Role of Fantasy Proneness, Imaginative Involvement, and Psychological Absorption in Depersonalization Disorder

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Despite a resurgence of interest in dissociation over the last decade, relatively little is known about the pathogenesis and clinical correlates of depersonalization disorder (DPD), a dissociative disorder characterized by persistent or recurrent experiences of detachment from one's mental processes or body with accompanying significant distress or impairment in social, occupational, or other areas of functioning (American Psychiatric Association, 1994). As with other dissociative disorders, severe emotional abuse is presumed to play a central role in the development of DPD (Simeon et al., 2001). In contrast with the more profound forms of dissociative disorders, which are usually associated with childhood trauma, for depersonalized symptomatology, Simeon et al. (2001) suggest that emotional maltreatment may be uniquely predictive.

One possible explanation for the link between emotional abuse and depersonalization comes from the literature on hypnosis and fantasy proneness, which suggests that depersonalization may represent a coalescence of imagination-based coping mechanisms to escape from aversive early life circumstances into a stable personality style marked by a flight into fantasy and high psychological absorption (Putnam, 1994; Wilson and Barber, 1983). These individuals, known as *fantasy-prones*, spend much of their waking life engaged in active, vivid fantasy. Similarly, absorption is defined as "the use of one's full commitment of available perceptual, motoric, imaginative, and ideational resources to a unified representation of the attentional object" (Tellegen and Atkinson, 1974, p. 274). Absorption correlates highly with fantasy proneness (r =.70; Levin and Young, 2001–2002; Lynn and Rhue, 1988) and is 1 of 3 factors measured by the Dissociative Experiences Scale (DES; Bernstein and Putnam, 1986). As with fantasy proneness and imaginative involvement, absorption in and of itself is not pathologic, but it may interact with other exogenous factors such as trauma or abuse to produce a dissociative disorder. Numerous studies report a significant relationship between dissociation and both fantasy-proneness and psychological absorption (Holtgraves and Stockdale, 1997; Levin and Spei, in press; Rauschenberger and Lynn, 1995; Segal and Lynn, 1992–1993). Holtgraves and Stockdale (1997) found that individuals with elevations on the DES became so absorbed by threatening words on a learning task that their encoding of these words was impaired. This finding suggests that dissociative individuals were unable to sustain attention to the task at hand without emotional interference. Absorption in negative emotion or internal stimuli may explain the attentional inconsistencies that have been found in dissociative individuals (eg, Rossini et al., 1996; Guralnik et al., 2000). However, few studies have been conducted with clinical samples of patients with DPD. The present study investigated whether patients with DPD report higher levels of fantasy-proneness, imaginative involvement, and psychological absorption than controls.

METHODS

Participants

Fifteen individuals currently diagnosed with DPD (5 women and 10 men, mean age = 31 years, SD = 6.6, range = 20–41) were compared with 14 controls (9 women and 5 men, mean age = 28 years, SD = 11.0, range = 21–64). The patients with DPD were participating in a pharmacological treatment study, with a minority enrolled in a neurochemical challenge study. The controls were participating in neuropsychological or neurochemical challenge studies. All participants were solicited through media advertisements, with the DPD group responding to an ad that asked, "Do you frequently feel unreal, detached or in a dream/fog?" The controls received monetary compensation, and the depersonalized subjects received a supervised trial of medication for their participation in the treatment study. This study was part of a larger ongoing study conducted at Mount Sinai Hospital in New York.

Depersonalized subjects met the diagnostic criteria for depersonalization disorder by both semistructured interview and the Structured Clinical Interview for DSM-IV Dissociative Disorders (Steinberg, 1994), which allows for the diagnosis of dissociative disorders with a κ value of 0.96 (Simeon et al., 2001). Exclusion criteria included lifetime incidence of psychotic disorder, current substance abuse disorder. and history of medical or neurological disorder. A licensed psychiatrist (D. S.) and a licensed clinical psychologist (O. G.) conducted all diagnostic interviews.

Procedures and Measures

Subjects were administered a packet of the following 4 self-report measures, which they completed at home and returned within approximately 2 weeks: the DES (Bernstein and Putnam, 1986), a 28-item questionnaire that taps a broad

TABLE 1. Means and SDs of DES scores for Patients With DPD and Controls

DES scale	DPD (n = 15)	Controls (n = 14)	F	p
DES total	31.00 (15.1)	4.32 (3.36)	10.04	.004
DES Amnesia	16.92 (15.25)	2.19 (3.66)	8.79	.006
DES Absorption	30.67 (19.58)	6.39 (4.46)	20.25	.000
DES Depersonalization	55.5 (14.68)	2.03 (2.42)	19.66	.000

range of dissociative experiences, including disturbances in identity, memory, and perception, such as feelings of depersonalization and derealization; the Inventory of Childhood Memories and Imaginings (ICMI; Wilson and Barber, 1983), a widely-used 52-item true-false questionnaire that measures characteristics of fantasy proneness; the Short Imaginal Processes Inventory (SIPI; Huba et al., 1982), a 45-item questionnaire that assesses daydreaming content and style; and the Tellegen Absorption Scale (TAS; Tellegen and Atkinson, 1974), a 34-item true-false measure assessing one's propensity to become highly involved in sensory and imaginative experiences.

RESULTS

Given the unequal sex distribution in the 2 groups, a Pearson χ^2 was conducted and indicated that the gender by diagnosis grouping distribution was not greater than chance ($\chi^2[1] = 2.78$, $p < .14$). In addition, t tests revealed no sex differences on any of the pertinent dependent measures ($t[27] = .52–1.63$, NS), suggesting that sex was not a confounding variable.

As expected, the DPD group scored significantly higher on the DES and its 3 subfactors than the controls. As seen in Table 1, these findings were particularly strong for the Depersonalization subscale, thus supporting the diagnostic integrity of the present sample. In addition, DES total score was significantly associated with higher scores on the ICMI ($r[29] = .63$, $p < .000$), the TAS ($r[29] = .48$, $p < .009$), and the Poor Attentional Control subscale of the SIPI ($r[29] = .59$, $p < .001$). Consistent with our hypothesis, depersonalized individuals scored higher (mean = 14.7, SD = 7.3) on the fantasy proneness measure than controls (mean = 9.29, SD = 5.2, $t[28] = 2.28$, $p < .03$). However, it should be noted that total scores for the DPD group were well below threshold for this dimension, with scores falling at the lowest end of the criterion for medium fantasy proneness (a score between 14 and 36). Contrary to our prediction, depersonalized subjects did not report significantly higher absorption levels on the TAS than controls (mean = 14.13, SD = 7.8, and mean = 9.86, SD = 6.7, $t[28] = 1.58$, $p < .13$). On the SIPI, however, the DPD and control groups differed on all 3 subscales of the Poor Attentional Control scale and on one of the subscales of the Positive Constructive Daydreaming scale (Positive Reactions to Daydreams). Significantly, there were no between-group differences on the Guilt and Fear of Failure scale, a measure of dysfunctional and negative-affectively toned internal rumination. These data are presented in Table 2.

TABLE 2. Summary of t test Results on Short Imaginal Processes Inventory

	Depersonalized group (n = 15)	Controls (n = 14)	t Values	p two-tailed
Poor Attentional Control	52.87 (7.27)	37.93 (9.77)	−4.69	.000
Mindwandering	18.33 (2.99)	13.36 (3.54)	−4.10	.000
Boredom	16.00 (2.54)	10.71 (3.89)	−4.37	.000
Distractibility	18.53 (3.94)	13.86 (4.15)	−3.11	.004
Guilt and Fear of Failure	34.40 (8.28)	29.71 (11.00)	−1.30	.20
Achievement Oriented Daydreams	7.33 (3.37)	6.36 (2.53)	−.88	.39
Fear of Failure	7.00 (3.40)	5.64 (3.00)	−1.14	.27
Hostile Daydreams	7.87 (3.76)	5.64 (3.00)	−1.76	.09
Guilt Daydreaming	4.47 (2.17)	5.00 (3.14)	.54	.60
Frightened Reactions to Daydreams	7.73 (2.43)	7.07 (2.70)	−.69	.49
Positive Constructive Daydreams	44.80 (10.71)	49.43 (9.19)	1.25	.22
Acceptance of Daydreams	9.53 (3.16)	10.21 (2.72)	.62	.54
Positive Reactions	8.93 (2.55)	11.21 (1.63)	2.85	.008
Visual Imagery	8.33 (2.19)	8.71 (2.05)	.48	.63
Problem Solving	8.07 (3.13)	8.79 (3.14)	.62	.54
Future Orientation	10.13 (3.11)	10.86 (2.98)	.64	.53

DISCUSSION

This study was the first systematic attempt to investigate personality characteristics of a clinical sample of patients with DPD. Our findings suggest that although the depersonalized sample scored higher than controls on a measure of fantasy proneness, their scores were well within the normal range. In addition, there were no differences between our groups on a measure of psychological absorption. However, depersonalized subjects did indicate higher levels of attentional difficulties, a finding consistent with previous work by Rossini et al. (1996). Guralnik et al. (2000) similarly found attention deficits, particularly when visual noise was added. These data suggest that although depersonalized individuals are not actively immersed in more overall fantasy, they appear to be more easily distracted by competing internalized cognitions, which may in part explain their presenting symptomatology. It is also possible that low absorption is related to distractibility, because we found an inverse relationship between these constructs ($r = -.46$, $p < .001$).

An additional explanation for low absorption in the present study may have to do with the instrument, the TAS. Whereas dissociative individuals may become intensely absorbed in negatively toned stimuli, the TAS assesses preference for normative absorption experiences (eg, becoming intensely drawn in by a beautiful sunset). Perhaps the attentional deficiencies of patients with DPD may preclude their ability to enjoy the benefits of positive absorptive events.

Another possible explanation for these data is suggested by the finding from the SIPI. The DPD group scored significantly lower than controls on the Positive Reactions to Daydreams subscale of the Positive Constructive Daydreaming scale, suggesting that these patients may have more negatively based imaginative experiences and may avoid active involvement in their imaginative processes because of its conditioned aversive quality. Additional research with a larger sample using more sensitive clinical and/or behavioral measures would be important to study further the proposed association between attentional deficits and dissociative phenomena.

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