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Journal of Research in Personality 36 (2002) 573–579

JOURNAL OF
RESEARCH IN
PERSONALITY

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Brief report

The dark side of Absorption: Empirical associations between an experiential response style and hypochondriacal concerns

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Abstract

We examined associations between hypochondriacal concerns and the personality dimensions of Absorption and Negative Emotionality (NE). On the basis of research suggesting that Absorption is associated with both negative and positive affective experiences, we hypothesized that participants with high levels of Absorption and NE would report higher levels of hypochondriacal concerns. A sample of 212 undergraduates completed a set of self-report measures assessing Absorption, NE, and aspects of hypochondriacal concerns. Results provide preliminary but mixed evidence that Absorption relates positively to certain hypochondriacal concerns, in some cases by means of interactions with NE.

Published by Elsevier Science (USA).

1. Introduction

The major higher-order dimensions of personality have received considerable research attention in recent years. One dimension that is particularly intriguing is Absorption, in part because it relates only modestly to other

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higher-order personality dimensions, such as Positive Emotionality (PE) and Negative Emotionality (NE). Absorption has been conceptualized as a capacity for deeply immersed and “self-altering attention” (Tellegen & Atkinson, 1974, p. 276) and a disposition to adopt an experiential rather than instrumental mode of responding (Tellegen, 1981). Individuals who endorse high levels of Absorption tend to think in images, to experience sensations cross-modally, and to be prone to oblivious involvement with engaging stimuli (Tellegen, 1981). Absorption is typically assessed using Tellegen’s (1982) Absorption Scale, which includes such items as, “I can be deeply moved by a sunset.”

Absorption has been linked to a number of other state and trait conceptions. For example, it has been shown to modestly predict hypnotic susceptibility (cf., Council, 1993; Nadon, Hoyt, Register, & Kihlstrom, 1991; Tellegen & Atkinson, 1974), as well as proneness to fantasy (Lynn & Rhue, 1986). Additionally, Absorption correlates moderately (r 's ranging from .4 to .5) with openness to experience, a broader trait that encompasses curiosity, novelty-seeking, and unconventionality (Coan, 1972; Costa & McCrae, 1992). Zero-order correlations, however, may obscure more complex associations between Absorption and other variables. In several studies, for example, Absorption has exhibited statistical interactions (including replicable disordinal interactions) with situational variables, such as the extent to which respondents are asked to adopt an experiential versus instrumental response set (e.g., Qualls & Sheehan, 1981).

Typically, Absorption has been viewed as facilitating positive emotional experiences, such as enjoyment of music and art (e.g., Snodgrass & Lynn, 1989; Wild, Kuiken, & Schopflocher, 1995). Frequency of cognitive states that are often pleasant, such as daydreaming, has also been shown to relate positively to Absorption (e.g., Crawford, 1982). Results of one study suggested positive associations between Absorption and intrinsic (but not extrinsic) religiosity (Levin, Wickramasekera, & Hirshberg, 1998), a characteristic that is in turn associated with low prejudice and dogmatism (Allport, 1954).

Nonetheless, there are reasons to suspect that Absorption also has a “dark side” in that it may relate to certain forms of psychopathology. One basis for this “dark side” is the finding that Absorption exhibits modest positive loadings on both NE and PE (Tellegen & Waller, *in press*). This pattern of associations suggests that Absorption may facilitate negative, as well as positive, emotional experiences. Several findings provide evidence of a link between Absorption and variables associated with maladjustment, including nightmare frequency (Belicki & Belicki, 1986), anxiety sensitivity (fear of one’s own anxiety symptoms) (Lilienfeld, 1997), recovered and repressed memories of abuse (McNally, Clancy, Schacter, & Pitman, 2000), and dissociative tendencies (Scropo, Drob, Weinberger, & Eagle, 1998).

Kirmayer, Robbins, and Paris (1994) proposed that by subjectively amplifying minor somatic sensations, Absorption increases risk for psycho-

pathological conditions (e.g., somatoform disorders, panic disorder) characterized by hypersensitivity to interoceptive stimuli. Two studies demonstrated that Absorption correlates positively, although modestly, with self-reported somatic symptoms (Gick, McLeod, & Hulihan, 1997; Watten, Vassend, Myhrer, & Syversen, 1997). In predicting somatic and global distress among patients at a behavioral medicine clinic, Absorption interacted statistically with a 1-item measure of how much individuals were bothered by their primary physical symptom (Gick et al., 1997). Individuals who endorsed high levels of Absorption *and* reported finding their primary symptom very bothersome reported more somatic and global distress than did those who found their primary symptom less bothersome.

In a study mentioned earlier, Lilienfeld (1997) found that Absorption correlated positively ($r = .16$, $p < .05$) with a history of panic attacks in the past year. Absorption was even more strongly related to the proportion of panic attacks that were unexpected ($r = .48$, $p < .05$). This finding is potentially important because unexpected panic attacks are a hallmark of panic disorder (American Psychiatric Association, 1994). However, these significant associations were qualified by the finding that Absorption showed weak incremental validity above and beyond trait anxiety measures for predicting panic attacks. Subsidiary analyses suggested that Absorption interacted synergistically with trait anxiety in predicting panic symptoms, but these findings were inconsistent across trait anxiety/NE measures.

A growing body of research, therefore, suggests that the correlates of Absorption may not be uniformly positive. Absorption may potentiate certain negative affective experiences, either on its own or through statistical interactions with variables related to NE or trait anxiety. Such interactions may be particularly potent for conditions, such as panic disorder, that are marked by excessive sensitivity to interoceptive sensations. The present study was designed to investigate associations between Absorption and hypochondriacal concerns and interactions between Absorption and NE/trait anxiety measures in predicting such concerns. Like panic disorder, hypochondriasis is marked by a heightened tendency to notice and misinterpret ambiguous bodily sensations as harmful. Because Absorption is linked to high levels of self-focus (Tellegen & Atkinson, 1974), it may increase vulnerability to hypochondriacal concerns, particularly in conjunction with NE or trait anxiety.

2. Method

2.1. Participants

Two hundred and twelve undergraduates (78% female, 53% Caucasian) participated in the study for extra credit in their introductory psychology class. Participants' ages ranged from 17 to 31 years ($M = 19.13$, $SD = 1.38$).

2.2. Measures and procedure

Participants completed a battery of self-report measures that included the Tellegen Absorption Scale (Tellegen, 1982), the Negative Emotionality Scale (NE; Waller, Tellegen, McDonald, & Lykken, 1996), and the Illness Attitudes Scale (IAS; Kellner, 1986), a widely used measure of hypochondriacal fears, beliefs, and attitudes.

3. Results

Absorption correlated significantly with two IAS subscales: Disease Phobia ($r = .14$, $p < .05$) and Effects of Symptoms ($r = .14$, $p < .05$). These correlations, however, became nonsignificant after NE scores were statistically controlled. Correlations between Absorption and other IAS subscales ranged from $-.01$ (IAS Health Habits) to $.13$ (IAS Bodily Preoccupation) and were nonsignificant.

Results of hierarchical multiple regression analyses revealed significant interactions between Absorption and NE measures in predicting some IAS subscale scores. Specifically, Absorption and NE interacted to predict IAS Concerns About Pain ($b = .003$, $t = 2.10$, $p < .05$, R^2 change = $.02$). Participants who endorsed high levels of both Absorption and NE obtained higher scores on the IAS Concerns About Pain subscale than did other participants (see Fig. 1). In contrast, the marginally significant interaction between Absorption and NE in predicting hypochondriacal beliefs ($b = -.001$, $t = -1.92$, $p = .06$, R^2 change = $.02$) took a different form. In this case, a combination of *low* Absorption and high NE was most predictive of a high IAS subscale score (see Fig. 1). No other interactions significantly predicted IAS subscale scores.

4. Discussion

Results provide preliminary support for the hypothesis that Absorption is positively (although weakly) associated with certain hypochondriacal concerns, but only mixed support for the hypothesis that Absorption potentiates these concerns in conjunction with NE. Interactions between Absorption and NE were evident in predictions of two out of nine IAS subscales. Although Absorption and NE interacted synergistically to predict concern about pain, these variables showed the opposite pattern of interaction when predicting hypochondriacal worries.

This superficially contradictory pattern of findings can potentially be reconciled by examining more closely the questions on each scale. Whereas the Concern about Pain subscale taps fears that painful sensations indicate the

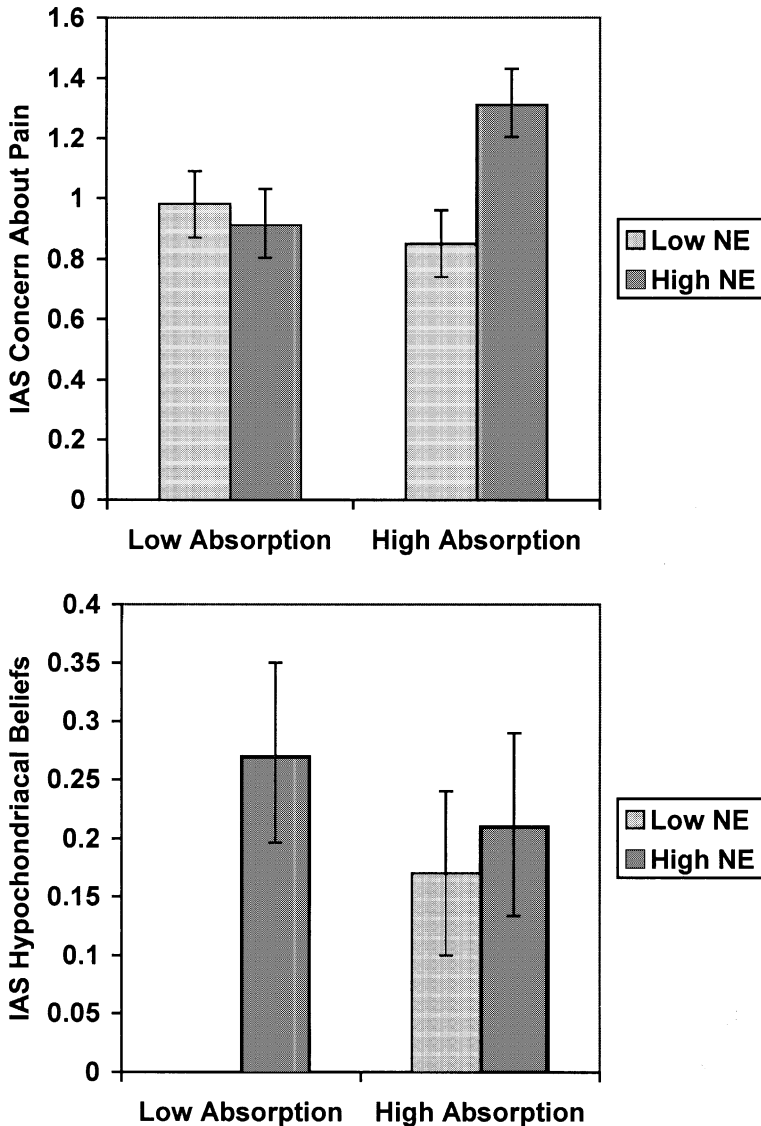


Fig. 1. Mean Illness Attitudes Scale (IAS) subscale scores (\pm SEM) for groups reporting high or low (above or below the median) levels of Absorption and Negative Emotionality (NE). All members of the low Absorption, low NE group obtained scores of 0 on the IAS Hypochondriacal Beliefs subscale.

presence of serious illness, the Hypochondriacal Beliefs subscale measures mistrust of doctors' diagnostic accuracy. Individuals who are prone to become absorbed in negative somatic sensations may be particularly vulnerable to exaggerated worries about pain. In contrast, individuals who are less at-

tuned to internal sensations may be less affected by actual somatic symptoms than by negative beliefs that lead them to mistrust others' assessments of their experiences.

The present study is limited by its exclusive reliance on self-report measures. Because no other assessment approaches were used, it is difficult to exclude method covariance as at least a partial explanation for the results. Additionally, the use of nonclinical samples may have limited our ability to identify interactions. In particular, curvilinear associations between Absorption and psychopathology could be evident in more severely affected samples (e.g., Wickramasekera, 1995). Moreover, because the interactions across IAS subscales were erratic and inconsistent, our findings require replication in independent samples.

Our findings suggest several avenues for future research. Longitudinal studies of individuals with high Absorption levels could help to elucidate possible causal pathways between Absorption and hypochondriacal concerns. In addition, it will be useful to determine if Absorption decreases as a consequence of treatment for certain clinical conditions or if successfully treated patients can instead learn to channel Absorption into more adaptive outlets. For example, therapists could perhaps use cognitive behavioral therapy techniques to help high absorption patients attend to positive, rather than negative, interoceptive sensations, or to shift their focus from internal to external cues regarding their physical well-being.

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