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A Taxometric Analysis of Experiential Avoidance

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Experiential avoidance, a trait-like construct referring to the tendency to rigidly avoid or change unpleasant internal experiences stemming from an unwillingness to experience them, is believed to contribute to the development and maintenance of various forms of psychopathology. Despite significant research on this construct, it remains unclear whether experiential avoidance is dimensional or categorical at the latent level. The current study examined the latent structure of experiential avoidance using three taxometric analytic approaches (MAXimum Eigenvalue, Mean Above Minus Below A Curve, Latent-Mode Factor Analysis) applied to data from two independent samples and using three widely used measures of experiential avoidance. The first sample (n = 922) completed the Multidimensional Experiential Avoidance Questionnaire (Gámez, Chmielewski, Kotov, Ruggero, & Watson, 2011), while the second sample (n = 615) completed the Brief Experiential Avoidance Questionnaire (Gámez et al., 2014) and Acceptance and Action Questionnaire-II (Bond et al., 2011). Across both samples and all three measures, experiential avoidance exhibited a dimensional structure. The clinical and research implications of this finding for experiential avoidance are discussed.

Keywords: experiential avoidance; taxometrics; MEAQ; BEAQ; AAQ-II

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Experiential avoidance (EA) is defined as an unwillingness to confront and remain in contact with unpleasant thoughts and emotions, coupled with attempts to change the form, frequency, or occurrence of those experiences and the situations that elicit them (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). EA has largely been conceptualized and measured as trait-like (Gámez, Chmielewski, Kotov, Ruggero, & Watson, 2011), encompassing a variety of beliefs and behaviors that promote avoidance strategies in the context of distressing situations. Thus, individuals high in EA are more likely to engage in avoidance behaviors (e.g., leaving a room containing a feared stimulus, distracting oneself from sadness) when distress or a distressing situation arises or is anticipated. Importantly, while avoidance itself is not intrinsically pathological, it can become problematic when it is both contextually insensitive and relied upon in a chronic manner as a means of regulating unpleasant internal experiences (Forsyth, Eifert, & Barrios, 2006), such as in the case of consistently high EA. Indeed, this is reflected in the consistent finding that higher EA is associated with negative outcomes including greater mental health symptom severity (Gámez et al., 2011; Kashdan et al., 2014; Thompson & Waltz, 2010), lower quality of life (Gámez et al., 2011; Kashdan, Morina, & Priebe, 2009; Kirk, Meyer, Whisman, Deacon, & Arch, 2019), and poorer physical health (Andrew & Dulin, 2007; Berghoff, Tull, DiLillo, Messman-Moore, & Gratz, 2017). Further, high EA has been shown to be associated with a variety of diagnoses including anxiety disorders (Bardeen, Fergus, & Orcutt, 2013; Kashdan et al., 2014; Newman &

Llera, 2011; Thompson & Waltz, 2010), depression (Spinhoven, Drost, de Rooij, van Hemert, & Penninx, 2014), alcohol and substance use disorders (Levin et al., 2012; Shorey et al., 2017), and borderline personality disorder (Jacob, Ower, & Buchholz, 2013). Taken together, EA can be conceptualized as a latent psychological factor that influences a range of avoidance behaviors in distressing contexts and across diverse psychological symptom profiles.

An important finding is that EA does not appear to be unidimensional. Though early measures of EA assessed it as a single factor, including the Acceptance and Action Questionnaire-II (AAQ-II; Bond et al., 2011), later factor analytic studies on measures of EA have found evidence for a multidimensional structure (Gámez et al., 2011). Specifically, the Multidimensional Experiential Avoidance Questionnaire (MEAQ; Gámez et al., 2011) identified six factors of EA, including behavioral avoidance, distress aversion, procrastination, distraction/suppression, repression/denial, and distress endurance. As such, EA appears to be comprised of distinct forms of trait-like avoidance tendencies and does not necessarily operate in the same way among different people. Thus, two individuals expressing high levels of EA could express distinct dimensions of EA, which influence avoidance behaviors differently. Importantly, the MEAQ has withstood psychometric scrutiny, showing evidence that the overall scale and subscales are robust and diverge from constructs such as distress or negative affectivity (Rochefort, Baldwin, & Chmielewski, 2018). The MEAQ also comes in a shortened version, the Brief Experiential Avoidance Questionnaire (BEAQ; Gámez et al., 2014), which retains the same dimensions measured by the MEAQ though only a single overall score is derived. The AAQ (Hayes et al., 2004) and AAQ-II (Bond et al., 2011) reflected groundbreaking theoretical developments on EA (Hayes et al., 1996; Hayes et al., 2004) and remain widely used, though have not held up as well to psychometric scrutiny (Rochefort et al., 2018; Wolgast, 2014).

Despite accumulating data on the importance of EA in predicting critical outcomes, less is known about its latent structure. Early work on EA has proposed that it exists within a dysfunctional range of normal behavior, implying a more dimensional conceptualization (Hayes et al., 1996). That is, individuals may exhibit varying levels of EA, but only at a sufficiently high level does it influence negative outcomes. Consistent with this dimensional view, researchers have historically referred to EA in terms of a given self-report score that exists along a broader range of scores. For example, different individuals can express varying levels of EA, such as "high" or "low" EA (e.g., Kashdan et al., 2014). Importantly, when used in this way, "high" or "low" EA does not reflect qualitatively distinct types of EA, but rather a shared type of EA with different levels of severity. Thus, the set of experiences and behaviors between "high" and "low" EA individuals is similar, but the frequency or intensity of those experiences or behaviors differ. However, despite this common description of EA, there is insufficient psychometric evidence to indicate that EA operates along a single continuum of behavior. Indeed, it may be the case that EA functions categorically such that different scores on EA measures reflect qualitatively distinct categories. Viewed this way, those who are high versus low EA would then reflect qualitatively distinct groups characterized by divergent sets of behavior, rather than a shared set of behaviors that differ only in the frequency or intensity with which they are expressed. An example of this might be that low EA could reflect an adaptive coping style, while high EA might reflect more pathological avoidance observed in chronic and severe mental health disorders. Such categorical distinctions among varying levels of avoidance behaviors have been discussed within the literature on safety behaviors versus adaptive coping (e.g., Arnaudova, Kindt, Fanselow, & Beckers, 2017; Thwaites & Freeston, 2005), though no clear consensus exists. Elucidating the underlying dimensional or categorical structure of EA advances both our theoretical understanding of this construct and our approach to measuring it.

Central to determining the categorical or dimensional structure of a construct is the use of taxometric analyses, a set of statistical procedures that allows researchers to mathematically evaluate the latent structure of a given construct (Beauchaine, 2007; Meehl, 1995). Through use of taxometrics, constructs can be shown to have taxonic (i.e., dichotomous, categorical) or nontaxonic (i.e., continuous, dimensional) structures (Meehl & Golden, 1982). Taxometric analyses have been applied to various psychological diagnoses including anxiety disorders (Kollman, Brown, Liverant, & Hofmann, 2006), posttraumatic stress disorder (Broman-Fulks et al., 2006), obsessive-compulsive disorder (Olatunji, Williams, Haslam, Abramowitz, & Tolin, 2008), major depression (Prisciandaro & Roberts, 2005; Solomon, Ruscio, Seeley, & Lewinsohn, 2006), bipolar disorder (Ahmed, Green, Clark, Stahl, & McFarland, 2011; Prisciandaro & Roberts, 2011), and eating disorders (Olatunji et al., 2012). Beyond formal diagnoses, various studies have also examined the latent structure of mental health constructs

that, like EA, predict the onset and exacerbation of mental health disorders. For example, past research has found evidence of dimensional structures for intolerance of uncertainty (Carleton et al., 2012), distress tolerance (Stevens, Kertz, Bjorgvinsson, & McHugh, 2018), worry (Olatunji, Broman-Fulks, Bergman, Green, & Zlomke, 2010), and fear of negative evaluation (Weeks, Norton, & Heimberg, 2009). While the majority of psychological diagnoses and mental health constructs tend to operate dimensionally (Haslam, Holland, & Kuppens, 2012), it remains important to identify categorical constructs in order to better understand the development and etiology of those constructs, and to better inform assessment and treatment (Beauchaine, 2007). Indeed, studies assessing the latent structure of important etiological constructs are sometimes mixed. For example, taxometric analyses of anxiety sensitivity have yielded both dimensional (Broman-Fulks et al., 2010) and categorical (Bernstein et al., 2007) results. Clarifying such inconsistencies or uncertainty regarding the latent structure of a given construct is important for both the measurement of that construct as well as our conceptualization regarding etiology and treatment.

An accurate understanding of a construct's latent structure is important for several reasons (Meehl, 1992). For example, the aim of assessment instrument development and administration varies depending on a variable's latent structure (Beauchaine, 2007; Ruscio & Ruscio, 2002; Walters & Ruscio, 2009). Whereas a categorical model of EA would imply that assessment instruments should be designed to sort individuals into their valid categorical class, a dimensional model suggests that measures should aim to assess and discriminate across the full spectrum of EA (Grove, 1991). Creating artificial dichotomizations along a dimensional construct would lead to an unnecessary loss of information and reduction in statistical power. Similarly, knowing the latent structure of EA would inform the appropriate use of language to communicate about the subject. For example, if EA is categorical, it would be appropriate to refer to individuals as "having" or "not having" EA, whereas a dimensional approach would suggest that reference to levels or ranges along the continuum of EA would be more relevant. Knowing the latent structure of EA also has the potential to inform research into the etiology and maintenance of EA. Whereas a categorical latent structure suggests a discrete etiology (e.g., a specific genetic source, environmental cause, particular gene-environment interaction), a dimensional structure would indicate a multiply determined (e.g., additive, graded) etiology.

Despite accumulating research delineating the function and importance of EA in various clinical outcomes, no known studies have investigated the latent structure of EA to determine whether it operates as a dimensional or categorical construct. To address this gap, the present research examined the latent structure of EA through use of taxometrics to determine whether it operates dimensionally or categorically. Two studies were conducted by applying three nonredundant taxometric procedures to data collected from two independent samples using three separate measures of EA (i.e., MEAQ, BEAQ, AAQ-II). Study 1 sought to establish the latent structure of EA using indicators representing the subcomponents of EA measured by the MEAQ (i.e., Behavioral Avoidance, Distress Aversion, Procrastination, Distraction/Suppression, Repression/Denial, and Distress Endurance), allowing for a more nuanced examination of the structure of EA across multiple dimensions. Study 2 applied taxometric analyses to indicators derived from the BEAQ and AAQ-II to determine whether findings from Study 1 would extend to the other commonly used measures of EA. As EA has been treated theoretically as a dimensional construct, operating along a continuum of normal human behavior, it was hypothesized that EA would evidence a dimensional structure as measured by the six components of the MEAQ, as well as single sum scores from the BEAQ and AAQ-II.

Study 1: Taxometric Analysis of the MEAQ

METHODS

Participants

Participants consisted of 1,094 individuals who completed the survey through Prolific, a crowdworking platform similar to Amazon's Mechanical Turk (MTurk) (Palan & Schitter, 2018). Previous research using these platforms has shown greater diversity when compared to university samples, and comparable reliability (Buhrmester, Kwang, & Gosling, 2011; Chandler & Shapiro, 2016). Participants were paid $2.85 for completing the study measures, which were part of a larger assessment battery that took an average of 33 minutes to complete.

To be eligible for the study, participants had to be at least 18 years of age, reside in the United States, report English as their native language, and complete the full survey in a valid manner. To complete the survey in a valid manner, participants could not provide irrelevant or off-topic answers, and had to respond correctly to validity items and finish the survey in a reasonable amount of time (i.e., between 8 minutes and 5 hours) based on pilot testing that established the minimum amount of