal consistency for CUDIT scores among the current sample was good (α = .86). Scores on the CUDIT have been related to problematic cannabis use (e.g., using cannabis at school, using cannabis while driving), coping motivations, and depressive symptoms, supporting the convergent validity of the measure (Annaheim et al., 2008).

Difficulties in Emotion Regulation Scale (DERS). The DERS (Gratz & Roemer, 2004) is a 36-item scale measuring multiple aspects of emotional regulation and dysregulation. The measures contains six subscales examining nonacceptance (of emotional responses), difficulties engaging in goal directed behavior, impulse control difficulties, lack of emotional awareness, limited access to emotional regulation strategies, and lack of emotional clarity. This six-factor solution for DERS has been supported through previous factor analyses of the scale (Gratz & Roemer, 2004). Internal consistency for the DERS total score among the current sample was excellent (α = .94). Previous studies have demonstrated strong correlations between scores on subscales of the DERS and similar emotion regulation scales (e.g., the Negative Mood Regulation Scale), supporting the convergent validity of scores on the measure.

Drug Use Disorders Identification Test (DUDIT). The DUDIT (Berman, Bergan, Palmstierna, & Schlyter, 2003) is an 11-item instrument measuring drug-related problems and drug use frequency, also adapted from the AUDIT. Among the current sample, internal consistency for scores on the DUDIT was good (α = .81). The instrument's scores have previously demonstrated strong correlations with other measures of drug use (e.g., the Drug Abuse Screening Test-10), supporting the convergent validity of the measure's scores (Voluse et al., 2012). Scores on the DUDIT also successfully discriminate between individuals with clinical and subclinical drug use problems (Voluse et al., 2012).

Frustration-Discomfort Scale (FDS). The FDS (Harrington, 2005) is a 28-item measure assessing intolerance of frustration and discomfort. The instrument contains items reflecting intolerance of emotional distress (e.g., "I absolutely must be free of distressing feelings as quickly as I can"), beliefs that life should be free of discomfort or distress (e.g., "Tasks that I attempt absolutely must not be difficult. Otherwise, I can't stand doing them"), demands for immediate gratification and fairness (e.g., "I can't tolerate criticism especially when I know I'm right"), and task-related frustration (e.g., "I can't stand doing a job if I'm unable to do it well.") Internal consistency for composite FDS scores among the current sample was excellent (α = .91). Harrington (2005) found that individuals presenting for outpatient treatment scored significantly higher on the FDS subscales compared to healthy controls. Elevated scores on the FDS have also been previously related to high scores on collateral measures of anger, anxiety and depression symptoms, and self-harm behaviors (Leyro et al., 2010).

Fear Questionnaire (FQ). The FQ (Marks & Matthews, 1979) is a 24-item self-report measure assessing phobias, phobic avoidance, and associated intolerance of depression and anxiety symptoms. Composite scores on the instrument (the Total Phobia scale) measures the test-taker's number of fears or phobias. Individual subscales measure more narrow experiences of fear within specific domains, with the Social Phobia subscale measuring frequency of fear of social stimuli. Internal consistencies for scores on the Total Phobia and Social Phobia subscales of the FQ were adequate to good among the current sample (Total Phobia $\alpha = .85$; Social Phobia $\alpha = .67$). Finally, sores on the FQ subscales were higher amongst individuals diagnosed with agoraphobia compared to non-clinical controls, further supporting their validity.

General Distress Scale of of Anxiety Depression Distress Inventory-27 (ADDI-27). The ADDI-27 (Osman et al., 2011) is a 27-item reduced version of Mood and Anxiety Symptom Questionnaire-90 (MASQ-90; Watson & Clark, 1991) measuring dimensions of the tripartite model of affect. The three dimensions of the tripartite model of affect are reflected in Distress, Somatic Anxiety, and Positive Affect subscales, which also appear on the ADDI-27. These subscales have demonstrated strong correlations with the subscales of the original MASQ-90.

Of particular interest in the current study, the instrument contains the General Distress scale, measuring a tendency to experience frequent, high-level negative affect responses, such as worry, fear, and irritability. The General Distress subscale is intended to reflect nonspecific or overlapping symptoms of depression and anxiety. Internal consistency for scores on the General Distress subscale among the current sample was excellent ($\alpha = .92$). Scores on the subscale have demonstrated strong correlations with collateral measures of general distress, mixed depressive and anxiety symptomology, and paranoia (Osman et al., 2011).

HLP of the MMPI-2-RF. The SP Hopelessness/Helplessness scale (HLP) of the MMPI-2-RF is a five-item scale measuring pessimism regarding one's future and perceptions of incapability of making changes or achieving goals. Among the current sample, internal consistency for HLP scores was low (α = .55) but is again comparable to that reported in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011) and may be a function of the small number of items on the scale (Streiner, 2003). As described in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), scores on HLP have been previously associated with therapist ratings of patients feeling hopeless, feeling overwhelmed, and having a pessimistic outlook on life among a mental health outpatient sample, supporting the convergent validity of scores on the scale.

MSF of the MMPI-2-RF. The SP Multiple Specific Fears (MSF) scale of the MMPI-2-RF is a nine-item scale measuring distinct fears and phobias that tend to co-occur. Internal consistency for scores on MSF was low (α = .65) but is comparable to that reported in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011) and is likely a function of the small number of items on the scale (Streiner, 2003). As described in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), MSF scores are associated with total number of fears and phobias among a medical outpatient sample and harm avoidance among a college student sample, supporting the convergent validity of scores on these scales.

NFC of the MMPI-2-RF. The SP Inefficacy (NFC) scale of the MMPI-2-RF is a nine-item scale measuring one's perceived incapability of making decisions or effectively managing major or minor crises. Internal consistency for scores on NFC among the current sample was adequate (α = .74). As outlined in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), scores on NFC previously demonstrated negative correlations with therapist ratings of patients being self-reliant and positive correlations with ratings of being passive or feeling like a failure among a mental health outpatient sample, supporting the convergent validity of NFC scores.

Negative Urgency subscale of UPPS-P Impulsive Behavior Scale (UPPS-P). The UPPS-P (Lynam, Smith, Whiteside, & Cyders, 2006) is a 59-item scale used to measure five distinct and empirically supported personality dimensions of impulsive behavior in adolescents and adults (Cyders et al., 2007; Whiteside & Lynam, 2001). The (Negative) Urgency scale (NU), measuring the tendency to act impulsively during negative affective states, is of particular interest to the current study. Scores on the NU subscale demonstrated adequate internal consistency among the current sample (α = .72). Moreover, scores on the individual subscales have also demonstrated differential associations with scores on collateral measures of personality and externalizing outcomes, supporting the discriminant validity of the subscales (Whiteside & Lyman, 2001).

Penn State Worry Questionnaire (PSWQ). The PSWQ (Meyer, Miller, Meztger, & Borkovec, 1990) is a 16-item measure assessing trait worry. Items on the measure relate to the excessiveness (e.g., "I worry all the time"), generality (e.g., "Many situations make me worry"), and uncontrollability (e.g., "Once I start worrying, I cannot stop") dimensions of worry. Internal consistency for PSWQ scores was excellent among the current sample (α = .94). Meyer et al. (1990) also demonstrated that scores on the PSWQ can successfully discriminate between individuals who meet all, some, or none of the diagnostic criteria for GAD, supporting the validity of these scores.

RC1 of the MMPI-2-RF. Restructured Clinical Scale 1 (Somatic Complaints; RC1) of the MMPI-2-RF is a 27-item scale measures a range of various somatic complaints and difficulties, which are often medically unexplained and may have a psychological cause. Internal consistency indicators for scores on RC1 among the current sample were adequate (RC1 α = .79). Previous research has demonstrated that, among a college student sample, scores on RC1 are related to scores on collateral measures of somatic complaints (Forbey & Ben-Porath, 2008), supporting the convergent validity of scores on this scale.

RC7 of the MMPI-2-RF. Restructured Clinical Scale 7 (Dysfunctional Negative Emotions; RC7) of the MMPI-2-RF is a 24-item scale that specifically examines negative emotionality, an affect-related personality reflecting a disposition towards experiencing negative emotions. Internal consistency for scores on RC7 among the current sample was good (α = .86). Among nonclinical college student samples, scores on RC7 have demonstrated strong, positive associations with scores on collateral measures of anger, cognitive complaints (e.g., feelings of “losing one’s mind”), social avoidance, and distress (Forbey et al., 2010), as well as social phobia, trait anxiety and anger, and obsessive-compulsive symptoms (Forbey & Ben-Porath, 2008), supporting the validity of these scores.

RCd of the MMPI-2-RF. Restructured Clinical Scale d (Demoralization; RCd) of the MMPI-2-RF measures demoralization, a general distress factor characterized by helplessness, hopelessness, feelings of inefficacy, and poor self-esteem. Internal consistency for scores on RCd were excellent among the current sample (α = .91). Previous empirical studies have found demoralization to be the primary marker of distress disorders (Sellbom, Ben-Porath, & Bagby, 2008). Additionally, previous research indicates that, among a college student sample, scores on RCd were related to scores on measures of depressive symptomology and trait anxiety, supporting the convergent validity of scores on the measure.

Ruminative Responses Scale (RRS). The RRS (Treynor, Gonzalez, & Nolen-Hoeksema, 2003) is a 10-item self-report measure assessing an individual's tendency to engage in rumination (i.e., coping with negative mood via self-focused attention). The RRS contains items measuring reflection (neutral contemplation of negative feelings; e.g., "analyz[ing] recent events to try to understand why you are depressed") and brooding (thinking anxiously or gloomily about negative mood; e.g., "think[ing] 'Why do I always react this way?'"). Internal consistency for composite scores on the RRS among the current sample was good (α = .84). Composite RRS scores have demonstrated moderate to strong correlations with scores on collateral measures of depression and anxiety symptomology and poor overall mental health, supporting the validity of scores on the measure (Parola et al., 2017).

SAV of the MMPI-2-RF. The Social Avoidance (SAV) scale of the MMPI-2-RF is a 10-item scale reflecting a lack of interest in and efforts to avoid social interactions. Internal consistency for scores on SAV among the current sample were good (α = .83). As described in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), scores on SAV were negatively correlated with scores on measures of social warmth and positive emotionality among a college student sample, supporting the convergent validity of scores on the scale.

SFD of the MMPI-2-RF. The SP Self-Doubt (SFD) scale of the MMPI-2-RF is a four-item scale measuring lack of confidence and feelings of inferiority. Internal consistency for SFD scores among the current sample were adequate (α = .76). As outlined in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), scores on SFD are related to therapist ratings of patient's feelings of worthlessness, depressive symptomology, and suicidal ideation, supporting the validity of scores on the scale.

SHY of the MMPI-2-RF. The Shyness (SHY) scale of the MMPI-2-RF is a seven-item scale measuring experiences of discomfort and anxiety while engaging in social interactions. Internal consistency for scores on SHY were adequate among the current sample (α = .77). As described in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), scores on SHY were positively correlated with scores on measures of stress reactivity and negatively correlated with measures of positive emotionality and social dominance, supporting the convergent validity of scores on the scale.

Social Interaction Anxiety Scale (SIAS). The SIAS (Mattick & Clarke, 1998) is a 19-item scale assessing fear of interacting in social situations (e.g., "When mixing socially I am uncomfortable"). Scores on the measure demonstrated excellent internal consistency among the current sample (α = .94). Scores on the SIAS have demonstrated strong correlations with other measures of social fear (e.g., the Social Phobia Scale), supporting the convergent validity of the measure. Additionally, individuals diagnosed with social phobia or agoraphobia demonstrated elevated scores on the SIAS compared to individuals with simple phobia diagnoses and individuals without disorder diagnoses, further supporting the validity of scores on the measure.

Somatic Anxiety Scale of Anxiety Depression Distress Inventory-27 (ADDI-27). As previously discussed, the ADDI-27 (Osman et al., 2011) is a 27-item reduced version of the MASQ-90, measuring dimensions of the tripartite model of affect. Of particular interest in the current study, the Somatic Anxiety scale of the ADDI-27 measures an anxious hyperarousal dimension, reflecting a tendency to experience somatic responses (e.g., dizziness, trembling hands) in response to anxiety. Scores on the Somatic Anxiety scale demonstrated good internal consistency among the current sample (α = .87). Scores on the scale have also previously demonstrated moderate to strong correlations with collateral measures of anxiety, fear, and somatization (i.e., the Beck Anxiety Inventory), supporting the convergent validity of these scores.

STW of the MMPI-2-RF. The SP Stress/Worry (STW) scale of the MMPI-2-RF is a seven-item scale measuring general experiences of stress and worry, such as stress reactivity and being worry-prone. Scores on STW demonstrated low internal consistency among the current sample ($\alpha = .61$), although this internal consistency coefficient is comparable to that reported in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011) and may relate to the small number of items on the scale (Streiner, 2003). As indicated in the MMPI-2-RF Technical Manual (Ben-Porath & Tellegen, 2008/2011), STW scores were previously related to scores on collateral measures of stress reactivity among a nonclinical sample, supporting the convergent validity of scores on the measure.

Procedure

Participants completed computerized administrations of the ASI, DTS, and criterion measures in a single session lasting approximately two hours under the supervision of a trained undergraduate or graduate research assistant. A maximum of four participants were permitted in each group data collection session. All measures, except for the MMPI-2-RF, were presented in a random order to each participant via Qualtrics (Qualtrics Labs, Inc., 2005) to control for order effects. Due to technical restrictions (i.e., proprietary software), the MMPI-2-RF was administered either prior to or after all other measures. The order in which participants completed the MMPI-2-RF and measures in Qualtrics were also counterbalanced across sessions. To reduce participant fatigue, participants completed a paper-and-pencil task in which they rated the humorousness of comic strips between administration of the MMPI-2-RF and Qualtrics measures. All participants were measured in accordance with guidelines set forth by the university's Institutional Review Board, including providing informed consent and allowing for withdrawal of participation. Participants received course credit for their participation in the current study.

Data Analyses

Prior to data analyses, participants with elevated *T* scores on Validity Scales of the MMPI-2-RF indicating invalid responding (as per criteria outlined in Ben-Porath & Tellegen, 2008/2011) were excluded to reduce error variance in analyses (see Participants section above). This is important because invalid response styles exhibited on the MMPI-2-RF have been demonstrated to carry over across collateral measures (Forbey & Lee, 2011; Forbey, Lee, Ben-Porath, Arbisi, & Gartland, 2013).

Using items from the ASI-3 and DTS, confirmatory factor analyses (CFA) were used to examine the goodness of fit to the data for several components of the overall Affect Sensitivity model. First, models for AS alone were examined. As illustrated in Figure 2, the fit for a model containing a single AS factor indicated by all ASI-3 items (Global AS Models A-C) was examined. Second, fit for models representing AS subcomponents (P-AS, C-AS, and S-AS) indicated by appropriate items on the ASI-3 were examined. Third, the fit for a model containing three correlated AS factors (Correlated AS Factors Model), in which P-AS, C-AS, and S-AS are correlated with one another, was examined and compared to the Global AS Model. Fourth, a hierarchical AS model (Hierarchical AS Model), in which P-AS, C-AS, and S-AS factors load onto a higher-order AS factor, was examined and compared to both the Global AS Models and Correlated Factors AS Model. Next, models for DI alone were examined. As illustrated in Figure 3, the global and local fit for a model (DI Measurement Model and Alternative DI Models A and B) containing a single DI factor indicated by DTS items was examined. Finally, models of Affect

Sensitivity combining previously established models of AS and DI into a single model were examined. As illustrated in Figure 4, the goodness of fit for a model (Global Affect Sensitivity Model) containing a single Affect Sensitivity factor indicated by all DTS and ASI-3 items was calculated. The Global Affect Sensitivity Model was then compared to a model (Correlated AS-DI Model) in which AS with its subfactors and DI were correlated and indicated by ASI-3 and DTS items respectively. The Global Affect Sensitivity Model was also compared to a model (Hierarchical Affect Sensitivity Model A and B) in which the Affect Sensitivity factor is indicated by an AS factor (indicated by P-AS, C-AS, and S-AS) and a DI factor (indicated by DTS items).

All calculated CFAs included an examination of the item level data and assumptions underlying CFA. All models were calculated in M-Plus (Version 6; Muthen & Muthen, 2010). Because several ASI-3 items did not demonstrate univariate normality (see Results), therefore likely violating the assumption of multivariate normality, Robust Maximum Likelihood (MLM; Satorra & Bentler, 1994) estimation was used. This type of estimation is robust to non-normality (Brown, 2006).Global model fit was evaluated by examining the MLM chi-square (χ^2), Root Mean-Square Error of Approximation (RMSEA), the RMSEA 90% Confidence Interval, the Comparative Fit Index (CFI), the Tucker-Lewis Index (TLI), and the Standardized Root Mean Square Residual (SRMR). Models with RMSEA values between .06 and .08, CFI values $\geq$ .90, TLI values $\geq$ .90, and SRMR values $\leq$ .08 were considered to have acceptable fit (Hu & Bentler, 1999). Likewise, models with RMSEA values $\leq$ .06, CFI values $\geq$ .95, TLI values $\geq$ .95, and SRMR values $\leq$ .05 were considered to have good fit (Hu & Bentler, 1999). Competing measurement models of the constructs under study were compared using MLM χ^2 difference tests (ΔMLM χ^2; Satorra & Bentler, 1999) to determine whether one model demonstrated a better fit to the data compared to the competing model. A competing model was considered to demonstrate better fit to the data than the baseline model if the competing model demonstrated a smaller MLM χ^2, the MLM χ^2 difference test between the two models was statistically significant, and other model fit indices (i.e., RMSEA, CFI, TLI, SRMR) suggested improved global model fit. In all analyses, latent variables representing Affect Sensitivity, AS, AS subfactors, and DI were scaled by setting factor variances to one.

Next, a series of hierarchical regression analyses were performed to examine the convergent and discriminant validity of Affect Sensitivity, AS, and DI. A regression for each outcome using factor scores for Affect Sensitivity, AS, and DI derived from the CFA was calculated. Specifically, using forced entry regression methods, Affect Sensitivity was entered into the first step of the model, while AS and DI were entered in the second step of the model. R^2 coefficients and F statistics were examined to determine whether the overall model predicted a significant and clinically meaningful amount of variance of the measured outcome. The change in R^2 between the first and second steps were also examined to determine whether the addition of DI and AS added meaningfully beyond Affect Sensitivity to the prediction of the examined outcome. Additionally, differential patterns of prediction by Affect Sensitivity, AS, and DI were assessed by examining the relative strength of β values obtained from each analysis.

Lastly, a similar series of hierarchical regression analyses were performed to examine the convergent and discriminant validity of the lower-order AS subfactors for predicting selected outcomes (see Table 2). Again, each outcome was examined in an individual regression analysis using the factor scores derived from the CFA. The higher-order AS factor score was entered into the first step of the model, while P-AS, C-AS, ad S-AS factor scores were entered into the second step of the model. Again, R^2 coefficients and F statistics were examined to assess the statistical significance and utility of the overall model. The change in R^2 between the first and second steps were also examined to determine whether the addition of P-AS, C-AS, and S-AS added beyond AS to the prediction of the examined outcome. Differential patterns of prediction by the global AS factor and AS subfactors were assessed by examining the relative strength of β values obtained from each analysis.

Results

Descriptive Statistics for AS and DI Items.

Descriptive statistics for items from the ASI-3 and DTS are displayed in Table 3. Items with skewness or kurtosis greater than 1.5 were considered positively skewed or leptokurtic (Tabachnick, & Fidell, 2013). Likewise, items with skewness or kurtosis less than 1.5 were considered negatively skewed or platykurtic (Tabachnick, & Fidell, 2013). As displayed in Table 1, all DTS items fell within acceptable ranges for both skewness and kurtosis. However, Items 10, 12, 14, 15, 16, and 18 from the ASI-3 were all positively skewed and leptokurtic. As such, these items did not demonstrate univariate normality. As such, it was assumed that these items would violate the assumption of multivariate normality, indicating a need to employ MLM estimation in CFA.

Factor Analyses.

AS analyses. Results of all CFAs are displayed in Table 4. As displayed in this table in the row labeled "Global Model A," analyses of a global measurement model of containing all eighteen items of the ASI-3 loading onto a common AS factor indicated that it had poor fit to the data. As such, model respecifications were considered to examine whether a global AS model with acceptable fit to the data could be derived. Inspections of standardized factor loadings indicated that Item 1 on the ASI-3 demonstrated poor factor loading (.36), as indicated by a factor loading less than .4 (Brown, 2006). Global AS Model B removed Item 1 of the ASI-3 from the model, with results indicating that this respecification improved model fit, ΔMLM $\chi 2$ (df = 16) = 43.76, p < .001, cd = 1.01. However, as displayed in Table 4 in the row labeled "Global Model B," this model also demonstrated poor fit to the data. Inspections of the standardized factor loadings indicated that Item 17 also demonstrated poor factor loading (.36). Global AS Model C removed this item from analyses and results indicated that this change improved model fit, ΔMLM $\chi 2$ (df = 15) = 32.31, p = .006, cd = 1.06. However, as displayed in Table 4 in the row labeled "Global AS Model C," this respecified model also demonstrated poor fit to the data, with all indices of global fit demonstrating little to no improvement. In summation, none of the examined global AS models demonstrated good or acceptable fit to the data, demonstrating the need to examine alternative measurement models of AS.

In line with conceptualizations of AS by Taylor et al. (2007), models of AS subfactors, which divides the global AS construct into physical (P-AS), cognitive (C-AS), and social (S-AS) concerns were examined. Each subfactor was indicated by ASI-3 items demonstrated by Taylor et al. (2007) to serve as the strongest indicators of these factors in a three-factor solution. As displayed in the "P-AS," "C-AS," and "S-AS" rows of Table 4, all inspected subfactor models demonstrated good fit to the data.

Because conceptualizations of P-AS, C-AS, and S-AS indicate that the factors should be strongly related, as they are each indicators of the higher-order AS construct (Taylor et al., 2007), a model (Correlated AS Factors Model) containing three correlated P-AS, C-AS, and S-AS factors was also examined. This model included all eighteen ASI-3 items, while P-AS, C-AS, and S-AS were indicated using ASI-3 items as outlined by Taylor et al. (2007). As displayed in the row labeled "Correlated AS Factors Model," analyses of this model indicated that it had acceptable fit to the data. Results also indicated that the Correlated AS Factors model, in which P-AS, C-AS, and S-AS were specified, improved model fit from Global AS Model 1, ΔMLM $\chi 2$ (df = 3) = 216.60, p < .001, cd = 1.47. The resulting P-AS, C-AS, and S-AS factors were strongly correlated with each other (P-AS with C-AS: *r* = .66; P-AS with S-AS: *r* = .70; C-AS with S-AS: *r* = .62).

A model of AS in which P-AS, C-AS, and S-AS (defined identically to previously tested models) loaded onto a common AS factor (Hierarchical AS Model) was also examined. P-AS, C-AS, and S-AS were constrained to tau-equivalence, as previous empirical studies examining the latent structure of AS (e.g., Bernstein et al., 2007) indicate that subfactor loadings onto the global AS dimension are comparable to one another. As seen in the row labeled “Hierarchical AS Model” in Table 4, results indicated that the Hierarchical AS Model had acceptable fit to the data. Because the strong correlations between P-AS, C-AS, and S-AS were expected as the constructs each exist as subfactors of the global AS construct, the Hierarchical AS Model was not expected to demonstrate improved model fit over the Correlated AS Factors Model. MLM χ^2 difference test results supported this notion, as the Hierarchical AS Model did not demonstrate improved model fit over the Correlated AS Factors Model, ΔMLM $\chi 2$ (df = 2) = 1.90, p = .387, cd = 1.21. As such, the Hierarchical AS Model was considered to provide a more parsimonious accounting of the underlying structure of the AS construct. The structure and standardized factor loadings for this model are depicted in Figure 5.

DI analyses. As seen in the row labeled “DI Measurement Model” in Table 4, analyses of the proposed DI measurement model containing all fifteen items of the DTS loading onto a common DI factor (DI Measurement Model) indicated that it had poor fit to the data. As such, model respecifications were considered. Inspections of standardized factor loadings indicated that Item 14 on the DTS demonstrated poor loading (.30), as indicated by a standardized loading less than .4 (Brown, 2006). Previous empirical examinations of DTS items have also indicated that this item has demonstrated less than ideal factor loadings onto the global DI factor (Simons & Gaher, 2005). Given both current and past studies have suggested that Item 14 may serve as a poor indicator of the underlying DI construct, an Alternative DI Model A was fit that removed this item. Results indicated that respecification significantly improved model fit, ΔMLM $\chi2$ (df = 13) = 37.94, $p < .001$, cd = 1.08. However, as displayed in the row labeled "Alternative DI Model A" in Table 4, this model also demonstrated poor fit to the data. Inspection of modification indices for Alternative DI Model A suggested that adding a correlation between the residual variances of Items 8 and 13 on the DTS (M.I. = 55.25, Standardized E.P.C. = 0.49) could improve model fit. However, a review of these DTS items indicated that items 8 ("I'll do anything to avoid feeling distressed or upset") and 13 ("I'll do anything to stop feeling distressed or upset") were nearly identical in their language. Thus, these two items seemed redundant and an Alternative DI Model 2 removed item 8, as it had a lower standardized loading (.42) onto the DI factor compared to item 13 (.52). This respecification significantly improved model fit, ΔMLM $\chi2$ (df = 12) = 94.25, $p < .001$, cd = 1.13. Alternative DI Model B also demonstrated an acceptable fit to the data, as displayed in row labeled "Alternative DI Model B" in Table 4. Because removing Items 8 and 14 significantly improved global fit for the DI model and resulted in a model with acceptable global and local fit, Alternative DI Model B was selected as the respecified measurement model to be used in further analyses. The structure and standardized factor loadings for Alternative DI Model B are presented in Figure 6.

Affect sensitivity model analyses. As seen in the row labeled "Global Model" in the Affect Sensitivity section of Table 4, analyses of the Global Model of Affect Sensitivity in which all ASI-3 and DTS items (with the exception of Items 8 and 14) loaded onto a common Affect Sensitivity factor indicated that it had poor fit to the data. As such, alternative models of Affect Sensitivity that include lower-order DI and AS factors were also examined.

A model of Affect Sensitivity in which a higher-order AS factor, onto which P-AS, C-AS, and S-AS load, and DI are correlated (Correlated AS-DI Model) was also examined. This model approximated the structure of the Bernstein et al. (2009) model of Affect Sensitivity without the higher-order Affect Sensitivity factor. As seen in the row labeled "Correlated AS-DI Model" in Table 4, results from the estimation of this model indicated that it had acceptable fit to the data. The AS and DI factors in this model were strongly related to one another (r = -.64). Moreover, Correlated AS-DI Model demonstrated a significant improvement in model fit over the Global Affect Sensitivity Model, ΔMLM $\chi 2$ (df = 4) = 587.00, p < .001, cd = 1.154.

Analyses were performed to examine a hierarchical model (Hierarchical Model A) in which the DI factor derived from Alternative DI Model B and the AS factor derived from the Hierarchical AS Model loaded onto a common Affect Sensitivity factor. AS and DI loadings were constrained to tau-equivalence, as recommended by Brown (2006), to identify the model. However, despite constraining AS and DI loadings to tau-equivalence, estimation of Hierarchical Model A did not converge. An examination of results indicated that this nonconvergence was not due to Heywood Cases. Thus, although the model was statistically identified, convergence was likely not achieved due to empirical underidentification (Brown, 2006). As such, an alternative model (Hierarchical Model B), in which the DI factor derived from Alternative DI Model B and the P-AS, C-AS, and S-AS factors derived from the Correlated AS Factors model loaded onto a common Affect Sensitivity factor, was examined. Again, P-AS, C-AS, and S-AS were constrained to tau-equivalence, as previous empirical studies indicate that these subfactors are comparable indicators of AS (Bernstein et al., 2007). As seen in the row labeled "Hierarchical Affect Sensitivity Model B" in Table 4, results from the estimation of this model indicated that it had acceptable fit to the data. Additionally, Hierarchical Affect Sensitivity Model B demonstrated significantly improved model fit over the Affect Sensitivity Global Model, ΔMLM $\chi 2$ (df = 2) = 494.36, p < .001, cd = 1.176. Because Hierarchical Model B demonstrated acceptable global and local fit to the data and approximates the proposed structure of Affect Sensitivity, AS, AS subfactors, and DI (Bernstein et al., 2009; Taylor et al., 2007), this model was selected to represent the structure of the Affect Sensitivity nomological net. The structure and standardized loadings for Hierarchical Affect Sensitivity Model B are presented in Figure 9.

Regression Analyses.

As described above, the goal of the hierarchical regression analyses was to examine the convergent and discriminant validity of Affect Sensitivity, AS, and DI constructs. Due to the nonconvergence of Hierarchical Affect Sensitivity Model A, hierarchical regression analyses were altered to include P-AS, C-AS, S-AS, and DI factor scores in Step 2 instead of AS and DI factor scores. However, the resulting hierarchical regression analyses demonstrated severe multicollinearity issues due to exceedingly high correlations of P-AS, C-AS, and S-AS with Affect Sensitivity (*r*'s = .89-.92). As such, the data analytic plan was altered, and two multiple regression models were calculated for each outcome. In Model 1, Affect Sensitivity factor scores from Hierarchical Affect Sensitivity Model B were entered into the regression model as the sole predictor of each outcome. In Model 2, DI, P-AS, C-AS, and S-AS factor scores from the same model were entered as predictors of each outcome. Coefficients of determination (R^2) and standardized regression weights (β) were inspected to determine whether each outcome was more strongly predicted by Affect Sensitivity or by its lower-order facets (P-AS, C-AS, S-AS, DI). Affect Sensitivity was considered to be the strongest predictor if R^2 coefficients were comparable between Models 1 and 2 and if Model 2 did not display a discriminant pattern of prediction for a given outcome (i.e., P-AS, C-AS, S-AS, or DI did not emerge as a relatively stronger predictor compared to the others). If a discriminant pattern of prediction was observed among P-AS, C-AS, S-AS, and DI, the construct with the largest β value was considered the strongest individual predictor. Pearson's product moment correlations between the factors in Hierarchical Affect Sensitivity Model B and each outcome were also calculated. Due to the large number of calculated correlational and regression analyses, a Bonferroni-corrected α of .001 ($p \leq .05/78$ calculated regression models = $p \leq .001$) was utilized for evaluating statistical significance. Descriptive statistics for Hierarchical Affect Sensitivity Model B factor scores and outcome variables are presented in Table 5.

Affect Sensitivity hypotheses. Results from regression analyses examining outcomes that were hypothesized to be best predicted by Affect Sensitivity are presented in Table 6. In Model 1, Affect Sensitivity significantly predicted a small amount of variance in the composite BACQ scores and moderate amount of variance in scores on the Coping Motives scale of the DMQ-R, the NU subscale of the UPPS, and the composite CCQ score. Affect Sensitivity also significantly predicted a large amount of variance in the DERS composite score. Affect Sensitivity did not significantly predict scores on the AUDIT, CUDIT, or DUDIT.

Model 2 demonstrated a similar pattern of prediction to Model 1. Specifically, DI, P-AS, C-AS, and S-AS together significantly predicted a small amount of variance in the BACQ, a moderate amount of variance in the Coping Motives scale of the DMQ-R, the NU subscale of the UPPS, and the composite CCQ score, and a large amount of variance in the DERS composite score. These constructs together also did not significantly predict scores on the AUDIT, CUDIT, or DUDIT.

Using these criteria for evaluating regression models described above, Affect Sensitivity was evaluated as the strongest individual predictor of scores on the Coping Motives scale of the DMQ-R. However, contrary to hypotheses, DI was determined to the be the strongest individual predictor of scores on the NU subscale of the UPPS, the composite DERS score, and the composite BACQ score. Additionally, P-AS was determined to be the strongest individual predictor of composite CCQ scores, contrary to hypotheses.

AS hypotheses. Results from regression analyses examining outcomes that were hypothesized to be best predicted by AS are presented in Table 7. In Model 1, Affect Sensitivity significantly predicted a small amount of variance in MSF scores, a moderate amount of variance in BRF scores, composite FQ scores, and scores on the Somatic Anxiety subscale of the ADDI-27, and a large amount of variance in scores on RC7, the composite ACQ score, BSQ, RC1, SIAS, and AXY. Model 2 demonstrated a similar pattern of prediction to Model 1, as Model 2 significantly predicted comparable amounts of variance in each outcome with the exception of the Somatic Anxiety subscale of the ADDI-27, for which Model 2 predicted a large amount of variance.

As hypothesized, one of the components of AS emerged as the strongest individual predictor of scores on the BSQ, the FQ, the MSF scale, and the SIAS. Specifically, P-AS was determined to be the strongest predictor of scores on the BSQ and MSF scales. Likewise, S-AS was determined to be the strongest predictor of scores on the FQ and the SIAS. However, contrary to hypotheses, Affect Sensitivity was determined to be the strongest predictor of scores on RC7, the ACQ, the BRF scale, RC1, and AXY. Also contrary to hypotheses, DI was determined to be the strongest individual predictor of score on the Somatic Anxiety subscale of the ADDI-27.

DI hypotheses. Results from regression analyses examining outcomes that were hypothesized to be best predicted by DI are presented in Table 8. Both Models 1 and 2 predicted a moderate amount of variance in HLP scores and a large amount of variance in scores on RCd, the FDS, the General Distress subscale of the ADDI-27, the RRS, the PSWQ, STW, SFD, and NFC. As hypothesized, DI was determined to be the strongest individual predictor of scores on RCd, the FDS, the General Distress subscale of the ADDI-27, the RRS, and HLP. However, contrary to hypotheses, Affect Sensitivity was determined to be the strongest predictor of scores on STW, SFD, and NFC. Additionally, also contrary to hypotheses, S-AS was evaluated to be the strongest individual predictor of scores on the PSWQ.

AS subfactor hypotheses. The goal of the next set of regression analyses was to determine whether P-AS, C-AS, and S-AS demonstrate discriminant patterns of association with conceptually-related outcomes or associations between these constructs and external criteria are better accounted for by the higher-order AS factor. Two multiple regression models were calculated for each outcome outlined in Table 2. In Model 1, AS factor scores from the Hierarchical AS Model were entered into the regression model as the sole predictor of each outcome. In Model 2, P-AS, C-AS, and S-AS factor scores from the same model were entered as predictors of each outcome. Again, AS was considered to be the strongest predictor if R^2 coefficients were comparable between Models 1 and 2 and if Model 2 did not display a discriminant pattern of prediction for a given outcome. Again, if a discriminant pattern of prediction was observed among P-AS, C-AS, and S-AS, the construct with the largest β value was considered the strongest individual predictor.

P-AS hypotheses. Results from regression analyses for outcomes hypothesized to be most strongly predicted by P-AS are presented in Table 9. Both Models 1 and 2 predicted a small amount of variance in scores on the Physical Catastrophes subscale of the CCQ, a moderate amount of variance in scores on the Somatic Anxiety subscale of the ADDI-27, and a large amount of variance in scores on the Physical Concerns subscale of the ACQ, the BSQ, and RC1. Using the criteria described above, P-AS was the strongest individual predictor of scores on the Physical Consequences subscale of the ACQ, the Physical Catastrophes subscale of the CCQ, and the BSQ, congruent to hypotheses. However, contrary to hypotheses, S-AS was determined to be the strongest predictor of the Somatic Anxiety subscale of the ADDI-27 and RC1.

C-AS hypotheses. Results from regression analyses for outcomes hypothesized to be most strongly predicted by C-AS are presented in Table 10. In both Models 1 and 2, AS and the lower dimensions of P-AS, C-AS, S-AS predicted a small amount of variance in scores on the Mental Catastrophes subscale of the CCQ, a moderate of variance in COG scores, and a large amount of variance in scores on the Loss of Control subscale of the ACQ. As hypothesized, C-AS was the strongest individual predictor of COG. However, contrary to hypotheses, the higher order AS factor was the strongest predictor of scores on the Loss of Control subscale of the ACQ, while P-AS was the strongest predictor of scores on the Mental Catastrophes subscale of the CCQ.

S-AS hypotheses. Results from regression analyses for outcomes hypothesized to be most strongly predicted by S-AS are presented in Table 11. Model 1 predicted a small amount of variance in scores on SAV and SHY and a moderate amount of variance in scores on the SIAS and the Social Phobia subscale of the FQ. In comparison, Model 2 predicted a small amount of variance in SAV scores, a moderate amount of variance in scores on SHY, and a large amount of variance in scores on SIAS and the Social Phobia subscale of the FQ. As hypothesized, S-AS was the strongest predictor of each of these outcomes.

Discussion

The goal of the current study was to examine the construct validity of the Affect Sensitivity nomological net by investigating the structure, as well as convergent and discriminant validity, of Affect Sensitivity, AS, DI, and lower-order AS dimensions. To accomplish this goal, CFAs were utilized to examine the underlying structure of the Affect Sensitivity nomological net. Additionally, multiple regression analyses were used to examine the empirical correlates of Affect Sensitivity, AS, the AS subfactors, and DI. Within this context, the convergent and discriminant validity of these constructs were evaluated by determining whether the constructs demonstrated a differential pattern of prediction of psychopathological outcomes when all the constructs within this network were considered conjointly. Overall, results of the current study provide inconsistent support for the structural validity of the Affect Sensitivity nomological net, as well as the construct validity of the components of the model.

In terms of the structure of Affect Sensitivity and its constituent constructs, it was hypothesized that a factor solution in which AS and DI load onto a higher order Affect Sensitivity factor would demonstrate a better fit to data than a global Affect Sensitivity factor. As described above, the hypothesized hierarchical model of Affect Sensitivity would not converge, likely due to empirical underidentification. This finding is contradictory to previous empirical findings from Bernstein et al. (2009), who were able to successfully derive this factor solution and found it to be the best fitting model for explaining the covariance between AS and DI. One possible explanation for the model nonconvergence in the current study is that AS may not have been empirically separable from the Affect Sensitivity factor. Specifically, post-hoc analyses indicated that P-AS, C-AS, and S-AS and the Affect Sensitivity factor demonstrated extremely strong associations (*r*'s = .89-.92) in Hierarchical Affect Sensitivity Model B. This finding suggests there may not have been variance in Affect Sensitivity that was separable from the composite AS factor in the original Hierarchical Affect Sensitivity Model A. In other words, AS in its composite may have been statistically indistinguishable from Affect Sensitivity, calling into question the utility of distinguishing between these two constructs and the validity of the overall structure of the Affect Sensitivity nomological net.

Before making too strong of conclusions regarding the Affect model, however, it is important to consider that alternative specifications of this model (i.e., the Correlated AS-DI Model and Hierarchical Affect Sensitivity Model B) that were similar to that proposed by Bernstein et al. (2009) converged and demonstrated good to excellent fit to the data. Specifically, the Correlated AS-DI Model demonstrated acceptable fit to the data. In this model, global AS and DI were strongly associated with one another (r = -.64), suggesting these constructs are likely linked by some third variable. Second, Hierarchical Affect Sensitivity Model B also approximated the initial model's structure by having P-AS, C-AS, S-AS, and DI load onto a common Affect Sensitivity factor. This solution provided an acceptable fit to the current data and demonstrated improved fit to the data over a global model of Affect Sensitivity. The loadings of P-AS, C-AS, and S-AS onto the higher-order Affect Sensitivity factor were strong (i.e., .81), but not so high to suggest that that they were simply alternative specifications of Affect Sensitivity. As such, one can argue that the findings of this study support the notion that items on the measures of AS and DI are tapping into related constructs that are likely linked by a shared higher-order construct, but are also distinct in that they are not better accounted for or conceptualized as a general sensitivity to affect. In other words, there appears to be utility in structurally discriminating between AS components and DI at the lower-order level. However, future studies are clearly needed to further examine the structure of Bernstein et al.'s (2009) model of the Affect Sensitivity nomological net given the difficulties replicating the structure in this study.

Based on previous research by Taylor et al. (2007), it was also hypothesized that a three-factor AS model, with AS dividing into P-AS, C-AS, and S-AS, would provide a better fit to data than a global AS factor. The global model of AS, indicated by all items on the ASI-3, demonstrated poor fit to the current data, even after removing items with low factor loadings from the measurement model. Alternatively, defining the three components of AS, either as correlated factors or as loading onto a shared AS factor, resulted in models demonstrating acceptable fit to the current data. Further, this alternative specification provided improved model fit over the global model of AS. These findings support our hypothesis regarding the structure of AS and converge with previous empirical studies of the construct (Olthuis et al., 2014; Taylor et al., 2007; Wheaton et al., 2012).

Establishing construct validity requires both an investigation of internal structure, as well as convergent and discriminant validity for components of that structure (Cronbach & Meehl, 1955). Thus, the convergent and discriminant validity of constructs within the Affect Sensitivity nomological net was examined using multiple regression analyses. It was hypothesized that Affect Sensitivity, AS, and DI would demonstrate differential patterns of association with various psychological outcomes, as outlined in Table 1. Specifically, mirroring contemporary models of internalizing psychopathology (Krueger & Markon, 2006; Lee et al., 2017), it was hypothesized that AS would most strongly predict outcomes characteristic of fear disorders, DI would most strongly predict outcomes characteristic of distress disorders, and Affect Sensitivity would best predict outcomes that are non-specific to these types of disorders.

A summary of results of from analyses testing these hypotheses are presented in Table 12. As displayed in this table, Affect Sensitivity, the components of AS, and DI did demonstrate a differential pattern of association with psychopathological criteria. However, the observed pattern of association somewhat deviated from hypotheses. Affect Sensitivity, for example, was the strongest individual predictor of drinking to cope motivations, as hypothesized. However, Affect Sensitivity also most strongly predicted negative emotionality, fear of anxiety sensations, experiences of fear and anxiety, somatization, stress and worry, self-doubt, and perceived inefficacy. In the latter case, these findings suggest that any previous association between AS or DI and these examined outcomes is better explained by a sensitivity to affect more broadly (that is, the variance shared by AS and DI). A rational inspection of these outcomes indicates that they appear to reflect general psychological dysfunction that is non-specific to one particular domain of internalizing psychopathology. In other words, these outcomes are characterized by general internalizing dysfunction as opposed to dysfunction specific to distress or fear. Given that Affect Sensitivity is conceptualized as a non-specific sensitivity to affect shared by AS and DI (Bernstein et al., 2009), it follows that Affect Sensitivity would be the best predictor of outcomes reflecting non-specific dysfunction, as demonstrated in the current study. This finding also aligns with Allan et al. (2015)'s postulation that elevated Affect Sensitivity serves as a domain-general risk factor psychopathological development. However, although these results add to the body of literature on the empirical correlates of Affect Sensitivity, these conclusions must be qualified by noting the limitations of the model from which these analyses were derived.

It also was hypothesized that AS would best predict outcomes characteristic of fear disorders, as outlined in Table 1. As discussed, the higher-order AS factor could not be derived in Hierarchical Affect Sensitivity Model B. However, when prediction offered by Affect Sensitivity alone was contrasted to that achieved in a model containing DI and components of AS, at least one component of AS (i.e., P-AS, C-AS, or S-AS) best predicted evaluations of negative affect as dangerous, fear of autonomic arousal, general experiences of fear, and fear of social interactions, as hypothesized. These findings lend support to the notion that AS is distinguishable from DI and Affect Sensitivity. These results also align with previous empirical findings, which indicate that AS is strongly associated with fear disorder symptomology (Taylor, Koch, Woody, & McLean, 1996; Naragon-Gainey, 2010; Zinbarg et al., 2001). Furthermore, despite AS's nominal description as a reflection of *anxiety*-related sensitivity, AS predicted outcomes associated with various aspects of fear rather than anxiety experiences (e.g., anxiety as measured by AXY, physiological hyperarousal as measured by Somatic Anxiety scale of ADDI-27). Although this finding may first appear counterintuitive, it is worth noting the distinctions between trait fear and trait anxiety, as delineated by LaPrarie, Sylvers, and Lilienfeld (2011). Specifically, fear and anxiety as constructs are often erroneously conflated with one another, although the two are distinct in terms of duration of arousal (short-lived for fear, persistent and pervasive for anxiety) and motivated behaviors (avoidance in fear, approach in anxiety) (LaPrarie et al., 2011). Applying this view to the findings from the current study suggest that AS may indeed be best conceptualized as an amplifier of attributions regarding fear-provoking stimuli and better described as fear sensitivity. This is congruent with the construct's original description as "fear of fear" (Reiss & McNally, 1985).

Analyses were also performed to establish the convergent and discriminant validity of AS's component constructs. It was hypothesized that, when compared to the global AS factor, P-AS, C-AS, and S-AS would demonstrate more specific patterns of association with the physical, cognitive, and social aspects of fear, respectively. A summary of findings addressing these hypotheses is presented in Table 13. As displayed in this table, P-AS, C-AS, and S-AS demonstrated a strong pattern of convergent validity, with P-AS most strongly predicting fear of physical consequences of anxiety and autonomic arousal, C-AS most strongly predicting cognitive difficulties, and S-AS most strongly predicting fear of social interactions, shyness, and social avoidance. This differential pattern of prediction converges with past findings regarding the incremental contributions of the lower-order AS dimensions above and beyond the higher-order AS dimension (Taylor et al., 2007; Wheaton et al., 2012). These results also support the utility of conceptualizing AS as a multi-faceted construct, with lower-order facets capturing more narrow aspects of AS that may be more salient to particular types of fear-inducing stimuli.

Despite strong support for their convergent validity, findings from analyses examining the lower order AS facets were less supportive of the discriminant validity of these constructs. Namely, results indicated that P-AS best predicted fear of mental catastrophes and S-AS best predicted physiological hyperarousal and somatization. Additionally, the global AS factor was the strongest predictor of fear of loss of cognitive control. There are several possible explanations for this pattern of findings. First, one could postulate that the individual subdimensions of AS may hold differential salience across various contexts and situations. For example, if one experiences physical symptoms of fear while engaged in a social situation, S-AS (i.e., fear of the social repercussions of outwardly expressing fear) may hold the most salience. In contrast, if one experiences this same sensation while away from other people, S-AS may be less prominent while P-AS (i.e., concerns about one's own physical well-being) becomes more pronounced. However, additional empirical research is needed to support this hypothesized interaction of AS and context. Second, these results may be related to content on the measures of AS subdimensions used in the current study. For example, a review of ASI-3 item content shows that items comprising the S-AS subscale also include information regarding physical experiences of anxiety (e.g., "It scares me when I blush in front of people," "When I begin to sweat in a social situation, I fear people will think negatively of me"). As such, while these items appear to appropriately capture their designated constructs (e.g., the S-AS subscale captures S-AS), aspects of other AS subdimensions may be conflated into the other scales (e.g., the S-AS subscale may also capture aspects of P-AS). Future research regarding measurement of AS might focus on parsing apart these subdimensions while constructing item content.

Regarding DI, it was hypothesized that the construct would most strongly predict outcomes characteristic of distress disorders. As displayed in Table 12, in support of this hypothesis, DI was the strongest predictor of demoralization, intolerance of frustration and emotional discomfort, rumination, and helplessness. This pattern of association converges with past studies examining the empirical correlates of DI (Leyro et al., 2010; Magidson et al., 2012; McHugh et al., 2013). However, contrary to hypotheses, DI was also the strongest predictor of avoidance coping, difficulties in emotion regulation, negative urgency, and physiological hyperarousal relative to Affect Sensitivity and AS subfactors. Although some empirical evidence previously suggested that DI was a strong predictor of negative urgency when considered concurrently with AS (Weitzman et al., 2011), it was hypothesized in the current that the Affect Sensitivity would better predict this outcome because of the non-specific nature of negative urgency. Some explanation for these mixed results may be possible by synthesizing these findings with previous models of affect, such as the model proposed by Tellegen and Watson (1985). Specifically, DI may be more strongly related to the pleasant-unpleasantness dimension of affect (i.e., feeling "blue, grouchy, lonely, sad"), as evidenced by its association with demoralization. In contrast, Affect Sensitivity and AS may be more strongly related to the negative affect dimension of affect (i.e., feeling "fearful, hostile, jittery, nervous"), as evidenced by their associations with negative emotionality and fear-related outcomes, respectively. Moreover, rational inspection of DI's most strongly predicted outcomes indicate that they are generally more specific than those best predicted by Affect Sensitivity. Whereas Affect Sensitivity was the strongest predictor of non-specific distress (e.g., inefficacy, self-doubt, stress), outcomes such as rumination, difficulties in emotion regulation, avoidance coping, and negative urgency appear to reflect maladaptive attempts at coping or problem solving. This suggests that the use of these maladaptive coping strategies may be unique to DI. In this sense, DI may emerge as a downstream effect from a broad sensitivity to one's affect, characterized by maladaptive attempts at regulating affect. Although greater empirical study is needed to further elucidate the distinctiveness of DI and Affect Sensitivity, past research has posited similar explanations (Allan et al., 2015).

Notably, when evaluating for the strongest predictor of each individual outcome, stress and worry, as measured by STW and the PSWQ, self-doubt as measured by SFD, inefficacy as measured by NFC, and negative affect as measured by the General Distress scale of the ADDI-27 presented somewhat ambiguous cases. For each of these outcomes, Affect Sensitivity, some component of AS, and DI demonstrated comparable predictive abilities, as evidenced by similar correlation coefficients and standardized regression weights. Because a discriminant pattern of prediction was not observed at the lower-order level, Affect Sensitivity was evaluated to be the strongest predictor of these outcomes. However, another interpretation of these findings is that these outcomes reflect non-specific cognitive processes by which the person reflects on their views of their future and themselves to solve problems and overcome difficulties. Although it follows conceptually that these outcomes would then be most strongly predicted by Affect Sensitivity, these constructs may also reflect processes for which distress or fear components may be more or less salient in particular contexts. For example, the PSWQ contains the reverse scored item "I find it easy to dismiss worrisome thoughts" while the General Distress scale asks the test-taker to rate how much thy have "felt nervous" or "worried a lot about things." Because of the non-specific nature of these items, participants could have evaluated worrisome thoughts and nervous feelings to refer to either distressing or fearful experiences, depending on the specific experiences in mind while answering the question. Thus, it is suggested that future studies incorporate a more nuanced approach to assessing cognitive processes by which individuals consider their views of self and the future in the context of specific emotional cues to parse apart the fear and distress aspects of these constructs.

Finally, contrary to hypotheses, none of the constructs within the Affect Sensitivity nomological net were significantly related to hazardous alcohol consumption, marijuana use, or drug use. This finding is contrary to previous empirical examinations of the association of AS and DI with substance use outcomes (Buckner et al., 2007; Schmidt et al., 2007; Wolitzky-Taylor et al., 2015). However, several of these studies (Schmidt et al., 2007; Wolitzky-Taylor et al., 2015) aimed to recruit individuals who already demonstrated elevated levels of AS. As such, overall levels of psychological dysfunction could theoretically moderate the association between the constructs under study and substance use outcomes. In other words, the association of AS and DI with substance use outcomes may only hold true among individuals with a number of psychological difficulties, explaining why this association was not observed in the current study, which utilized a non-clinical college student sample. The current study's findings could also be due to restricted variance in variables reflecting maladaptive alcohol, marijuana, and drug use, as a large proportion of individuals reported complete abstinence from alcohol (*n* = 59; 20.6% of sample), marijuana (*n* = 149; 50.3% of sample), or other drugs (*n* = 235; 83.6% of sample).

In general, findings from the current study suggest a need for future research regarding constructs within the Affect Sensitivity nomological net to embrace a more holistic approach. As described previously, AS and DI share a meaningful degree of overlap, as evidenced by their similar definitions, their strong association in the Correlated AS-DI Model in the current study, and their similar pattern of empirical correlates in both past research and the current study. As such, researching one construct outside the context of the other hampers researchers' abilities to determine whether observed associations between these constructs and external criteria are unique to either AS or DI or common to both. Alternatively, considering all constituent parts of the Affect Sensitivity nomological net concurrently, as was done in the current study, allows for a clearer understanding of the convergent and discriminant validity of these constructs. It is recommended that future studies examining Affect Sensitivity, AS, and DI as etiological mechanisms implicated in psychological dysfunction continue to employ similar methodologies. Moreover, future research examining the measurement of AS and DI may utilize this holistic approach by designing measures demonstrate improved discriminant validity over previous measures at both the item and scale score level.

The current study was subject to several important limitations that hinder the generalizability and interpretability of these findings and provide promising directions for future research. The primary limitation of the current study was the measurement of constructs within the Affect Sensitivity nomological net using the ASI-3 and the DTS. As described, items intended to reflect unique subdimensions of AS (i.e., P-AS, C-AS, or S-AS) often contained content reflecting more than one domain (e.g., items that reflect both P-AS and S-AS). This, in turn, hinders our ability to evaluate the convergent and discriminant validity of the AS subdimensions using these constructs. Furthermore, a review of ASI-3 item content indicates that some items may reflect somewhat extreme variants of experiences associated with AS or its subdimensions. For example, ASI-3 items 10 ("When I feel 'spacey' or spaced out, I worry that I may be mentally ill") and 18 ("When my mind goes blank, I worry there is something terribly wrong with me") were endorsed with "very little" agreement by a large majority of participants (*n* = 204 and 207 respectively; 72.6% and 73.7% of sample). As such, while the ASI-3 may be appropriate for use with clinical samples in which these experiences may be more frequently endorsed, scores on the measure may be less valid when used to measure AS and its subdimensions among a non-clinical sample. Likewise, the DTS contained redundant item content and some items demonstrating poor factor loadings both in the current study and previous empirical studies (Simons & Gaher, 2005). This calls into question whether scores on the DTS provide valid measurements of the underlying DI construct. In all, these limitations suggest a need for future research to refine the measurement of constructs within the Affect Sensitivity nomological net before examining the intercorrelations between these constructs and their associations with external criteria.

Another limitation of the current study is the nonconvergence of the model of Affect Sensitivity conceptualized and tested by Bernstein et al. (2009). Because the proposed factor solution could not be derived successfully, our ability to draw conclusions regarding the replicability or validity of this structure was hindered. This nonconvergence may be related to the concerns regarding the measurement of AS and DI described above. However, another possible explanation is that the Bernstein et al. (2009) model of Affect Sensitivity does not provide a precise reflection of the structure of these constructs. As such, future research should continue to examine alternative models that could explain the covariation between AS and DI.

The current study was subject to several methodological limitations, as well. Specifically, constructs in the current study were each measured using self-report data, which can artificially inflated observed associations between variables due to shared method variance. This limitation suggests a need for future studies to examine the construct validity of the Affect Sensitivity nomological net using non-self-report indicators of the constructs (e.g., behavioral or physiological data). Additionally, a non-clinical college student sample was employed, potentially resulting in restricted variance in psychopathological variables and outcomes of interest. Future studies should address this limitation by examining the replicability of the structure of the Affect Sensitivity nomological net and the predictive ability of constructs within the nomological net using clinical or non-college student samples.

Despite the limitations just described, results of the current study do have several important implications. First, results provide some support for the construct validity of the Affect Sensitivity nomological net, indicating that future studies might continue to examine AS and DI as strongly related, yet conceptually distinct, constructs implicated in the development and maintenance of psychopathological dysfunction. However, emphasis should be placed on studies investigating the unique roles of AS and DI in contributing to psychological dysfunction, given the meaningful conceptual and statistical overlap between the two constructs. Second, results from the current study also suggest a need for continued empirical research on Affect Sensitivity to further investigate both the distinctiveness of AS and DI, as well as the commonalities between the two constructs. By employing a holistic and more nuanced approach to studying these mechanisms in the future, researchers can elucidate the etiological role of these mechanisms in various outcomes outside the context of disorder-based nosologies. In all, studying the Affect Sensitivity nomological net using this approach can allow researchers and clinicians to advance our transdiagnostic understanding of psychopathology and more effectively inform disorder classification and treatment.

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Footnotes

[1] Distress intolerance has commonly been referred to as distress tolerance. In order to valence all constructs in the same direction, such that higher standing on the construct indicates greater psychological dysfunction, the construct will be referred to as distress intolerance in the current study.

Table 1. *Hypothesized Pattern of Association Between Affect Sensitivity, AS, DI, and Outcome Measures.*

AFFECT SENSITIVITY MORE STRONGLY ASSOCIATED WTH:

Construct	**Measured By:**
Hazardous alcohol consumption	Alcohol Use Disorders Identification Test
Hazardous marijuana use	Cannabis Use Disorder Identification Test
Drug-related problems	Drug Use Disorders Identification Test
Drinking to cope motivations	Drinking Motivations Questionnaire-Revised
Acting rashly during negative affective states	Negative Urgency scale of UPPS-P
Evaluation of negative affect as dangerous	Catastrophic Cognitions Questionnaire
Poor emotion regulation abilities	Difficulties in Emotion Regulation Scale
Avoidance coping	Approach/Avoidance scale of BACQ

AS MORE STRONGLY ASSOCIATED WITH:

Construct	**Measured By:**
Negative emotionality	RC7 scale of MMPI-2-RF
Fear of anxiety sensations	Agoraphobia Cognitions Questionnaire
Fear of autonomic arousal	Body Sensations Questionnaire
Physiological hyperarousal	Somatic Anxiety scale of ADDI-27
General experiences of fear	Fear Questionnaire
	BRF scale of MMPI-2-RF
	MSF scale of MMPI-2-RF
Somatization	RC1 scale of MMPI-2-RF
Fear of social interactions	Social Interaction Anxiety Scale
General experiences of anxiety	AXY scale of MMPI-2-RF

DI MORE STRONGLY ASSOCIATED WITH:

Construct	**Measured By:**
Demoralization	RCd scale of MMPI-2-RF
Intolerance of emotional states	Frustration Discomfort Scale
Negative affective responses	General Distress scale of ADDI-27
Rumination	Ruminative Responses Scale
Helplessness	HLP scale of MMPI-2-RF
Worry	Penn State Worry Questionnaire
	STW scale of MMPI-2-RF
Self-doubt	SFD scale of MMPI-2-RF
Perceived inefficacy	NFC scale of MMPI-2-RF

Table 2. *Hypothesized Pattern of Association Between AS Subdimensions and Outcome Measures.*

P-AS MORE STRONGLY ASSOCIATED WITH:

Construct	**Measured By:**
Fear of physical consequences of anxiety	Physical Consequences scale of ACQ
	Physical subscale of CCQ-M
Fear of autonomic arousal	Body Sensations Questionnaire
Physiological hyperarousal	Somatic Anxiety scale of ADDI-27
Somatization	RC1 scale of MMPI-2-RF

C-AS MORE STRONGLY ASSOCIATED WITH:

Construct	**Measured By:**
Fear of loss of cognitive control	Loss of Control scale of ACQ
	Mental subscale of CCQ-M
Cognitive difficulties	COG scale of MMPI-2-RF

S-AS MORE STRONGLY ASSOCIATED WITH:

Construct	**Measured By:**
Fear of social interactions	Social Interaction Anxiety Scale
	Social Phobia subscale of FQ
Social avoidance	SAV scale of MMPI-2-RF
Shyness	SHY scale of MMPI-2-RF

Table 3. *Descriptive Statistics for Items on the ASI-3 and DTS Among a College Student Sample.*

Item	***M***	***SD***	**Skewness**	**Kurtosis**
		ASI-3		
ASI 1	2.31	1.12	-0.28	-0.58
ASI 2	0.69	0.94	1.15	0.41
ASI 3	1.28	1.18	0.57	-0.76
ASI 4	0.75	1.04	1.39	1.30
ASI 5	0.91	1.04	0.98	0.25
ASI 6	1.29	1.29	0.71	-0.60
ASI 7	1.24	1.28	0.74	-0.61
ASI 8	0.78	1.17	1.42	0.98
ASI 9	1.46	1.42	0.56	-1.01
ASI 10	0.48	0.92	1.93	2.88
ASI 11	0.94	1.21	1.22	0.49
ASI 12	0.63	1.06	1.72	2.03
ASI 13	1.18	1.27	0.83	-0.40
ASI 14	0.50	0.89	1.82	2.76
ASI 15	0.38	0.84	2.45	5.71
ASI 16	0.68	0.99	1.49	1.56
ASI 17	2.18	1.43	-0.22	-1.26
ASI 18	0.44	0.86	2.22	4.82
		DTS		
DTS 1	3.03	1.09	0.13	-0.74
DTS 2	2.83	1.10	0.39	-0.76
DTS 3	3.47	1.11	-0.40	-0.75
DTS 4	3.76	1.17	-0.73	-0.37
DTS 5	3.29	1.27	-0.18	-1.05

DTS 6	3.26	1.24	0.38	-1.49
DTS 7	3.58	1.11	-0.51	-0.54
DTS 8	2.67	1.14	0.26	-0.72
DTS 9	3.18	1.20	-0.12	-1.00
DTS 10	3.46	1.16	-0.34	-0.79
DTS 11	3.56	1.22	-0.38	-1.04
DTS 12	3.73	1.14	-0.56	-0.75
DTS 13	3.05	1.17	0.13	-0.89
DTS 14	2.99	1.02	-0.01	-0.72
DTS 15	2.97	1.19	0.17	-0.99

Note. n = 281. ASI-3 = Anxiety Sensitivity Index-3; DTS = Distress Tolerance Scale; M = Mean score on item across sample; SD = Standard deviation of scores on each item across sample.

Table 4. *Confirmatory Factor Analyses for Anxiety Sensitivity, Distress Intolerance, and Affect Sensitivity Among a College Student Sample.*

	χ^2	df	SF	RMSEA (90% CI)	CFI	TLI	SRMR
Anxiety Sensitivity							
Global AS Model A[a]	492.72***	135	1.277	.10 (.09-.11)	.77	.74	.08
Global AS Model B[b]	445.63***	119	1.313	.10 (.09-.11)	.77	.74	.08
Global AS Model C[c]	408.17***	104	1.349	.10 (.09-.11)	.78	.74	.08
Correlated AS Factors	244.13***	132	1.273	.06 (.04-.07)	.93	.92	.05
Hierarchical AS	246.12***	134	1.272	.06 (.04-.07)	.93	.92	.06
AS Subfactors							
P-AS	18.40*	9	1.334	.06 (.02-.10)	.98	.96	.03
C-AS	21.44*	9	1.849	.07 (.03-.11)	.97	.94	.04
S-AS	10.20	9	1.113	.02 (.00-.07)	>.99	.99	.03
Distress Intolerance							
DI Measurement Model[d]	288.79***	90	1.112	.09 (.08-.10)	.86	.83	.06
Alternative DI Model A[e]	250.73***	77	1.117	.09 (.08-.10)	.87	.85	.06
Alternative DI Model B[f]	155.89***	65	1.115	.07 (.06-.09)	.93	.91	.05
Affect Sensitivity							
Global Model	1493.40***	434	1.115	.09 (.09-.10)	.66	.63	.09

Correlated AS-DI Model	710.62***	430	1.112	.05 (.04-.05)	.91	.90	.06
Hierarchical Model A[g]	-	-	-	-	-	-	-
Hierarchical Model B	713.65***	432	1.112	.05 (.04-.05)	.91	.90	.06

Note. n = 281 in all analyses. $\chi2$ = Chi-square test of model fit; RMSEA (95% CI) = Root mean square error of approximation with 90% confidence interval; CFI = Comparative Fit Index; TLI = Tucker Lewis Index; SRMR = Standardized root mean square residual.

* $p < .05$; *** $p < .001$; [a] All ASI-3 items included in model; [b] All ASI-3 items except for item 1 included in model; [c] All ASI-3 items for except items 1 and 17 included in model; [d] All DTS items included in model; [e] All DTS items except for item 14 included in model; [f] All DTS items except for items 8 and 14 included in model; [g] Model did not converge due to empirical underidentification.

Table 5. *Descriptive Statistics for Factors in Hierarchical Affect Sensitivity Model B and Outcome Measures.*

Measure	*M*	*SD*	*Range*	Skewness	Kurtosis
Factor Scores from Hierarchical Affect Sensitivity Model B*					
Affect Sensitivity	0.00	0.90	-1.35 – 3.54	1.04	1.03
P-AS	0.00	1.60	-1.82 – 5.92	1.24	1.12
C-AS	0.00	1.59	-1.64 – 7.33	1.53	2.54
S-AS	0.00	1.57	-2.53 – 4.56	0.78	0.23
DI	0.00	1.23	-3.46 – 2.50	-0.30	-0.20
Factor Scores from Hierarchical AS Model*					
AS	0.00	0.89	-1.17 – 3.56	1.19	1.34
P-AS	0.00	1.61	-1.74 – 5.96	1.28	1.20
C-AS	0.00	1.60	-1.56 – 7.35	1.56	2.63
S-AS	0.00	1.56	-2.42 – 4.59	0.82	0.29
Outcome Measures					
ACQ	1.71	0.58	1.00 – 4.21	1.34	2.49
Loss of Control	1.92	0.73	1.00 – 4.29	0.88	0.39
Physical Concerns	1.49	0.56	1.00 – 4.86	2.36	8.49
AUDIT	4.74	4.57	0 – 24	1.09	1.21
AXY	1.51	1.31	0 – 5	0.59	-0.39
BACQ	40.85	5.92	20 – 50	-0.03	0.02
BRF	1.51	1.49	0 – 7	0.99	0.55
BSQ	2.18	0.70	1.00 – 4.65	0.48	0.02
CCQ Total	62.08	11.35	23 – 94	-0.02	0.87
Mental Catastrophes	21.77	5.18	7 – 34	-0.14	0.08
Physical Catastrophes	24.9	4.42	7 – 35	-0.76	1.31
COG	3.17	2.24	0 – 9	0.32	-0.78

Measure	*M*	*SD*	*Range*	Skewness	Kurtosis
CM (DMQ-R)	9.83	4.93	5 – 25	1.01	0.31
CUDIT	3.06	5.09	0 – 29	2.4	6.78
DERS	80.81	22.21	42 – 162	0.61	0.3
DUDIT	1.01	3.03	0 – 27	4.33	24.49
FDS	80.35	16.64	28 – 123	-0.22	0.12
FQ	34.72	19.34	2 – 101	0.55	-0.01
Social Phobia	14.39	7.28	0 – 33	0.34	-0.46
GD (ADDI-27)	21.62	8.00	9 – 44	0.7	-0.32
HLP	1.21	1.21	0 – 5	0.96	0.47
MSF	3.24	2.03	0 – 9	0.26	-0.69
NFC	4.83	2.44	0 – 9	-0.1	-0.96
NU (UPPS)	29.17	5.20	17 – 43	0.05	-0.29
PSWQ	45.47	10.00	16 – 70	-0.25	-0.23
RC1	6.59	4.69	0 – 22	0.96	0.48
RC7	10.02	5.39	0 – 24	0.25	-0.58
RCd	8.64	6.13	0 – 24	0.59	-0.71
RRS	21.65	5.91	10 – 38	0.23	-0.28
SAV	2.7	2.77	0 – 10	0.97	-0.07
SFD	1.78	1.51	0 – 4	0.24	-1.4
SHY	3.37	2.23	0 – 7	0.09	-1.2
SIAS	27.78	15.94	0 – 77	0.54	-0.1
Somatic Anxiety (ADDI-27)	16.09	6.02	9 – 37	1.17	0.91
STW	3.52	1.83	0 – 7	0.08	-0.71

Note. $n = 281$ for all analyses. *M* = Mean score on item across sample; *SD* = Standard deviation of scores on each item across sample; P-AS = Physical Concerns Anxiety Sensitivity Subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity Subfactor; S-AS = Social Concerns Anxiety Sensitivity Subfactor; DI = Distress Intolerance; AS = Anxiety Sensitivity; AUDIT = Alcohol Use Disorder Identification Test; ACQ = Agoraphobic Cognitions Questionnaire; AXY = Specific Problems (SP) Anxiety scale

Measure	*M*	*SD*	*Range*	Skewness	Kurtosis

of the Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF); BACQ = Brief Approach/Avoidance Coping Questionnaire; BRF = SP Behavior Restricting Fears scale of the MMPI-2-RF; BSQ = Body Sensations Questionnaire; CCQ = Catastrophic Cognitions Questionnaire; COG = SP Cognitive Problems scale of the MMPI-2-RF; DMQ-R = Drinking Motivations Questionnaire-Revised; CUDIT = Cannabis Use Disorders Identification Test; DERS = Difficulties in Emotion Regulation Scale; DUDIT = Drug Use Disorders Identification Test; FDS = Frustration Discomfort Scale; FQ = Fear Questionnaire; ADDI-27 = Anxiety Depression Distress Inventory-27; HLP = SP Helplessness/Hopelessness scale of the MMPI-2-RF; MSF = SP Multiple Specific Fears scale of the MMPI-2-RF; NFC = SP Inefficacy scale of the MMPI-2-RF; NU (UPPS) = Negative Urgency subscale of the UPPS-P Impulsive Behavior Scale; PSWQ = Penn State Worry Questionnaire; RC1 = Restructured Clinical (RC) Scale 1 (Somatic Complaints) of the MMPI-2-RF; RC7 = RC Scale 7 (Dysfunctional Negative Emotions) of the MMPI-2-RF; RCd = RC Scale d (Demoralization) of the MMPI-2-RF; RRS = Ruminative Responses Scale; SAV = SP Social Avoidance scale of the MMPI-2-RF; SFD = SP Self-Doubt scale of the MMPI-2-RF; SHY = SP Shyness scale of the MMPI-2-RF; SIAS = Social Interaction Anxiety Scale; STW = SP Stress/Worry scale of the MMPI-2-RF.

[*] Scores displayed in these sections represent *z*-scores derived from confirmatory factor analyses.

Table 6. *Regression Analysis Results for Outcomes Hypothesized To Be Best Predicted by Affect Sensitivity.*

	AUDIT		CUDIT		DUDIT		CM (DMQ-R)	
	r	***β***	***r***	***β***	***r***	***β***	***r***	***β***
Model 1		R^2 = .03**		R^2 = .01		R^2 = .01		R^2 = .13***
Affect Sensitivity	.16**		.08		.08		.36***	
Model 2		R^2 = .03*		R^2 = .01		R^2 = .02		R^2 = .15***
P-AS	.10	-.10	.07	.03	.05	-.01	.26***	-.07
C-AS	.17**	.15	.07	.02	.08	.06	.31***	.11
S-AS	.15*	.11	.06	-.03	.05	-.09	.35***	.19
DI	-.12*	-.02	-.09	-.08	-.13*	-.15	-.35***	-.20**
	NU		**CCQ**		**DERS**		**BACQ**	
	r	***β***	***r***	***β***	***r***	***β***	***r***	***β***
Model 1		R^2 = .16***		R^2 = .12***		R^2 = .41***		R^2 = .06***
Affect Sensitivity	.40***		.35***		.64***		-.24***	
Model 2		R^2 = .23***		R^2 = .15***		R^2 = .57***		R^2 = .12***
P-AS	.27***	-.13	.38***	.35***	.48***	-.06	-.16**	.07
C-AS	.37***	.21*	.28***	-.01	.56***	.20**	-.17**	.04
S-AS	.36***	.08	.31***	.09	.58***	.11	-.24***	-.11
DI	-.45***	-.34***	-.18**	.06	-.73***	-.59***	.34***	.33***

Note. n = 281 for all analyses. *r* = Pearson's product moment correlation; *β* = Standardized regression weight; R^2 = Coefficient of determination; AUDIT = Alcohol Use Disorder Identification Test; CUDIT = Cannabis Use Disorder Identification Test; DUDIT = Drug Use Disorder Identification Test; CM (DMQ-R) = Coping Motives subscale of the Drinking Motivations Questionnaire-Revised; NU = Negative Urgency subscale of the UPPS-P Impulsive Behavior Scale; CCQ = Catastrophic Cognitions Questionnaire total score; DERS = Difficulties in Emotion Regulation total score; BACQ = Breif Approach/Avoidance Coping Questionnaire; P-AS = Physical Concerns Anxiety Sensitivity Subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity Subfactor; S-AS = Social Concerns Anxiety Sensitivity Subfactor; DI = Distress Intolerance.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 7. *Regression Analysis Results for Outcomes Hypothesized To Be Best Predicted by Anxiety Sensitivity.*

	RC7		ACQ		BSQ		SA (ADDI-27)		FQ	
	r	***β***	***r***	***β***	***r***	***β***	***r***	***β***	***r***	***β***
Model 1		R^2 = .41***		R^2 = .49***		R^2 = .28***		R^2 = .25***		R^2 = .18***
Affect Sensitivity	.64***		.70***		.53***		.50***		.43***	
Model 2		R^2 = .49***		R^2 = .49***		R^2 = .35***		R^2 = .28***		R^2 = .22***
P-AS	.50***	-.03	.65***	.31***	.58***	.56***	.43***	.11	.39***	.14
C-AS	.54***	.12	.60***	.13	.41***	-.08	.41***	.05	.30***	-.14
S-AS	.63***	.32***	.65***	.24**	.48***	.13	.47***	.18	.46***	.40***
DI	-.63***	-.38***	-.50***	-.11	-.31***	.03	-.48***	-.28***	-.34***	-.09

	BRF		MSF		RC1		SIAS		AXY	
	r	***β***	***r***	***β***	***r***	***β***	***r***	***β***	***r***	***β***
Model 1		R^2 = .17***		R^2 = .03**		R^2 = .31***		R^2 = .27***		R^2 = .33***
Affect Sensitivity	.41***		.19**		.56***		.52***		.57***	
Model 2		R^2 = .18***		R^2 = .06**		R^2 = .33***		R^2 = .35***		R^2 = .35***
P-AS	.37***	.15	-.18**	.27**	.50***	.18*	.42***	-.03	.47***	.05
C-AS	.32***	-.03	.21***	-.13	.45***	.02	.38***	-.12	.48***	.11
S-AS	.40***	.20*	.11	-.04	.54***	.28**	.58***	.58***	.56***	.30**
DI	-.36***	-.16*	.19**	-.13	-.46***	-.17**	-.46***	-.17*	-.50***	-.23***

Note. n = 281 for all analyses. r = Pearson's product moment correlation; β = Standardized regression weight; R^2 = Coefficient of determination; RC Scale 7 (Dysfunctional Negative Emotions) of the Minnesota Multiphasic Personality-2-Restructured Form (MMPI-2-RF); ACQ = Agoraphobic Cognitions Questionnaire; BSQ = Body Sensations Questionnaire; SA (ADDI-27) = Somatic Anxiety subscale of Anxiety Depression Distress Inventory-27; FQ = Fear Questionnaire Total Phobia; BRF = Specific Problems (SP) Behavior Restricting Fears scale of the MMPI-2-RF; MSF = SP Multiple Specific Fears scale of the MMPI-2-RF; RC1 = Restructured Clinical (RC) Scale 1 (Somatic Complaints) of the MMPI-2-RF; SIAS = Social Interaction Anxiety Scale; AXY = SP Anxiety scale of the MMPI-2-RF; P-AS = Physical Concerns Anxiety Sensitivity Subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity Subfactor; S-AS = Social Concerns Anxiety Sensitivity Subfactor; DI = Distress Intolerance.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 8. *Regression Analysis Results for Outcomes Hypothesized To Be Best Predicted by Distress Intolerance.*

	RCd		FDS		GD (ADDI-27)		RRS		HLP	
	r	***β***	***r***	***β***	***r***	***β***	***r***	***β***	***r***	***β***
Model 1		$R^2 = .39^{***}$		$R^2 = .32^{***}$		$R^2 = .39^{***}$		$R^2 = .33^{***}$		$R^2 = .15^{***}$
Affect Sensitivity	$.63^{***}$		$.57^{***}$		$.63^{***}$		$.58^{***}$		$.39^{***}$	
Model 2		$R^2 = .47^{***}$		$R^2 = .34^{***}$		$R^2 = .50^{***}$		$R^2 = .40^{***}$		$R^2 = .18^{***}$
P-AS	$.49^{***}$	-.02	$.49^{***}$	.15	$.49^{***}$	-.02	$.48^{***}$	.13	$.31^{***}$	-.01
C-AS	$.54^{***}$	$.17^{*}$	$.49^{***}$	.14	$.51^{***}$	.06	$.45^{***}$	.01	$.33^{***}$	.08
S-AS	$.58^{***}$	$.20^{*}$	$.52^{***}$	.13	$.61^{***}$	$.29^{***}$	$.54^{***}$	$.17^{*}$	$.37^{***}$	.16
DI	$-.64^{***}$	$-.43^{***}$	$-.50^{***}$	$-.26^{***}$	$-.66^{***}$	$-.45^{***}$	$-.60^{***}$	$-.42^{***}$	$-.40^{***}$	$-.27^{***}$
	PSWQ		STW		SFD		NFC			
	r	***β***	***r***	***β***	***r***	***β***	***r***	***β***		
Model 1		$R^2 = .34^{***}$		$R^2 = .38^{***}$		$R^2 = .31^{***}$		$R^2 = .29^{***}$		
Affect Sensitivity	$.58^{***}$		$.61^{***}$		$.55^{***}$		$.54^{***}$			
Model 2		$R^2 = .42^{***}$		$R^2 = .44^{***}$		$R^2 = .35^{***}$		$R^2 = .35^{***}$		
P-AS	$.45^{***}$	.03	$.50^{***}$	.02	$.44^{***}$	-.01	$.42^{***}$	-.02		
C-AS	$.40^{***}$	-.08	$.48^{***}$	< .01	$.47^{***}$	.10	$.43^{***}$	.03		
S-AS	$.60^{***}$	$.47^{***}$	$.62^{***}$	$.40^{***}$	$.54^{***}$	$.28^{**}$	$.54^{***}$	$.32^{***}$		
DI	$-.53^{***}$	$-.27^{***}$	$-.58^{***}$	$-.32^{***}$	$-.53^{***}$	$-.29^{***}$	$-.53^{***}$	$-.31^{***}$		

Note. $n = 281$ for all analyses. r = Pearson's product moment correlation; β = Standardized regression weight; R^2 = Coefficient of determination; RCd = Restructured Clinical (RC) Scale d (Demoralization) of the Minnesota Multiphasic Personality Inventory-2-Restructured Form (MMPI-2-RF); FDS = Frustration Discomfort Scale; GD (ADDI-27) = General Distress subscale of the Anxiety Depression Distress Inventory-27; RRS = Ruminative Responses Scale; HLP = Specific Problems (SP) Helplessness/Hopelessness scale of the MMPI-2-RF; PSWQ = Penn State Worry Questionnaire; STW = SP Stress/Worry scale of the MMPI-2-RF; SFD = SP Self-Doubt scale of the MMPI-2-RF; NFC = SP Inefficacy scale of the MMPI-2-RF; P-AS = Physical Concerns Anxiety Sensitivity Subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity Subfactor; S-AS = Social Concerns Anxiety Sensitivity Subfactor; DI = Distress Intolerance.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 9. *Regression Analysis Results for Outcomes Hypothesized To Be Best Predicted By Physical Concerns – Anxiety Sensitivity.*

	ACQ – Physical Subscale		CCQ – Physical Subscale		BSQ		SA (ADDI-27)		RC1	
	r	***β***	***r***	***β***	***r***	***β***	***r***	***β***	***r***	***β***
Model 1		$R^2 = .41^{***}$		$R^2 = .06^{***}$		$R^2 = .29^{***}$		$R^2 = .22^{***}$		$R^2 = .29^{***}$
AS	$.64^{***}$		$.25^{***}$		$.54^{***}$		$.47^{***}$		$.53^{***}$	
Model 2		$R^2 = .46^{***}$		$R^2 = .10^{***}$		$R^2 = .34^{***}$		$R^2 = .22^{***}$		$R^2 = .30^{***}$
P-AS	$.68^{***}$	$.61^{***}$	$.30^{***}$	$.37^{***}$	$.58^{***}$	$.55^{***}$	$.41^{***}$	.10	$.49^{***}$	.17
C-AS	$.52^{***}$	.01	$.16^{**}$	-.15	$.41^{***}$	-.09	$.40^{***}$	.10	$.44^{***}$	.05
S-AS	$.56^{***}$	.09	$.23^{***}$	.05	$.49^{***}$	.13	$.46^{***}$	$.31^{**}$	$.53^{***}$	$.38^{***}$

Note. $n = 281$ for all analyses. r = Pearson's product moment correlation; β = Standardized regression weight; R^2 = Coefficient of determination; ACQ = Agoraphobic Cognitions Questionnaire; CCQ = Catastrophic Cognitions Questionnaire; BSQ = Body Sensations Questionnaire; SA (ADDI-27) = Somatic Anxiety subscale of the Anxiety Depression Distress Inventory-27; RC1 = Restructured Clinical (RC) Scale 1 (Somatic Complaints) of the Minnesota Multiphasic Personality Inventory-2-Restructured Form; AS = Anxiety Sensitivity; P-AS = Physical Concerns Anxiety Sensitivity Subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity Subfactor; S-AS = Social Concerns Anxiety Sensitivity Subfactor.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 10. *Regression Analysis Results for Outcomes Hypothesized To Be Best Predicted By Cognitive Concerns – Anxiety Sensitivity.*

		ACQ – Loss of Control		CCQ – Mental Subscale		COG	
		r	***β***	***r***	***β***	***r***	***β***
Model 1			$R^2 = .35^{***}$		$R^2 = .08^{***}$		$R^2 = .22^{***}$
	AS	$.60^{***}$		$.30^{***}$		$.46^{***}$	
Model 2			$R^2 = .37^{***}$		$R^2 = .09^{***}$		$R^2 = .25^{***}$
	P-AS	$.50^{***}$	.02	$.29^{***}$	$.21^{*}$	$.38^{***}$	-.01
	C-AS	$.54^{***}$	$.23^{**}$	$.24^{***}$	.02	$.50^{***}$	$.46^{***}$
	S-AS	$.59^{***}$	$.41^{***}$	$.26^{***}$	.09	$.39^{***}$	.06

Note. n = 281 for all analyses. r = Pearson's product moment correlation; β = Standardized regression weight; R^2 = Coefficient of determination; ACQ = Agoraphobic Cognitions Questionnaire; CCQ = Catastrophic Cognitions Questionnaire; COG = Specific Problems Cognitive Problems (COG) of the Minnesota Multiphasic Personality Inventory-2-Resturcuted Form; AS = Anxiety Sensitivity; P-AS = Physical Concerns Anxiety Sensitivity Subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity Subfactor; S-AS = Social Concerns Anxiety Sensitivity Subfactor.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 11. *Regression Analysis Results for Outcomes Hypothesized To Be Best Predicted By Social Concerns – Anxiety Sensitivity.*

	SIAS		FQ – Social Phobia Scale		SAV		SHY	
	r	***β***	***r***	***β***	***r***	***β***	***r***	***β***
Model 1		$R^2 = .24^{***}$		$R^2 = .19^{***}$		$R^2 = .02^{***}$		$R^2 = .10^{***}$
AS	$.49^{***}$		$.43^{***}$		$.15^{*}$		$.32^{***}$	
Model 2		$R^2 = .33^{***}$		$R^2 = .28^{***}$		$R^2 = .06^{***}$		$R^2 = .19^{***}$
P-AS	$.41^{***}$	-.04	$.38^{***}$	.02	.12	-.08	$.24^{***}$	-.17
C-AS	$.37^{***}$	-.09	$.29^{***}$	$-.19^{*}$	.09	-.11	$.24^{***}$	-.06
S-AS	$.57^{***}$	$.67^{***}$	$.52^{***}$	$.64^{***}$	$.22^{***}$	$.36^{***}$	$.41^{***}$	$.59^{***}$

Note. n = 281 for all analyses. r = Pearson's product moment correlation; β = Standardized regression weight; R^2 = Coefficient of determination; SIAS = Social Interaction Anxiety Scale; FQ = Fear Questionnaire; SAV = Specific Problems (SP) Social Avoidance scale of the Minnesota Multiphasic Personality Inventory-2-Restructurd Form (MMPI-2-RF); SHY = SP Shyness scale of the MMPI-2-RF; AS = Anxiety Sensitivity; P-AS = Physical Concerns Anxiety Sensitivity Subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity Subfactor; S-AS = Social Concerns Anxiety Sensitivity Subfactor.

* $p < .05$; ** $p < .01$; *** $p < .001$.

Table 12. *Summary of Observed Pattern of Association Between Affect Sensitivity, AS, DI, and Outcome Measures.*

AFFECT SENSITIVITY MORE STRONGLY ASSOCIATED WTH:

Construct	**Measured By:**
Drinking to cope motivations	Drinking Motivations Questionnaire-Revised
Negative emotionality	RC7 scale of MMPI-2-RF
Fear of anxiety sensations	Agoraphobia Cognitions Questionnaire
General experiences of fear	BRF scale of MMPI-2-RF
Somatization	RC1 scale of MMPI-2-RF
General experiences of anxiety	AXY scale of MMPI-2-RF
Stress and worry	STW scale of MMPI-2-RF
Self-doubt	SFD scale of MMPI-2-RF
Perceived inefficacy	NFC scale of MMPI-2-RF

P-AS, C-AS, OR S-AS MORE STRONGLY ASSOCIATED WITH:

Construct	**Measured By:**
Evaluation of negative affect as dangerous	Catastrophic Cognitions Questionnaire
Fear of autonomic arousal	Body Sensations Questionnaire
General experiences of fear	Fear Questionnaire
	MSF scale of MMPI-2-RF
Fear of social interactions	Social Interaction Anxiety Scale
Worry	Penn State Worry Questionnaire

DI MORE STRONGLY ASSOCIATED WITH:

Construct	**Measured By:**
Acting rashly during negative affective states	Negative Urgency scale of UPPS-P
Physiological hyperarousal	Somatic Anxiety scale of ADDI-27

Poor emotion regulation abilities	Difficulties in Emotion Regulation Scale
Avoidance coping	Approach/Avoidance scale of BACQ
Demoralization	RCd scale of MMPI-2-RF
Intolerance of emotional states	Frustration Discomfort Scale
Negative affective responses	General Distress scale of ADDI-27
Rumination	Ruminative Responses Scale
Helplessness	HLP scale of MMPI-2-RF

Table 13. *Summary of Observed Pattern of Association Between AS Subdimensions and Outcome Measures.*

AS GLOBAL FACTOR MORE STRONGLY ASSOCIATED WITH:	
Construct	**Measured By:**
Fear of loss of cognitive control	Loss of Control scale of ACQ

P-AS MORE STRONGLY ASSOCIATED WITH:	
Construct	**Measured By:**
Fear of physical consequences of anxiety	Physical Consequences scale of ACQ
	Physical subscale of CCQ-M
Fear of autonomic arousal	Body Sensations Questionnaire
Fear of mental catastrophes	Mental subscale of CCQ-M

C-AS MORE STRONGLY ASSOCIATED WITH:	
Construct	**Measured By:**
Cognitive difficulties	COG scale of MMPI-2-RF

S-AS MORE STRONGLY ASSOCIATED WITH:	
Construct	**Measured By:**
Fear of social interactions	Social Interaction Anxiety Scale
	Social Phobia subscale of FQ
Social avoidance	SAV scale of MMPI-2-RF
Shyness	SHY scale of MMPI-2-RF
Physiological hyperarousal	Somatic Anxiety scale of ADDI-27
Somatization	RC1 scale of MMPI-2-RF

Figure 1. *Proposed Hierarchical Model of Affect Sensitivity (Adapted from Bernstein et al., 2009).*

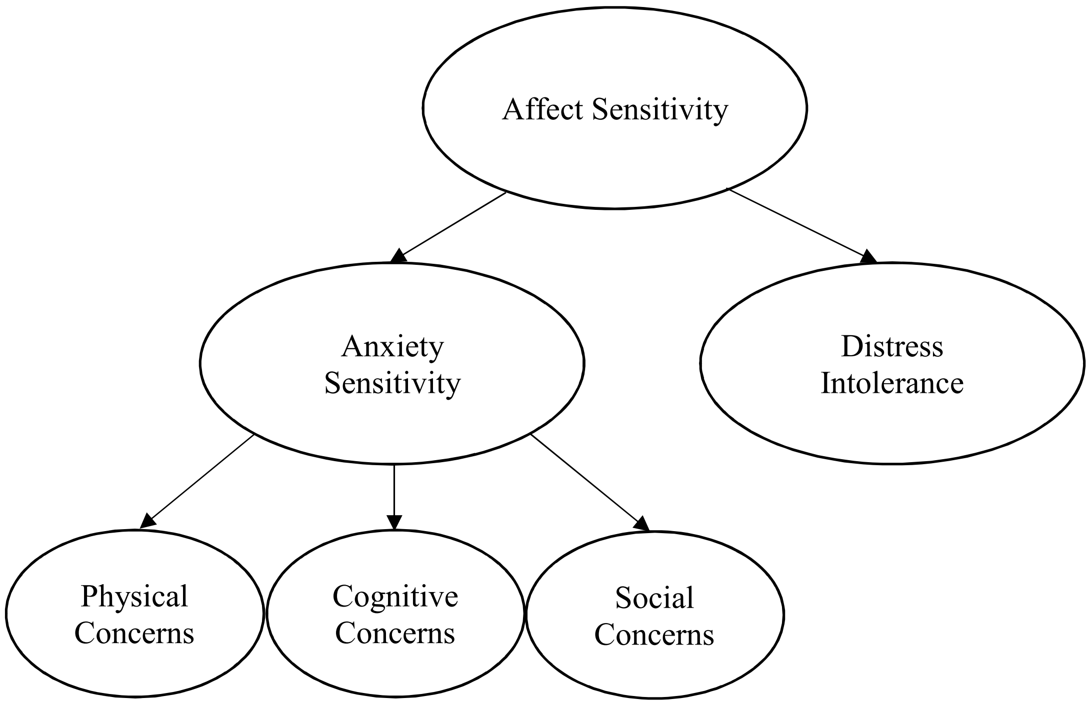
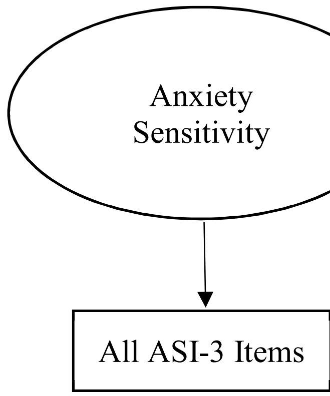
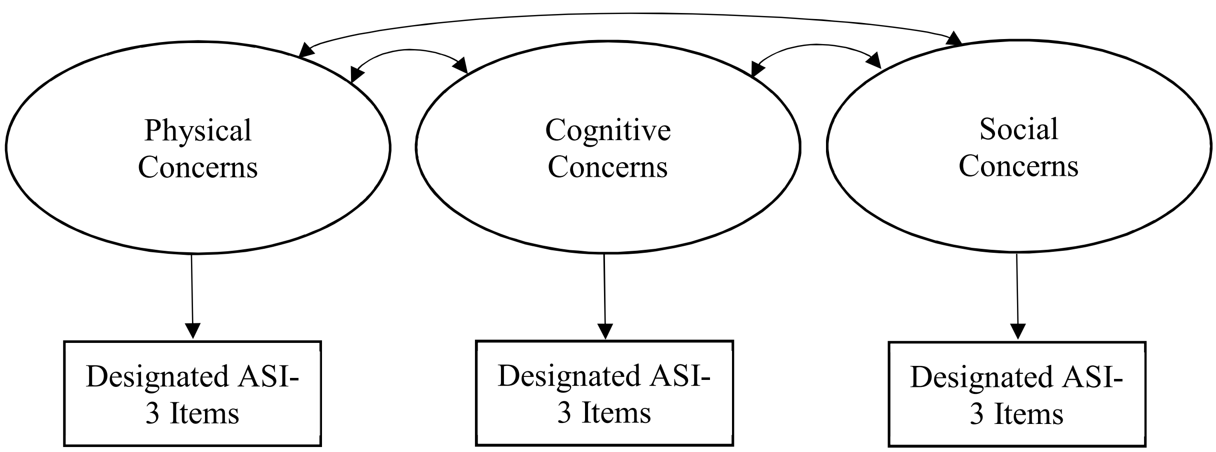


Figure 2. *Examined Models of Anxiety Sensitivity.*

Global Model.



Correlated AS Factors Model.



Hierarchical AS Model.

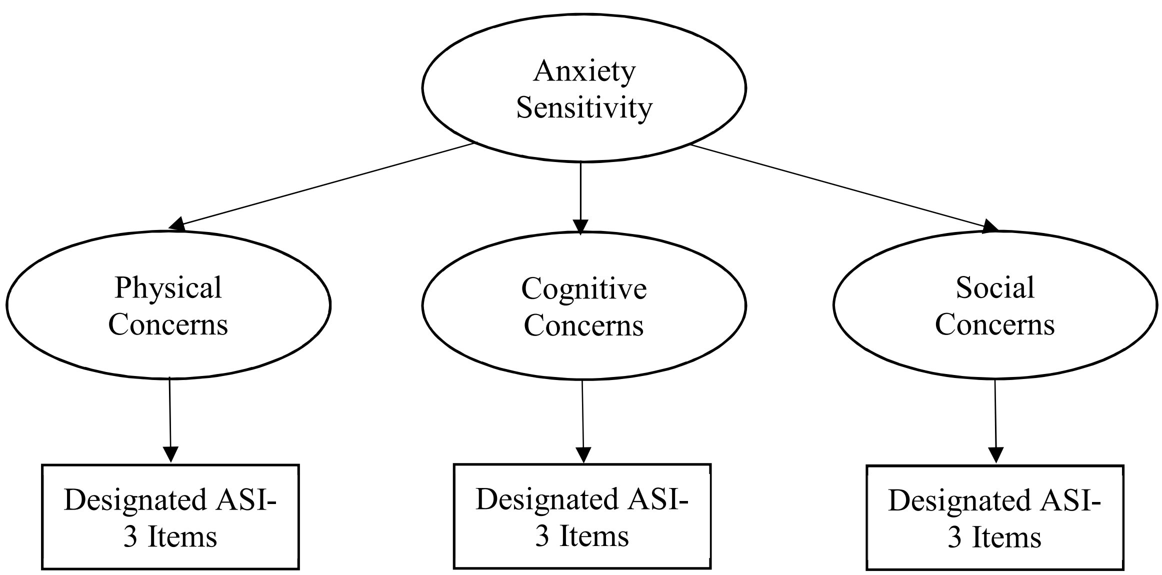


Figure 3. *Examined Model of Distress Intolerance.*

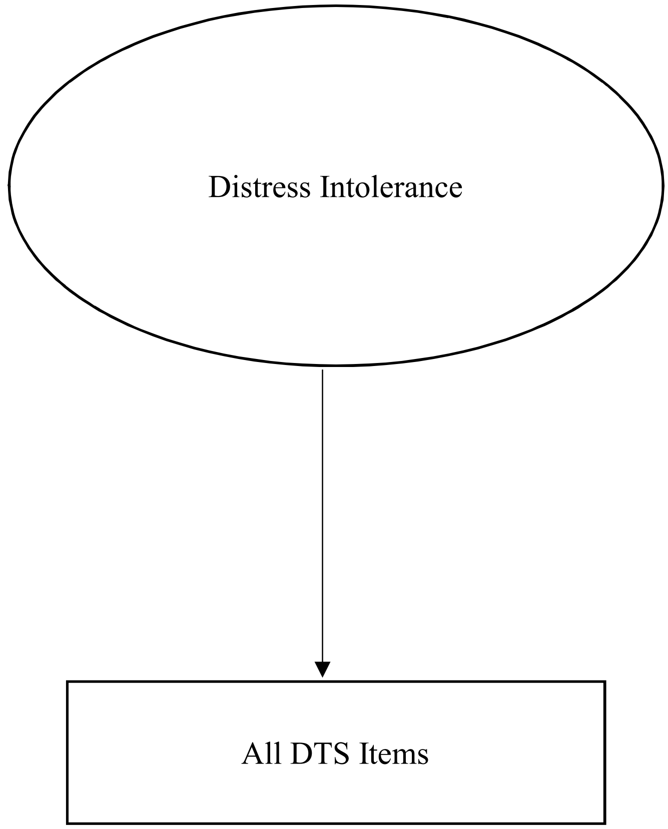
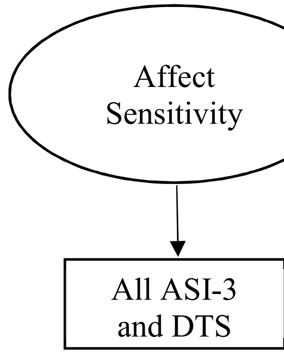
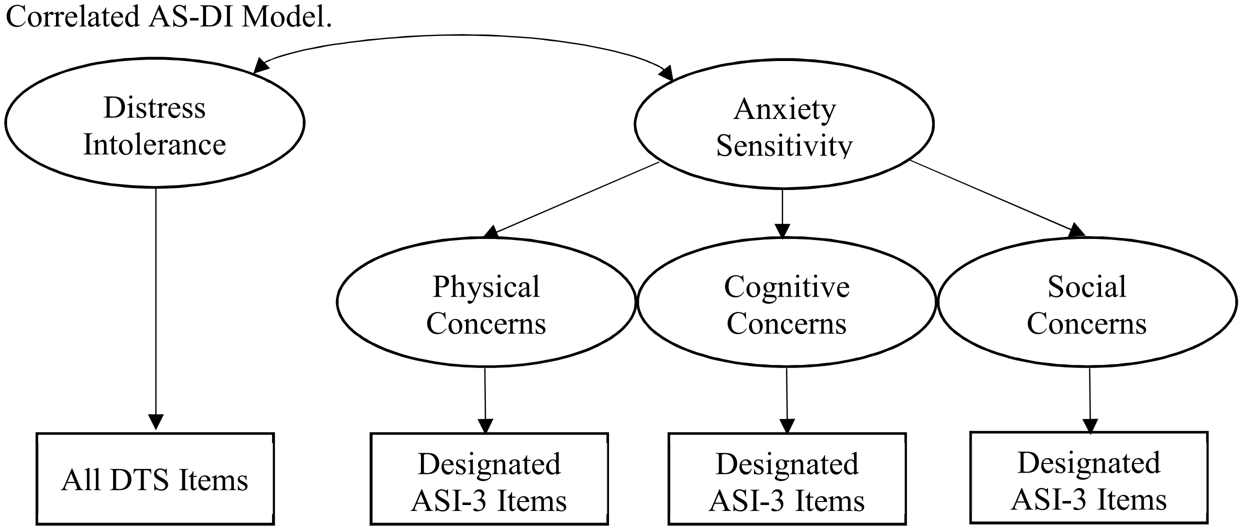


Figure 4. *Examined Models of Affect Sensitivity.*

Global Model.



Correlated AS-DI Model.



Hierarchical Affect Sensitivity Model.

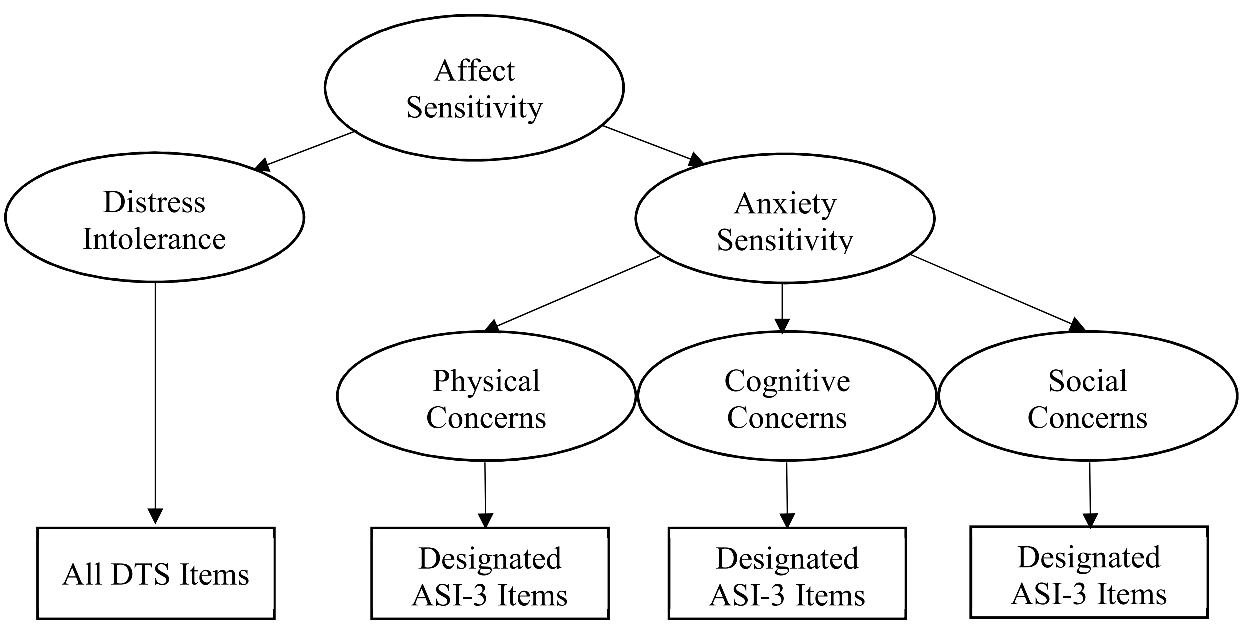
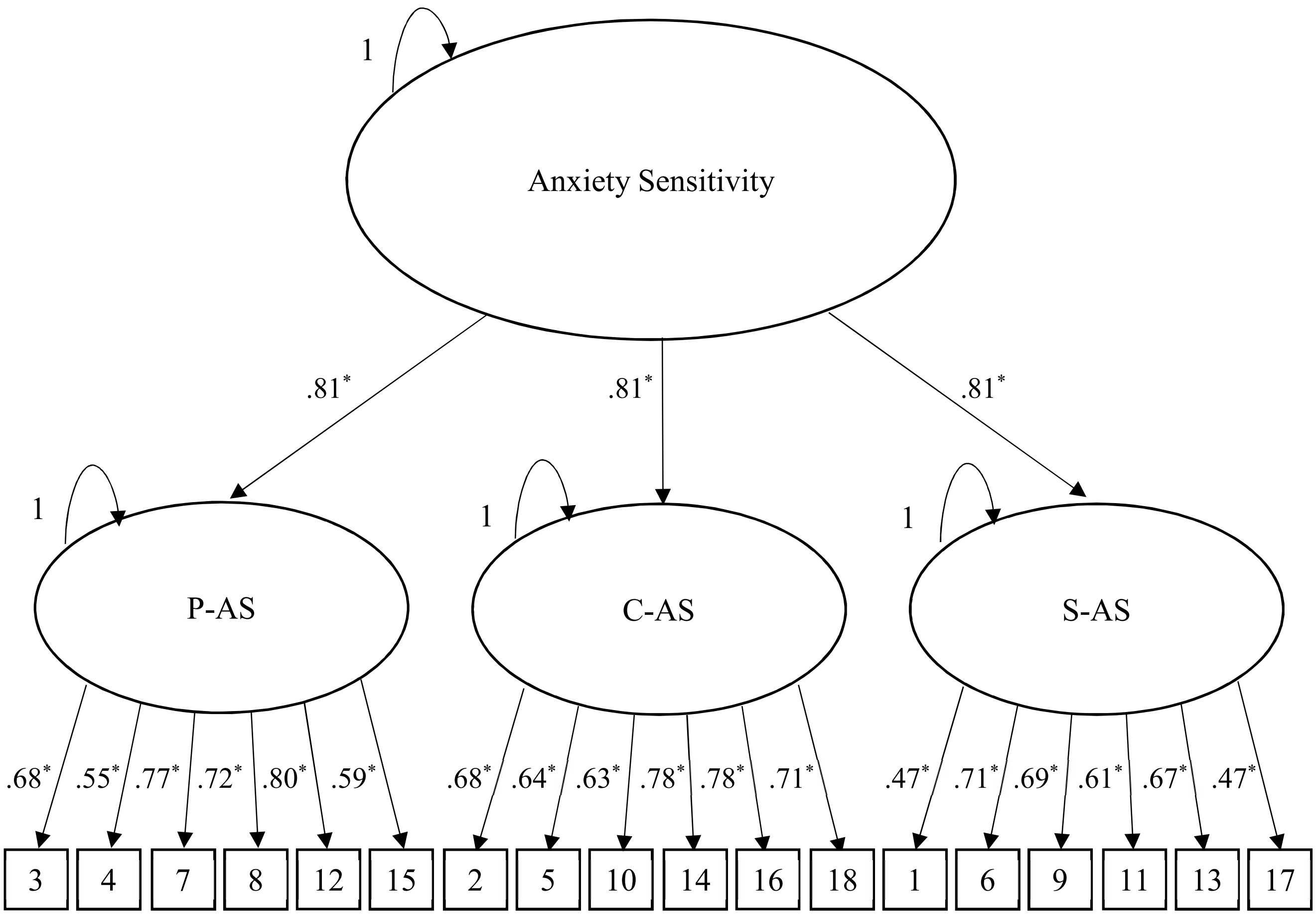


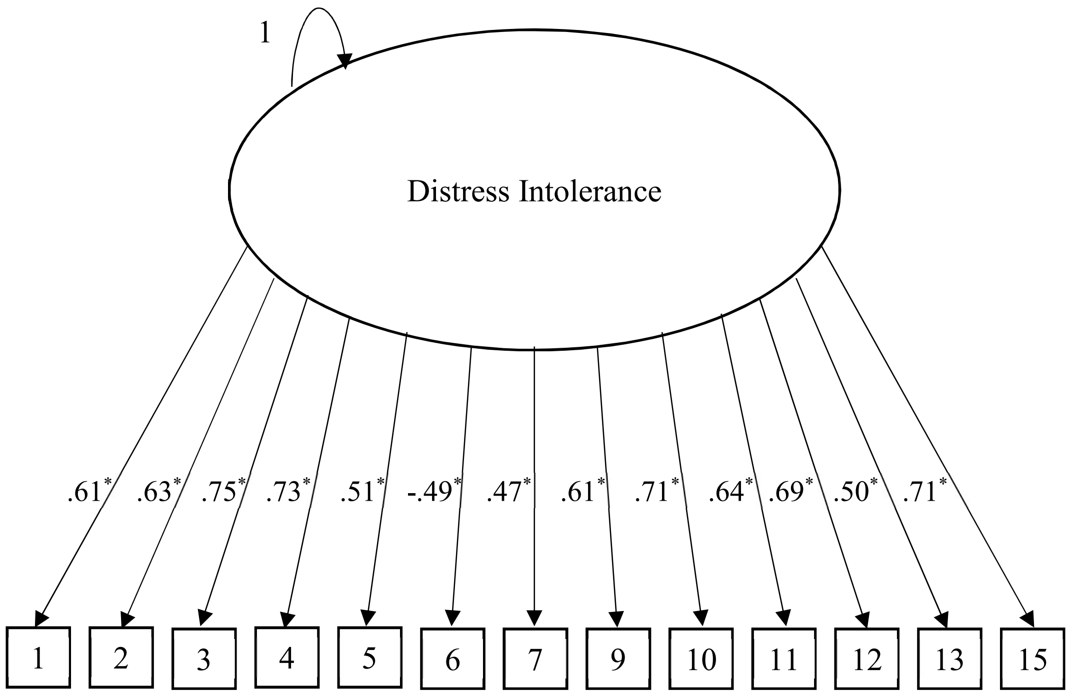
Figure 5. *Hierarchical Measurement Model of Anxiety Sensitivity*.



Note. Numbers in squares represent Anxiety Sensitivity Index-3 items. Statistical significance based on unstandardized factor loadings. Error terms not presented in figure. P-AS, C-AS, and S-AS constrained to tau-equivalence. P-AS = Physical Concerns Anxiety Sensitivity subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity subfactor; S-AS = Social Concerns Anxiety Sensitivity subfactor.

$^{*}p < .001$.

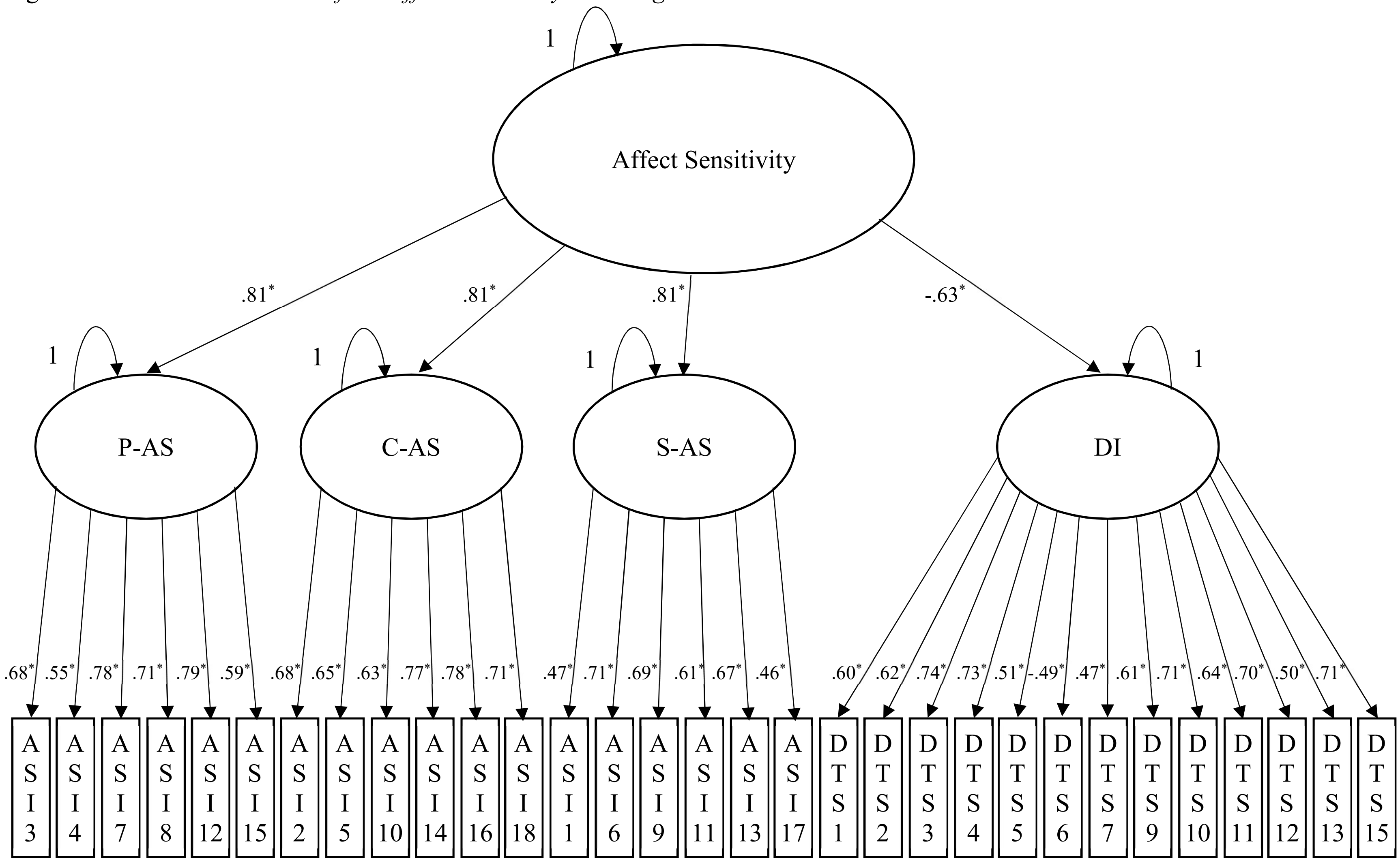
Figure 6. *Measurement Model of Distress Intolerance.*



Note. Numbers in squares represent Distress Tolerance Scale items. Statistical significance based on unstandardized factor loadings. Error terms not presented in figure.

* $p < .001$.

Figure 7. *Measurement Model of the Affect Sensitivity Nomological Net.*



Note. Numbers in squares represent Anxiety Sensitivity Index-3 and Distress Tolerance Scale items. Statistical significance based on unstandardized factor loadings. Error terms not presented in figure. P-AS, C-AS, and S-AS constrained to tau-equivalence. P-AS = Physical Concerns Anxiety Sensitivity subfactor; C-AS = Cognitive Concerns Anxiety Sensitivity subfactor; S-AS = Social Concerns Anxiety Sensitivity subfactor; DI = Distress Intolerance.

* $p < .001$.