Feeling Unreal:
30 Cases of DSM-III-R Depersonalization Disorder

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Objective: In contrast to the recent surge of interest in other dissociative disorders, DSM-III-R depersonalization disorder has not been thoroughly investigated and characterized. The authors systematically elucidated its phenomenology, comorbidity, traumatic antecedents, and treatment history. _Method:_ Thirty adult subjects (19 women and 11 men) were consecutively recruited and administered various structured and semistructured interviews as well as the self-rated Dissociative Experiences Scale. An age- and sex-matched normal comparison group was also recruited. _Results:_ The mean age at onset of depersonalization disorder was 16.1 years (SD=5.2). The illness had a chronic course that was usually continuous but sometimes episodic. Severe distress and high levels of interpersonal impairment were characteristic. Unipolar mood and anxiety disorders were common, but none emerged as specifically related to the depersonalization. A wide variety of personality disorders was manifested; avoidant, borderline, and obsessive-compulsive were most common. Although not highly traumatized, the subjects with depersonalization disorder reported significantly more childhood trauma than the normal comparison subjects. Depersonalization had been typically treatment refractory; only serotonin reuptake inhibitors and, to a lesser extent, benzodiazepines had been of any therapeutic benefit. _Conclusions:_ This study supports the conceptualization of depersonalization disorder as a distinct disorder with a characteristic course that is independent of mood, anxiety, and personality symptoms. A subtle relationship may exist between childhood trauma and depersonalization disorder that merits further investigation. The disorder appears to be highly treatment refractory, and prospective treatment trials are warranted.

(Am J Psychiatry 1997; 154:1107–1113)

Depersonalization disorder is a fascinating psychiatric disorder about which relatively little is known. Despite the surge of interest and the rediscovery of dissociation in the last decade, depersonalization disorder continues to be one of the least investigated, diagnosed, and written about dissociative conditions. Although the older psychiatric literature contains descriptively rich reports of patients with depersonalization syndromes, diagnostic criteria are frequently poorly defined or differ from current ones.

The incidence and prevalence of depersonalization disorder are unknown, and there are limited data on its occurrence in community or clinical settings. The common belief is that depersonalization is a rare disorder; however, this is uncertain given the paucity of data, the underreporting of symptoms by patients, and the underdiagnosis by clinicians. In fact, a number of reports suggest that depersonalization is a rather common experience that spans from the normal to the pathological (1) and may constitute the third most common psychiatric symptom after anxiety and depression (2). One study found a 46% 1-year incidence of depersonalization experiences in a sample of college students (3). About two-thirds of individuals subjected to life-threatening danger report transient depersonalization (4). In a large series of general psychiatric inpatients with various diagnoses, 80% had experienced depersonalization, and 12% reported severe and lasting depersonalization that had not been diagnosed (5). Thus, it seems that inquiry reveals depersonalization to be more common than expected.

No systematic data on comorbidity with axis I and axis II disorders have been reported, and little is known about the role of trauma in contrast to its established pathogenetic role in other dissociative conditions. Psychopharmacological treatment has been minimally in-

vestigated, and no clear treatment guidelines, either psychotherapeutic or pharmacological, exist.

We therefore undertook the description of 30 consecutively recruited patients who were suffering from depersonalization disorder in order to elucidate the phenomenology, associated psychopathology, and treatment history of this disorder.

METHOD

Thirty consecutive subjects with DSM-III-R depersonalization disorder were recruited through media advertisements (N=27) and clinician referrals (N=3) and gave written informed consent. Subjects had to meet diagnostic criteria for depersonalization disorder both by semistructured interview and by the Structured Clinical Interview for DSM-III-R Dissociative Disorders (SCID-D) (6). The self-report Dissociative Experiences Scale (7) was also administered.

The semistructured interview developed by the authors inquired about all aspects of depersonalization history. The SCID-D scores five dissociative symptoms (amnesia, depersonalization, derealization, identity confusion, and identity alteration) on a 4-point severity scale and diagnoses the various dissociative disorders. The SCID-D criteria for depersonalization disorder match those of DSM-III-R: 1) persistent or recurrent experiences of depersonalization; 2) during the depersonalization experiences, reality testing remains intact; 3) the depersonalization is sufficiently severe and persistent to cause marked distress or dysfunction; and 4) the depersonalization experience is the predominant disturbance and not a symptom of another disorder. The Dissociative Experiences Scale is a widely validated and replicated 28-item 0–100-mm visual analog scale, the total score of which is the mean of all items. A factor analysis of the Dissociative Experiences Scale (8) revealed three factors (depersonalization/derealization, amnesia, and self-absorption), which were used in this study.

Axis I disorders were assessed by the Structured Clinical Interview for DSM-III-R—Patient Version (SCID-P) (9), which was modified to also assess lifetime dysthymia and generalized anxiety disorder. Posttraumatic stress disorder (PTSD) was assessed by standard clinical interviewing. Axis II disorders were assessed by the Structured Clinical Interview for DSM-III-R Personality Disorders (SCID-II) (10). Histories of childhood trauma were obtained by the Childhood Antecedents Questionnaire (11), a semistructured interview that rates three types of childhood trauma (physical abuse, sexual abuse, and witnessing domestic violence) during each of three developmental periods (childhood, latency, and adolescence). The total trauma score ranges from 0 to 9 (or higher if there were multiple perpetrators). All three interviewers (D.S., S.G., and O.G.) were formally trained in administering the structured interviews and reached interrater agreement of 90%.

A normal comparison group of 20 subjects without psychiatric disorders according to the SCID-P, SCID-II, and SCID-D were administered the Dissociative Experiences Scale and the Childhood Antecedents Questionnaire for comparison to the depersonalization group.

Independent-samples Student's t tests with Bonferroni correction were used to compare the scores on the depersonalization/derealization factor of the Dissociative Experiences Scale for the presence or absence of each axis I and axis II disorder. Paired Student's t tests as well as Pearson's correlations were used to compare the age at onset of depersonalization disorder and that of other axis I disorders. Pearson's correlations were used to test the significance of the relationship between scores on the Dissociative Experiences Scale and trauma scores from the Childhood Antecedents Questionnaire. For the purpose of data reduction, a principal components factor analysis with varimax rotation was used to extract three factors from all mood, anxiety, and personality disorders. The derived factors were scored as the raw sum of all variables with loadings greater than 0.45 and were entered, in conjunction with the total trauma score, into a multiple linear regression as predictors of the score on the depersonalization/derealization factor of the Dissociative Experiences Scale. Finally, independent-samples Student's t tests were used to compare Dissociative Experiences Scale and trauma scores between depersonalization disorder subjects and normal comparison subjects. All statistical tests were two-tailed.

RESULTS

Demographic and Clinical Characteristics

The mean age of the 30 subjects (19 women and 11 men) was 31.8 years (SD=8.1, range=18–56). Most (67%) were single, 20% were divorced, and 13% were married. Level of education attained was as follows: graduated high school (13%), some college education (27%), graduated college (37%), and postgraduate education (20%); one subject had not finished high school. With regard to occupation 20% were unemployed, 10% had part-time employment, 3% were homemakers, and 60% were fully employed. Many of the fully employed subjects reported that depersonalization substantially interfered with their capacity to work at a level concordant with their education and abilities.

The mean age at onset of depersonalization disorder was 16.1 years (SD=5.2, range=5–25). Thus, subjects had on average suffered from depersonalization for half of their lifetimes. Mean duration of illness was 15.7 years (SD=10.7, range=3 months to 41 years). Fourteen subjects (47%) described an acute onset to their illness within hours to days and could vividly recall the first depersonalization and its context. The remaining 16 subjects (53%) reported a gradual and insidious onset over weeks to months or had felt depersonalized as far back as they could remember. The illness had a characteristically chronic course: 47% had felt continuously depersonalized since the onset, while another 23% had an initially episodic course that later became continuous. A minority (30%) reported having episodes that ranged in duration from minutes to a few years. Many subjects described a constant intensity of depersonalization, while others experienced waxing and waning that seemed autonomous or was associated with particular triggers. Exacerbating factors were highly variable: negative affects (anxiety, depression, jealousy, stress), alcohol, drugs, antihistamines, caffeine, minocycline, sleep deprivation, fatigue, bright or artificial lights, social or intimate interactions, sex, self-focusing, noise, overstimulation, menstruation, pregnancy, physical exertion, and physical pain. Alleviating factors were equally variable: physical stimulation (including self-mutilation), intense positive feelings, exercise, meditation, physical pain, emotional stress/trauma, food, being alone, and secure and comforting interactions.

All subjects described suffering from distress or functional impairment that was associated with their depersonalization. Distress ranged from relatively mild ("I am so used to it, I cannot remember what it feels like not to have it") to profound ("Life has no meaning like this . . . I would rather be dead than continue living like this. It is like the living dead"). Impairment also ranged from relatively mild to extreme. Subjects who held jobs or were in significant relationships frequently described

being unable to derive satisfaction or pleasure from these facets of their lives because they felt detached and disconnected from their activities or from other people, even in intimate settings. Almost uniformly, subjects felt that the depersonalization interfered more with interpersonal relatedness than their being able to work.

Seven subjects (23%) reported histories of self-injurious behaviors (self-mutilation). Four reported a clear temporal association between the infrequent use of marijuana and the onset of chronic depersonalization, and three reported the same association with hallucinogens. No subject had a history of seizure disorders or other neurological abnormalities except for two who suffered from migraines. Psychiatric illnesses in first-degree relatives, as known to the subjects, included depression (N=8), bipolar disorder (N=2), schizophrenia (N=2), obsessive-compulsive disorder (N=1), panic disorder (N=2), alcohol abuse (N=4), bulimia (N=1), and pathological gambling (N= 1); no patient reported a family history of depersonalization disorder.

By definition, all subjects met criteria for depersonalization disorder and no other dissociative disorder on the SCID-D. The score distribution for each of the five SCID-D dissociative symptoms is presented in table 1. The mean score on the Dissociative Experiences Scale was 22.7 (SD=14.1, range=6–59). The scores for the three factors of the Dissociative Experiences Scale were as follows: depersonalization/derealization: mean=39.9 (SD=17.2, range=10–74); amnesia: mean=6.2 (SD=7.8, range=0–27); and self-absorption: mean=25.5 (SD= 21.7, range=1–85). Table 2 shows the content and score for each of the six items from the Dissociative Experiences Scale that comprise the depersonalization/derealization factor.

The mean age of the normal comparison group (14 women and six men) was 29.3 years (SD=6.6, range=20–48). The two groups did not differ significantly in age (t=1.16, df=48) or sex (χ^2=0.24, df=1). The mean score on the Dissociative Experiences Scale for the normal comparison subjects was 3.9 (SD=2.9, range=0–13), and the three factor scores were as follows: depersonalization/ derealization: mean=0.7 (SD=1.6, range=0–7); amnesia: mean=2.2 (SD=3.1, range=0–13); and self-absorption: mean=6.7 (SD=4.0, range=0–16). The two groups differed significantly on the total and all factor scores of the Dissociative Experiences Scale (total: t=7.00, df=48, p< 0.001; depersonalization/derealization: t=11.88, df=48, p<0.001; amnesia: t=2.45, df=48, p<0.05; self-absorption: t=4.79, df=48, p<0.001).

TABLE 1. Severity of SCID-D Dissociative Symptoms in 30 Subjects With DSM-III-R Depersonalization Disorder

Symptom	Number of Subjects				Score[a]	
	Absent	Mild	Moderate	Severe	Mean	SD
Amnesia	27	2	1[b]	0	1.1	0.4
Depersonalization	0	0	0	30	4.0	0.0
Derealization	4	1	1	24	3.5	1.1
Identity confusion	8	0	9	13	2.9	1.2
Identity alteration	24	6	0	0	1.2	0.4

[a]Scores determined by severity of the dissociative symptom: absent=1, mild=2, moderate=3, and severe=4.
[b]Subject had received ECT for depersonalization and had moderate amnesia surrounding the treatment but otherwise had no amnesia.

TABLE 2. Scores of 30 Subjects With Depersonalization Disorder on Six Depersonalization/Derealization Items From the Dissociative Experiences Scale

Depersonalization/Derealization Item	Score		
	Mean	SD	Range
Some people sometimes have the experience of feeling as though they are standing next to themselves or watching themselves do something and they actually see themselves as if they were looking at another person (item 7)	22.1	30.6	0–99
Some people have the experience of looking in a mirror and not recognizing themselves (item 11)	25.1	33.9	0–100
Some people have the experience of feeling that other people, objects, and the world around them are not real (item 12)	63.1	34.9	0–100
Some people have the experience of feeling that their body does not seem to belong to them (item 13)	56.5	34.7	0–100
Some people sometimes find that they hear voices inside their head that tell them to do things or comment on things that they are doing (item 27)	10.1	23.9	0–95
Some people sometimes feel as if they are looking at the world through a fog so that people and objects appear far away or unclear (item 28)	57.6	38.9	0–100

Case Descriptions

Three case histories are briefly described. They were selected for their varying and interesting presentations and offer a more intimate flavor for this disorder.

Ms. A was a 43-year-old woman who was living with her mother and son and worked at a clerical job. She had felt depersonalized as far back as she could remember: "It is as if the real me is taken out and put on a shelf or stored somewhere inside of me. Whatever makes me me is not there. It is like an opaque curtain . . . like going through the motions and having to exert discipline to keep the unit together." She had suffered several episodes of depersonalization annually and found them extremely distressing. She had experienced panic attacks for 1 year when she was 35 and had been diagnosed with self-defeating personality disorder. Her childhood trauma history included nightly genital fondling and frequent enemas by her mother from earliest memory to age 10.

Mr. B was a 37-year-old married professional man who had suffered from depersonalization disorder since age 10. He vividly recalled its acute onset on a day when he was playing football: he was tackled by another boy and suddenly felt that his body had disappeared. The depersonalization was initially episodic but became continuous by age 14. He described it as "not being in this world . . . I am disconnected from my body.

TABLE 3. Axis I Disorders in 30 Subjects With DSM-III-R Depersonalization Disorder

Disorder	Lifetime		Current	
	N	%	N	%
Bipolar disorder	1	3	1	3
Major depression	16	53	1	3
Dysthymia	10	33	9	30
Panic disorder	11	37	4	13
Social phobia	16	53	14	47
Generalized anxiety disorder	6	20	6	20
Obsessive-compulsive disorder	5	17	3	10
Simple phobia	2	7	2	7
Bulimia nervosa	4	13	0	0
Anorexia nervosa	3	10	0	0
Alcohol dependence	4	13	0	0
Alcohol abuse	0	0	0	0
Drug dependence	5	17	1	3
Drug abuse	1	3	0	0
Somatoform disorder[a]			1	3

[a]Lifetime occurrence not assessed by the SCID-P.

It is as if my body is not there." The depersonalization was lessened when he was alone and almost disappeared in his wife's presence. All social settings made it much worse. He met criteria for schizoid personality disorder. As a child he had suffered marked emotional neglect. His parents fed and clothed him but never expressed emotion; he recalled hardly ever being touched or kissed. It is of interest that his sense of detachment only involved his body and not other aspects of the self.

Mr. C was a 36-year-old male performer who had had five lifetime episodes of depersonalization disorder; each had lasted several months. The first one occurred at age 14 on the third occasion that he had used LSD. The second one occurred at age 21 upon smoking marijuana, which he did very rarely. The third episode occurred 3 years later as he was reading a book about drugs and had felt very frightened by the memory of his past experiences; there had been no recent drug use. At age 34, Mr. C again suffered depersonalization, which he felt was triggered by romantic and financial stressors. The latest episode occurred after he looked up depersonalization disorder in a medical textbook and discovered a damning description with little hope of cure. He described his experience as "a feeling of unreality and distance, like I am a spectator of my own movements and of what is going on." Mr. C had been suffering from generalized anxiety disorder since age 14. He also met criteria for obsessive-compulsive, self-defeating, and borderline personality disorders. There was no reported childhood history of abuse or neglect.

Comorbidity

Table 3 summarizes lifetime occurrence and current comorbidity of axis I disorders. The most prevalent disorders were unipolar mood disorders and the various anxiety disorders. Three subjects (10%) had never experienced a mood or anxiety disorder in their lifetime, while seven (23%) did not meet criteria for a mood or anxiety disorder at the time of the study.

Of interest is the age at onset in relation to depersonalization of the major mood and anxiety disorders: major depression: mean=18.9 years (SD=6.3, range=13–39);

TABLE 4. SCID-II Axis II Disorders in 30 Subjects With DSM-III-R Depersonalization Disorder

Personality Disorder	N	%
Avoidant	9	30
Borderline	8	27
Obsessive-compulsive	7	23
Schizotypal	5	17
Paranoid	5	17
Dependent	4	13
Schizoid	3	10
Histrionic	2	7
Narcissistic	2	7
Passive-aggressive	1	3
Antisocial	1	3
Self-defeating	3	10

dysthymia: mean=14.4 years (SD=5.1, range=5–25); generalized anxiety disorder: mean=18.3 years (SD=5.8, range=11–26); panic disorder: mean=23.6 years (SD=9.0, range=11–35); obsessive-compulsive disorder: mean= 19.8 years (SD=3.0, range=15–23); and social phobia: mean=10.5 years (SD=4.5, range=3–16). Corrected for six comparisons to a significance level of 0.01, no disorder significantly differed in age at onset from depersonalization disorder. After using the same correction, age at onset of depersonalization correlated significantly only with onset of generalized anxiety disorder (r=0.92, N=4, p<0.01). The depersonalization/derealization factor scores from the Dissociative Experiences Scale did not significantly differ for the lifetime presence or absence of any of these six mood and anxiety disorders.

Only one subject, a 35-year-old woman, had suffered from past PTSD after a rape at age 20. No subjects manifested current posttraumatic stress symptoms.

Axis II comorbidity, summarized in table 4, ran the gamut of personality disorders. Twelve subjects (40%) had no personality disorder, while the mean number of personality disorders per subject was 1.6 (SD=1.9, range=0–7). Of the 18 subjects with personality disorders, 10 had personality disorders from multiple clusters, five had disorders only from cluster C, and three had disorders only from cluster B; no subject had only cluster A personality disorders. After Bonferroni correction for multiple comparisons, scores on the depersonalization/derealization factor of the Dissociative Experiences Scale differed significantly only for the presence or absence of avoidant personality disorder (t= –4.36, df=28, p<0.001).

Trauma History

The mean total trauma score for the 30 subjects with depersonalization disorder was 1.8 (SD=2.4, range= 0–7). Trauma scores by category were as follows: physical abuse: mean=0.7 (SD=1.2, range=0–4); sexual abuse: mean=0.5 (SD=1.0, range=0–4); and witnessing domestic violence: mean=0.6 (SD=1.1, range=0–3). Thirteen subjects (43%) had a history of childhood trauma, which consisted of physical abuse (30%, N=9), sexual abuse (33%, N=10), or witnessing domestic violence

(27%, N=8). There was no significant correlation between the total or category scores of trauma and the total or factor scores of the Dissociative Experiences Scale.

The mean total trauma score for the normal comparison group was 0.45 (SD=1.57, range=0–7). Trauma scores by category were as follows: physical abuse: mean=0.15 (SD=0.67, range=0–3); sexual abuse: mean=0.10 (SD=0.31, range=0–1); and witnessing domestic violence: mean=0.20 (SD=0.70, range=0–3). The total trauma score of the depersonalization disorder subjects differed significantly from the normal comparison subjects (t=2.33, df=48, p<0.05), as did the physical abuse score (t=2.03, df=48, p<0.05). Differences in sexual abuse approached statistical significance (t=1.87, df=48, p=0.07), while witnessing domestic violence did not differ between the two groups (t=1.57, df=48). When the two groups were combined, the correlation between total trauma score and Dissociative Experiences Scale score approached significance (r=0.26, df=48, p=0.07) as did the correlation between total trauma score and score on the depersonalization/derealization factor of the Dissociative Experiences Scale (r=0.25, df=48, p=0.08).

Predictors of Depersonalization Severity

In order to determine whether associated pathology predicted the severity of depersonalization as measured by the score on the depersonalization/derealization factor of the Dissociative Experiences Scale, three factors were extracted from all mood, anxiety, and personality disorders (as explained in the Method section), which accounted for 48% of the total variance. The three factors, which were labeled according to clinical content, were "severely personality disordered" (comprising antisocial, paranoid, schizoid, and schizotypal personality disorders), "anxious" (comprising social phobia and obsessive-compulsive disorder as well as avoidant and obsessive-compulsive personality disorders), and "borderline/depressed" (comprising dysthymia, major depression, and borderline and dependent personality disorders). These three scores and the total trauma score were then entered into a multiple regression analysis. While accounting for 21% of the total variance of the score on the depersonalization/derealization factor of the Dissociative Experiences Scale, they did not significantly predict depersonalization severity (F=1.68, df=4, 25, p=0.19).

Treatment History

Most subjects had received multiple psychiatric treatments before presenting to our program. A large majority (N=21, 70%) had been treated with medications for a total of 69 adequate dose and duration trials. Although treatment was not necessarily aimed at depersonalization symptoms, we retrospectively attempted to rate the depersonalization response to all medications tried as significantly improved or not. Only serotonin reuptake inhibitors and benzodiazepines were reported as having been of any benefit for depersonalization. Five of 12 fluoxetine trials (42%) led to significant improvement as did one of three sertraline trials (33%), while neither of two clomipramine trials was successful. Thus the overall efficacy for all serotonin reuptake inhibitor trials was 35% (N=6 of 17). Two out of nine subjects (22%) treated with benzodiazepines reported markedly less depersonalization; the rest stated that benzodiazepines helped their anxiety or panic symptoms but not their depersonalization. Not a single trial of any other medication class (which included tricyclics [N=11], monoamine oxidase inhibitors [N=8], lithium [N=6], buspirone [N=4], antipsychotics [N=4], bupropion [N=3], stimulants [N=3], anticonvulsants [N=3], barbiturates [N=1], meprobamate [N=1], and doxepine [N=1]) was recalled as having been beneficial.

Most subjects had been in general psychotherapy (N=25, 83%) of greatly varying duration and, probably, orientation. Although most subjects described psychotherapy as helpful in other domains, as well as in gaining insight or in helping to better cope with their depersonalization, none reported a significant decrease in depersonalization symptoms per se. In addition, two subjects had been in cognitive-behavioral/relaxation therapy (one improved and one worsened), one had received hypnosis (which resulted in no change), and one had received acupuncture (no change).

About one-third of the group (N=9, 30%) had a history of psychiatric hospitalizations, although depersonalization was not necessarily the primary condition that led to hospitalization. One subject who had not responded to multiple medication trials for treatment of depersonalization had received ECT, which also resulted in no improvement.

DISCUSSION

The following major findings emerged in this phenomenological study of 30 consecutively recruited adult subjects with DSM-III-R depersonalization disorder. The illness started on average in mid-adolescence, with no subject having an age at onset after 25. Depersonalization was roughly twice as common in women as in men. The course was usually chronic, waxing and waning in intensity, but was sometimes episodic. The disorder was highly distressing and impairing to patients, more so in the interpersonal than the occupational domain, and was highly treatment refractory. Comorbid mood, anxiety, and personality disorders were common. The subjects were significantly more traumatized than a matched normal comparison group.

The clinical characteristics of the disorder in our series closely match those in DSM-III-R. Although DSM-III-R cites a 1:1 sex ratio, our finding of a roughly 2:1 ratio of women to men is similar to the two- to fourfold predominance of women in other series (12, 13). It could, however, reflect the bias of women being more likely to seek evaluation or treatment. DSM also sug-

gests that the disorder may have an undetected onset in childhood, and, in fact, about one-fourth of our study group reported preadolescent onset. The Dissociative Experiences Scale profile of depersonalization disorder is also of interest. Previous analyses have recommended a score of 30 as a cutoff for the detection of dissociative disorders, which is highly sensitive and specific for the severe dissociative disorders (8) but would often miss depersonalization disorder; a lower Dissociative Experiences Scale cutoff score of 15–20 (14) would be more sensitive to the detection of depersonalization.

The relationship of depersonalization disorder to mood, anxiety, and personality disorders is an interesting and controversial one. Although chronic, severe depersonalization has been conceptualized as a distinct syndrome (13, 15); it also has been commonly described as a symptom intimately linked to other psychological states. A "phobic anxiety-depersonalization syndrome" has been proposed by some (16–18). Others have advocated the relationship of depersonalization to the anxiety disorders (19–21), depression (22), or obsessive-compulsive disorder (23). Alternatively, heterogeneity within depersonalization and subtypes such as "organic," "schizoid," "hysterical," "depressive," and "tension-related" have been suggested (24). The current series concurs more with the conceptualization of chronic, severe depersonalization as a distinct disorder (13, 15). Even though mood, anxiety, and personality disorders were widely represented, no particular one or ones emerged as predominant. Statistical analyses suggested that no disorders specifically predated depersonalization, correlated with its onset, or determined its severity. The only exceptions were the related age at onset of depersonalization and generalized anxiety disorder and the greater severity of depersonalization in subjects with avoidant personality disorder, which might support a relationship to anxiety. The wide variability of comorbid personality disorders suggests that depersonalization can be understood at all levels of character pathology—neurotic, narcissistic, borderline, and psychotic— as has been eloquently proposed elsewhere (25).

The role of trauma in the pathogenesis of depersonalization disorder remains unclarified in this study, in contrast to its well-established relationship with other dissociative symptoms (26, 27). In one group of borderline patients derealization was found to be one of the strongest predictors of childhood sexual abuse (28). Although our depersonalized subjects had suffered significantly more childhood trauma than normal comparison subjects, their overall trauma scores were modest, and it is not uncommon for psychiatric populations in general to have histories of some childhood trauma (11). It may be that in the genesis of depersonalization more subtle childhood trauma plays a role that was not measured by the particular instrument that we used.

Extensive reviews of treatment modalities for depersonalization disorder can be found elsewhere (1, 29). Overall, depersonalization disorder tends to be nonresponsive to either therapy or medication, a finding clearly corroborated by this study. This study also concurs with the existing impression in the literature that serotonin reuptake inhibitors (30, 31) and possibly benzodiazepines (21, 32) may be of some benefit in the treatment of depersonalization disorder, but prior reports of successful treatment with tricyclic antidepressants (19), stimulants (13, 15), barbiturates (2, 33), or neuroleptics (32) were not supported in this study. Our one subject who had received ECT also did not respond, as found in one prior report (16) and in contrast to another one (15). The selective treatment response to serotonin reuptake inhibitors, in sharp contrast to tricyclic antidepressants, could have interesting implications regarding serotonergic dysfunction in depersonalization, as has been suggested elsewhere (34, 35). The clear temporal relationship between occasional marijuana or hallucinogen use and prolonged depersonalization in a few subjects has been reported previously (36, 37) and could also implicate the serotonergic axis.

Directions for future research in depersonalization are many and include more sophisticated trauma measurements, neuropsychological testing, biological imaging and challenge studies, and prospective treatment trials. It is hoped that these will contribute to better elucidating this elusive disorder.

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