Journal of Anxiety Disorders 23 (2009) 760–766

Contents lists available at ScienceDirect

Journal of Anxiety Disorders

Reexamining the domain of hypochondriasis: Comparing the Illness Attitudes Scale to other approaches

Thomas A. Fergus, David P. Valentiner *

Department of Psychology, Northern Illinois University, DeKalb, IL 60115, United States

ARTICLE INFO

Article history:
Received 7 August 2008
Received in revised form 23 February 2009
Accepted 27 February 2009

Keywords:
Illness Attitudes Scale
Hypochondriasis
Health anxiety

ABSTRACT

The present study examined utility of the Illness Attitudes Scale (IAS; [Kellner, R. (1986). *Somatization and hypochondriasis*. New York: Praeger Publishers]) in a non-clinical college sample ($N = 235$). Relationships among five recently identified IAS dimensions (fear of illness and pain, symptom effects, treatment experience, disease conviction, and health habits) and self-report measures of several anxiety-related constructs (health anxiety, body vigilance, intolerance of uncertainty, anxiety sensitivity, and non-specific anxiety symptoms) were examined. In addition, this study investigated the incremental validity of the IAS dimensions in predicting medical utilization. The fear of illness and pain dimension and the symptom effects dimension consistently shared stronger relations with the anxiety-related constructs compared to the other three IAS dimensions. The symptom effects dimension, the disease conviction dimension, and the health habits dimension showed incremental validity over the anxiety-related constructs in predicting medical utilization. Implications for the IAS and future conceptualizations of HC are discussed.

Conceptualization and measurement of hypochondriasis (HC) have long been interests of researchers (Pilowsky, 1967). The Illness Attitudes Scale (IAS; Kellner, 1986) was developed to assess the fears, attitudes, beliefs, and behaviors associated with hypochondriasis and has been one of the most frequently used self-report measures of the disorder (Fava, Kellner, Zielezny, & Grandi, 1988; Gramling, Clawson, & McDonald, 1996; Hadjistavropoulos, Craig, & Hadjistavropoulos, 1998; Kellner, Hernandez, & Pathak, 1992). Relying upon previous conceptualizations of HC (Pilowsky, 1967), Kellner developed the IAS item pool to assess nine dimensions of HC: worry about illness, concerns about pain, health habits, hypochondriacal beliefs, thanatophobia, disease phobia, bodily pre-occupation, treatment experience, and effects of symptoms. Although Kellner used a deductive approach to scale construction (Clark & Watson, 1995), the original nine-factor model does not appear to describe the factor structure underlying this item pool; various factor structures have been reported in both clinical (Hadjistavropoulos & Asmundson, 1998; Kellner, 1986; Speckens, Spinhoven, Sloekers, Bolk, & van Hemert, 1996) and non-clinical samples (Ferguson & Daniel, 1995; Stewart & Watt, 2000).

Hadjistavropoulos, Frombach, and Asmundson (1999) conducted the most comprehensive analysis of the IAS factor structure to date and clarified its factor structure in non-clinical populations. These researchers initially ran their own exploratory factor analysis (EFA), with a five-factor solution [fear of illness, death, disease, and pain (i.e., fear of illness and pain); symptom effects; treatment experience; disease conviction; and health habits] emerging. Hadjistavropoulos et al. also conducted a series of confirmatory factor analyses (CFAs), using data from another non-clinical sample, to test a variety of models. These models included the original nine-factor model proposed by Kellner (1986), the two different four-factor models previously found in non-clinical samples (Ferguson & Daniel, 1995; Stewart & Watt, 2000), the five-factor model the researchers found through their EFA, and a one-factor model. Results from the CFAs indicated that their five-factor model was the best-fitting model and therefore demonstrated that five replicable dimensions underlie the IAS item pool.

Although the IAS factor structure has been clarified, Hadjistavropoulos et al. (1999) suggested that future research should examine potential differences that may exist among the five IAS dimensions. Over the past decade, attention has been predominantly focused on the relations between the IAS dimensions and anxiety-related constructs, as recent conceptualizations of HC (Salkovskis & Warwick, 2001; Warwick & Salkovskis, 1990) have viewed it as health anxiety, presumably a part of the anxiety disorders domain (Abramowitz, Schwartz, & Whiteside, 2002; Deacon & Abramowitz, 2008). Previous studies investigating the relation between HC and anxiety-related constructs (Otto, Demopulos, McLean, Pollack, & Fava, 1998; Otto, Pollack, Sachs, & Rosenbaum, 1992; Stewart & Watt, 2000) have consistently used

* Corresponding author. Tel.: +1 815 753 7086; fax: +1 815 753 8088.
E-mail address: dvalentiner@niu.edu (D.P. Valentiner).

0887-6185/$ – see front matter © 2009 Elsevier Ltd. All rights reserved.
doi:10.1016/j.janxdis.2009.02.016

unreliable IAS factor structures (e.g., four- and seven-factor solutions) and almost solely focused on the relations between the IAS dimensions and only two anxiety-related constructs (i.e., anxiety sensitivity and non-specific anxiety symptoms). Consequently, there exist no known studies that speak to how the five replicable IAS dimensions may be associated with both anxiety sensitivity and non-specific anxiety symptoms and whether these dimensions share similar relations with other relevant anxiety-related constructs.

Earlier views of HC (e.g., as measured by the IAS) and our current classification system (*DSM-IV-TR*; American Psychiatric Association [APA], 2000) consider HC as falling within the somatoform disorder domain. However, contemporary conceptualizations of HC (e.g., as measured by the Short Health Anxiety Inventory; SHAI; Salkovskis, Rimes, Warwick, & Clark, 2002) suggest the disorder is better represented as an extreme form of health anxiety. In fact, researchers have recently noted that health anxiety likely shares core cognitive processes with panic disorder (e.g., body vigilance; Olatunji, Deacon, Abramowitz, & Valentiner, 2007) and both generalized anxiety and obsessive-compulsive disorder (e.g., intolerance of uncertainty; Deacon & Abramowitz, 2008). No studies have examined whether these cognitive constructs appear relevant to earlier views of HC as well. Thus, of particular interest are the relationships of the IAS dimensions to contemporary conceptualizations of HC (i.e., health anxiety), body vigilance, and intolerance of uncertainty. Examining these relationships might shed some light on whether HC is part of the anxiety disorders domain.

In comparing earlier views of HC with contemporary conceptualizations of the disorder, it is important to examine the relevance of both approaches (i.e., the IAS and the SHAI, respectively) to medical utilization. Medical utilization represents the criterion which conceptualizations of HC attempt to explain and predict. Contemporary views of HC propose that individuals with the disorder frequently develop safety-seeking behaviors to relieve the anxiety of having a potentially serious illness. These safety-seeking behaviors can take a variety of forms and include: going to see doctors, asking friends and family members for their opinions, reviewing medical literature, and checking the body for the presence of symptoms (Abramowitz et al., 2002; Katon, Ries, & Kleinman, 1984; Salkovskis & Warwick, 2001). Although safety-seeking behaviors might function as a way to temporarily reduce the anxiety for individuals with HC, these behaviors also become habitual. Theorists speculate that individuals may get the impression that each episode of increased anxiety, followed by reassurance seeking, is an example of a "near miss" from a possible serious illness. Individuals with HC can therefore never be certain that they do not have or will not develop a serious illness and so the safety behaviors persist (Abramowitz & Moore, 2007; Salkovskis & Warwick, 2001). Examining the incremental validity of the IAS dimensions over anxiety-related constructs (i.e., health anxiety, body vigilance, intolerance of uncertainty, anxiety sensitivity, and non-specific anxiety symptoms) in predicting medical utilization would thus provide information about the degree of redundancy of the IAS dimensions with this contemporary conceptualization of HC, as health anxiety, and other related variables.

The first aim of the current study was to examine if differential relations exist between the five IAS dimensions and anxiety-related constructs. As described, the anxiety-related constructs included in this study were health anxiety, body vigilance, intolerance of uncertainty, anxiety sensitivity, and non-specific anxiety symptoms. Health anxiety was included as a contemporary conceptualization of HC. Body vigilance and intolerance of uncertainty were chosen because these constructs are important to contemporary conceptualizations of health anxiety and are thought to help explain the relationships between health anxiety and related anxiety disorders (Deacon & Abramowitz, 2008; Olatunji et al., 2007). Anxiety sensitivity and non-specific anxiety symptoms are also important constructs to consider to better understand the relation of HC with the anxiety disorders domain, and also allow for some comparison to previous results (Stewart & Watt, 2000) while using five replicable IAS dimensions. The second aim of the current study was to examine if the IAS dimensions are important in predicting medical utilization. Of particular interest here is the degree to which the IAS dimensions appear to be reasonably independent of contemporary approaches to understanding HC, and also account for unique variance in predicting a criterion of interest. Although four of the IAS dimensions are promising candidates for better understanding HC, the health habits dimension is inconsistent with current HC diagnostic criteria (Hadjistavropoulos et al., 1999) and it does not appear to distinguish between those with and without HC (Kellner, Abbott, Winslow, & Pathak, 1987). Examining the relationships of the IAS dimensions with these theoretically relevant constructs can potentially clarify whether using the five dimensions of the IAS or other more contemporary approaches are most useful for best conceptualizing HC.

For the present study, we predicted that fear of illness and pain dimension and the symptom effects dimension would share significantly stronger relations with all of the anxiety-related constructs (i.e., health anxiety, body vigilance, intolerance of uncertainty, anxiety sensitivity, and non-specific anxiety symptoms) compared to the other three IAS dimensions. These stronger relations were predicted to exist based upon previous research suggesting that disease phobia (i.e., the fear of illness and pain) is marked by predominantly anxious presentations (Barsky, 1992; Barsky, Wyshak, & Klerman, 1986; Kellner et al., 1992) and the strong conceptual overlap that exists between the symptom effects dimension (e.g., *When you feel a sensation in your body, do you worry about it?*) and the assessed anxiety-related constructs, especially body vigilance and anxiety sensitivity. We also predicted that all of the IAS dimensions, except the health habits dimension, would show incremental validity over the anxiety-related constructs (i.e., health anxiety, body vigilance, intolerance of uncertainty, anxiety sensitivity, and non-specific anxiety symptoms) in predicting medical utilization. The health habits dimension was not expected to show incremental validity in predicting medical utilization due to its aforementioned shortcomings.

Although it remains important to study those with clinically significant HC, studies with non-clinical samples are also important (Ferguson, 1996; Ferguson et al., 2000; Hitchcock & Mathews, 1992; Marcus, 1999; Owens, Asmundson, Hadjistavropoulos, & Owens, 2004; Rief, Hiller, & Margraf, 1998). The need for and appropriateness of using non-clinical samples when investigating HC is supported by research suggesting the disorder functions along a continuum (Costa & McCrae, 1985; Salkovskis & Warwick, 2001) in which the content of non-clinical and clinical HC concerns strongly parallel one another (see Marcus, Gurley, Marchi, & Bauer, 2007). Furthermore, it has also been noted that non-clinical samples may prove best when investigating HC because "psychiatric populations have high rates of co-existing disorders and primary care samples may have an over-representation of patients with disease conviction" (Noyes, Carney, & Langbehn, 2004, p. 541). Thus, use of a non-clinical sample in the present study is consistent with the extant HC literature and appears to be an appropriate strategy for further investigating the utility of the IAS.

1. Method

1.1. Participants

The sample consisted of 244 college students recruited from a Midwestern university through introductory psychology courses.