8-1-2010

Diagnosis of Depersonalization Disorder

Margaret R. DeHoff
Indiana State University

VITA

Margaret R. DeHoff

EDUCATION

2010 Indiana State University, Terre Haute, Indiana
Psy.D. in Clinical Psychology

2005 Loyola College, Baltimore, Maryland
M.A. in Clinical Psychology

2002 Indiana State University, Terre Haute, Indiana
B.S. in Psychology and English

PROFESSIONAL EXPERIENCE

2010 – Chillicothe Veterans Affairs Medical Center, Chillicothe, Ohio
Inpatient Psychologist

2009 – 2010 Cleveland Department of Veterans Affairs Medical Center, Cleveland, Ohio
Psychology Intern

2008 – 2009 Good Samaritan Hospital, Vincennes, Indiana
Graduate Clinician

2007 – 2008 Hamilton Center, Inc., Terre Haute, Indiana
Graduate Clinician

2004 – 2005 Johns Hopkins University, Baltimore, Maryland
Research Assistant, Division of Medical Psychology

2003 Kennedy Krieger Institute, Baltimore, Maryland
Research Assistant, Department of Neuropsychology

Diagnosis of Depersonalization Disorder

A dissertation

Presented to

The College of Graduate and Professional Studies

Department of Psychology

Indiana State University

Terre Haute, Indiana

In Partial Fulfillment

of the Requirements for the Degree

Doctor of Clinical Psychology

---

by

Margaret R. DeHoff

August 2010

Keywords: Diagnosis, Depersonalization Disorder

COMMITTEE MEMBERS

Committee Chair: June Sprock, Ph.D.

Psychology Clinic Director and Professor of Psychology

Indiana State University

Committee Member: Veanne Anderson, Ph.D.

Associate Professor of Psychology

Indiana State University

Committee Member: Kevin Bolinskey, Ph.D.

Assistant Professor of Psychology

Indiana State University

ABSTRACT

Depersonalization Disorder (DPD) is considered both under-researched and under-diagnosed. A variety of reasons have been proposed for the under-diagnosis of DPD, including the high frequency of depersonalization as a symptom and comorbidity of DPD with other disorders. Under-diagnosis of DPD has also been attributed to inadequate diagnostic criteria in the *DSM-IV-TR*, as it lists only four criteria and only one specifically addresses the phenomenon of depersonalization. Several groups of researchers have proposed more comprehensive and in-depth conceptualizations of DPD. Further, common biases in clinical decision-making, such as an over-reliance on cognitive heuristics and the use of prototypes, can contribute to inaccurate diagnosis and under-diagnosis. A national sample of licensed psychologists was randomly selected and recruited from the membership of the American Psychological Association. The study was conducted on-line and participants were asked to read one of two DPD cases, assign a diagnosis, and rate the representativeness of a series of diagnoses for the case. They were also asked to rate the presence of a list of symptoms, including the *DSM-IV-TR* and *ICD-10* criteria for DPD, and the symptoms and dimensions of DPD and depersonalization from the literature. Half of the participants were asked to assign a diagnosis and then rate symptoms (simulated prototype approach) while the others rated the symptoms before assigning a diagnosis (simulated *DSM-IV* approach). The study found that clinicians under-diagnosed DPD and that the *DSM-IV* depersonalization criterion had high sensitivity but not adequate specificity. Results indicated that a simulated *DSM-IV* approach

improved accuracy of diagnosing DPD. Finally, results indicated that the symptoms of DPD and depersonalization proposed by researchers had better predictive value for DPD representativeness ratings than the current *DSM-IV* criteria, but not for a diagnosis of DPD. The results of this study have implications for the diagnostic criteria for DPD, clinical decision-making strategies, clinical training, and future research on DPD.

ACKNOWLEDGMENTS

I would like to thank Dr. June Sprock, who during the course of my academic career has served as supervisor, advisor, professor, and dissertation chair. Your patience, kindness, thoroughness, and support have been indispensible in my development as a psychologist. It has been a privilege and an honor to work with you and I look forward to future collaborations and friendship. Thank you so much!

DEDICATION

I would like to dedicate this paper, the culmination of my academic career, to my husband, Douglas DeHoff, and thank him for his unfailing support throughout this process. My gratitude for you, sweet Douglas, is best expressed by these Hall and Oates lyrics:

> *What I've got – full stock of thoughts and dreams that scatter*
> *And you put them all together*
> *And how I can't explain*
> *Well, well you (ooh ooh ooh ooh) you make my dreams come true!*

I would also like to thank my parents, Mark Ryan and Gregory and Christina Dyken, and my sisters, Christina Ryan and Rebekka Bodine. Thank you for your confidence, encouragement, and love throughout this project. I am so blessed to have you as my family. Daddy – hopefully after 'twenty [-three] years of schoolin' they won't put me on the day shift.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1

Introduction and Literature Review

Diagnosis of Depersonalization Disorder

Although Depersonalization Disorder (DPD) is typically considered rare (Simeon, 2004), some suggest that its prevalence may be nearly 2.4% in the general population (Blanco-Campal, 2006; Ross, Joshi, & Currie, 1991). This rate is comparable to and even exceeds other major psychiatric disorders such as schizophrenia (Simeon, 2004). Considering that DPD may be far more common than typically believed, some researchers have proposed that it is not only under-researched, but also under-diagnosed (Lambert, Sierra, Phillips, & David, 2000; Simeon, 2004). Implications for under-diagnosis of DPD are far-reaching and include inadequate or inappropriate treatment and potential social and legal stigmatization resulting from misdiagnosis (i.e., diagnosing a patient with a psychotic disorder, as opposed to DPD) (Hare-Mustin & Maracek, 1997).

Researchers have proposed a number of reasons for under-diagnosis of DPD. One possible reason is the high frequency of depersonalization as a symptom and the resulting confusion over the distinction between depersonalization symptoms and a diagnosis of DPD. Some researchers have estimated that approximately 23% of the general population experiences short-lived episodes of depersonalization (Aderibigbe, Bloch, & Whaler, 2001) and others have suggested that depersonalization may be the third most commonly experienced psychiatric

symptom among psychiatric inpatients (Brauer, Harrow, & Tucker, 1970; Hunter, Sierra, & David, 2004). Additionally, depersonalization is a symptom of a number of other psychiatric disorders (e.g., Panic Disorder, Major Depressive Disorder, Post-Traumatic Stress Disorder, Schizophrenia, and other dissociative disorders; Pias, 1991). Considering the prevalence of depersonalization as a symptom and the number of disorders that include depersonalization in their diagnostic criteria or as associated features, it is not surprising that clinicians may experience confusion regarding the diagnosis of DPD. Further complicating the diagnostic picture is the high comorbidity of DPD with other disorders, particularly depressive and anxiety disorders, which may reduce the likelihood of a diagnosis of DPD (Baker et al., 2003). Thus, clinical presentations of DPD are often quite complex and confounded by the presence of comorbid diagnoses, making it more difficult for clinicians to accurately diagnose the disorder. Another reason may be patients' reluctance to divulge symptoms that may make them appear 'crazy.' Further, until very recently, research on DPD has been lacking (Simeon, 2004), resulting in clinicians having insufficient knowledge of the disorder.

Inadequate diagnostic criteria in the *Diagnostic and Statistical Manual of Mental Disorders - Fourth Edition (DSM-IV;* American Psychiatric Association [APA] 1994) and *DSM-IV-TR* (i.e., Text Revision; APA, 2000) may also lead to under-diagnosis. Several groups of researchers have proposed more comprehensive and in-depth conceptualizations of DPD. The *DSM-IV and DSM-IV-TR* list only four diagnostic criteria for the disorder and only one of the criteria specifically address the phenomenon of depersonalization (Appendix A). In comparison, some researchers conceptualize DPD using three dimensions of DPD (Torch, 1987), five domains of depersonalized experience (Blanco-Campal, 2006), four symptoms of depersonalization (Sierra & Berrios, 2001), or five dimensions of depersonalization (Jacobs &

Bovasso, 1992; 1996). If DPD is indeed under-diagnosed, the diagnostic criteria outlined in the *DSM-IV-TR* may be insufficient and may contribute to misdiagnosis.

There are also biases in clinical decision-making that may contribute to inaccurate diagnosis or under-diagnosis. Although the *DSM-III* (APA, 1980) and subsequent editions of the manual have provided specific operational definitions of disorders, research has shown that clinicians often fail to adhere to the diagnostic criteria (Blashfield & Herkov, 1996; Morey & Ochoa, 1989), thereby increasing the likelihood of inaccurate diagnosis. Although a more structured approach to diagnosis is not always appropriate, clinicians often make diagnostic decisions relying solely upon clinical judgment (Blashfield & Herkov, 1996; Garb, 2005). Research has also demonstrated that clinical judgment is subject to multiple sources of error, including assessment bias (Crosby & Sprock, 2004), over-reliance on cognitive heuristics (Tversky & Kahneman, 1973; 1974), and inappropriate use of prototype models (Garb, 2005). Moreover, clinicians increase their reliance on heuristics (i.e., cognitive shortcuts) under conditions of uncertainty (Tversky et al., 1992). As many clinicians may be unfamiliar with DPD and its typical presentation (Simeon, 2004), it seems likely that clinicians will be more reliant on diagnostic short-cuts when confronted with a case of DPD.

The present study examined whether clinicians under-diagnose DPD when presented with representative cases of DPD from the literature. The study also examined diagnostic decision-making processes involved in under-diagnosis, specifically assessing whether the use of a prototype approach, rather than a systematic evaluation of the presence of *DSM-IV* criteria and other symptoms, contributes to the under-diagnosis of DPD. Finally, the *DSM-IV* criteria and DPD symptoms from the literature were examined to determine their predictive value beyond that of the *DSM-IV* for diagnosis of DPD.

Depersonalization and Depersonalization Disorder

Descriptions of depersonalization as a symptom have been recorded since the early nineteenth century; however, the term “dépersonnalisation” was not proposed until 1898 by Ludovic Dugas. In their review of the history of depersonalization, Sierra and Berrios (1997) noted that early French physicians initially conceptualized episodes of depersonalization as manifestations of depression. Indeed, some described depersonalization as a subtype of melancholia labeled, "*melancolia anaesthetica*." The earliest theories of depersonalization focused on affect or disturbances in sensory perception. Historic descriptions of the sensation of depersonalization have included experiences of unreality, a sense of not being in control of oneself, an emptiness or hollowness in the head, and the experience of the self as a lifeless machine (Sierra & Berrios, 1997). Current descriptions of depersonalization have emphasized visual perceptions of the environment or subjective perceptions of the state of self. Another common symptom of depersonalization is derealization, in which an individual experiences a loss of familiarity with friends or surroundings. One individual described the depersonalization experience as follows:

> I feel as though I'm not alive, as though my body is an empty, lifeless shell. I seem to be standing apart from the rest of the world, as though I am not really here...I seem to be walking in a world I recognize but don't feel. (Phillips & Sierra, 2003, p. 157)

Although depersonalization as a symptom has been noted in the literature since as early as 1838, Depersonalization Disorder (DPD) was not officially recognized as an independent mental disorder in the United States until the APA included the diagnosis in the *DSM-III* in 1980, following the upsurge of interest in the dissociative disorders in the 1970s (Kihlstrom, 2005). A diagnosis of DPD is assigned when an individual's episodes of depersonalization run

a chronic course, result in significant distress or dysfunction, and do not occur exclusively during the course of another axis I disorder. Baker et al. (2003) provided a description of a typical case of DPD. They presented a 28-year old man who had recently become unemployed and had been diagnosed with DPD for four years. In his case, the onset was gradual, his symptoms became increasingly severe with time, and the course was unremitting. The etiology for the disorder was unknown by the clinician, as the young man reported no significant life events. He described his experience as:

> This sounds mad, but I am not me. I look in the mirror and I don't see me. I don't know who it is that I see and I don't know where the real me has gone. Logically, that cannot be the case, but that is how it feels. I spend all day checking myself and it's never me. I panic and try to solve where I am. I feel so depressed, like I can't go on living this way but I live in hope that one day I will wake up and it will be me (Baker et al., 2003, pp. 432-433).

This case presentation illustrates the estranged nature of the individual's sense of self in relation to past perceptions of self and current perceptions of the world. Such experiences appear to be common among individuals with DPD.

Current Diagnostic Criteria

DSM-IV-TR. Since the first inclusion of DPD as a diagnosis in the *DSM-III*, DPD has been classified as a dissociative disorder along with Dissociative Identity Disorder (formerly Multiple Personality Disorder), Dissociative Amnestic Disorder, and Dissociative Fugue. The *DSM-IV and the DSM-IV-TR* have four criteria for a diagnosis of DPD (Appendix A). The *DSM-IV and DSM-IV-TR* criteria are identical, and for the purposes of this paper will be considered interchangeable. The first criterion provides a definition for depersonalization and

indicates that the individual must experience persistent or recurrent feelings of being detached from, and as if one is an outside observer of, one's mental processes or body. The second criterion states that throughout the experience of depersonalization, the individual must maintain intact reality testing in order to differentiate DPD from other psychotic disorders. As depersonalization is a common experience, the third criterion states that the experience must cause the individual significant distress or impairment in important areas of functioning. The final criterion is an exclusionary criterion that indicates that if the experience of depersonalization occurs exclusively during the course of another mental disorder, or is due to the direct physiological effects of a substance or general medication condition, a diagnosis of DPD should not be assigned. Further descriptions of depersonalization-associated features, comorbid conditions, and guidelines for differential diagnosis are provided in the text of the *DSM-IV-TR*.

ICD-10. The *International Classification of Diseases-10* (*ICD-10*; World Health Organization [WHO], 1992) classifies Depersonalization Disorder somewhat differently (Appendix B). In the *ICD-10*, the disorder is labeled "Depersonalization-Derealization syndrome" and includes symptoms of both depersonalization and derealization. The description in the *ICD-10* states that an individual's mental activity, body, and/or surroundings are perceived as unreal, remote, or automatized, although the individual maintains intact reality testing. The *ICD-10* indicates that an individual must meet criteria for depersonalization symptoms (feelings that one's own experiences and feelings are detached, distant, not one's own) and/or derealization symptoms (objects, people, and/or surroundings seem unreal, distant, artificial, colorless, lifeless). In addition, the individual must 1) accept that the experience is a subjective and spontaneous change, not imposed by outside forces or other people (i.e., insight)

and 2) possess a clear sensorium and an absence of toxic confusional states or epilepsy. Thus, in contrast to the *DSM-IV*, the *ICD-10* criteria offer significantly more information regarding DPD symptoms and features. However, the *ICD-10* does not specifically mention impairment, which might blur its boundary with depersonalization as a symptom. Also, rather than categorizing DPD as a dissociative disorder, it is categorized as a neurotic condition along with Dissociative Fugue and Dissociative Amnesia, reflecting the previous classification of dissociative disorders within the neuroses in the *DSM-II* (APA, 1968). Furthermore, the *ICD-10* indicates that when symptoms of depersonalization occur as part of another disorder, DPD should not be diagnosed. It also describes DPD as a disorder that is rare.

Prevalence of Symptoms of Depersonalization and DPD

Research has suggested that symptoms of depersonalization are fairly common, both within the general population and within psychiatric patients. In their study on the prevalence of depersonalization and derealization among 1,008 residents in rural North Carolina, Aderibigbe et al. (2001) estimated that approximately 20% of the general population experience short-lived episodes of depersonalization. These rates were somewhat higher than those reported previously by Ross et al. (1991), who found a prevalence rate of 11% in a general population study of Canadian residents. Simeon (2004) reported that approximately one-third of individuals exposed to traumatic situations experience symptoms of depersonalization. Researchers from the United Kingdom (Hunter, Baker, Phillips, Sierra, & David, 2005) found a one-month prevalence rate of depersonalization and derealization of between 1.2 and 1.7% in a UK sample.

Interestingly, some researchers have asserted that rates of depersonalization experiences among young adults are significantly higher than among older adults. An early study (Dixon,

1963) found a 46% one-year incidence of depersonalization experiences among college students. More recently, Pias (1991) estimated that nearly 70% of young adults experience brief episodes of depersonalization, and Jacobs and Bovasso (1992) found that approximately 75% of their sample of college students reported having experienced symptoms of depersonalization (particularly derealization) at least twice in the last year. Some researchers have attributed the higher rates of depersonalization among young adults to the possible effects of illicit drug use, as certain substances are known to produce episodes of depersonalization (Baker et al., 2003). Although earlier studies suggested gender differences in prevalence, with women more frequently reporting experiences of depersonalization (Roberts, 1960; Simeon et al., 1997), most current research suggests a lack of significant gender differences (Baker et al., 2003; Sierra & Berrios, 2001; Simeon, 2004).

Research also indicates that symptoms of depersonalization are very frequent among psychiatric patients. It has been estimated that nearly 80% of psychiatric inpatients experience severe symptoms of depersonalization, specifically in panic-related circumstances (Brauer et al., 1970; Hunter et al., 2004). This estimate would place depersonalization as the third most commonly experienced psychiatric symptom following anxiety and depression. Episodes of depersonalization are common in a number of mental disorders including mood, anxiety, psychotic, and other dissociative disorders (APA, 2004; Pias, 1991), although most of these would not meet criteria for a diagnosis of DPD.

Although symptoms of depersonalization appear to be quite common in both clinical and nonclinical populations, the diagnosis of DPD is historically considered ‘rare’ (Simeon, 2004). Indeed, the diagnosis is significantly less prevalent in the general population in comparison to rates of depersonalization symptoms, which may be transient experiences in

normal individuals or symptoms of other mental disorders. Yet, research suggests that prevalence rates for DPD may be comparable to or even greater than rates for schizophrenia and bipolar disorder (Simeon, 2004). Ross et al. (1991) suggested that DPD may be present in about 2.4% of the general population, which is significantly greater than the prevalence rate of .5-1.5% for schizophrenia (APA, 2000). Two urban UK samples found one month prevalence rates of DPD of 1.2-1.7% (Bebbington, Hurry, Tennant, Sturt, & Wing, 1981; Bebbington, Marsden, & Brewin, 1997). A diagnosis of DPD was assigned using the diagnostic criteria outlined in the *ICD-10*. More recently, Simeon and Abugel (2006) estimated a 1-2% prevalence of DPD in the general population. Among inpatient populations, research has found that up to 16% of patients meet *DSM-IV* criteria for the diagnosis (Hunter et al., 2005; Hunter et al., 2004).

Onset and Course

Overall, the onset of DPD tends to be early and the course is chronic. In fact, the mean age of onset for DPD is typically between 16 and 22 years of age, though onset may extend into the 30s and 40s (Baker et al., 2003; Simeon & Abugel, 2006). Onset is typically insidious, although it has also been associated with trauma and the use of substances (Simeon, 2004; Simeon, Guralnik, Schmeidler, Sirof & Knutelska, 2001). The course is reported to be episodic in approximately 1/3 of those diagnosed, with episodes lasting as little as a few hours and as much as a few months, depending upon exacerbating factors like comorbid depression and anxiety (Simeon, 2004). However, for most individuals, the course of the disorder is chronic, with little fluctuation in degree of intensity or severity of symptoms (Simeon et al., 1997; Simeon, 2004). The prognosis for DPD tends to be poor because the disorder is typically chronic and is frequently associated with other severe psychopathology (Simeon & Abugel,

2006). Although some psychotherapeutic interventions (i.e., Cognitive-Behavioral therapy) have been shown to be effective for some individuals with DPD (Hunter et al., 2005), these have primarily been conducted with individual cases and there is limited evidence for the extent to which they may generalize (Holmes et al., 2005).

Under-diagnosis of DPD

There appears to be a consensus among researchers of DPD that the disorder is likely under-diagnosed and/or misdiagnosed (Freidl, Draijer, & de Jonge, 2000; Lambert, Senior, Fewtrell, Phillips, & David, 2001; Lambert et al., 2000; Simeon, 2004; Simeon et al., 1997; Steinberg, Cicchetti, Buchanan, Hall, & Rounsaville, 1993). One reason is that DPD is under-researched (Simeon, 2004). Considering the fact that the diagnosis has been included in the diagnostic manual for nearly 30 years, there is a dearth of research on DPD, particularly in comparison to the wealth of research on other dissociative disorders, such as Dissociative Identity Disorder (Sprock & Herrmann, 2000). Indeed, a current search of the PsycINFO literature database revealed only 114 articles with DPD as the primary focus. In addition, clinicians may receive little training on the diagnosis of Dissociative Disorders (Dorahy, Lewis, & Mulholland, 2005), resulting in inadequate knowledge of the clinical features of these disorders. Other possible reasons for under-diagnosis include the high overlap and comorbidity of depersonalization symptoms and the diagnosis of DPD with other disorders, inadequacy of the DPD diagnostic criteria in the *DSM-IV*, and biases and decision-making strategies of clinicians that might contribute to misdiagnosis.

Depersonalization as a symptom of other disorders. Under-diagnosis of DPD could result from the fact that depersonalization experiences frequently occur within the context of other mental disorders and medical conditions. Researchers have found that episodes of

depersonalization occur in patients with temporal lobe epilepsy (Devinsky, Feldmann, Burrowes, & Bromfield, 1989), cerebral tumors (Lilja & Salford, 1997), cerebrovascular disease (Morioka et al., 1997), and traumatic brain injury (Blanco-Campal, Carton, & Delargy, 2003). In addition, episodes of depersonalization are commonly associated with Panic Disorder (Cox, Swinson, Endler & Norton, 1994) and Post-Traumatic Stress Disorder (PTSD) (Bremner et al., 1998; Davison, Kudler, Saunders, & Smith, 1990; Mayou, Bryant, & Ehlers, 2001). Episodes of depersonalization are also experienced with Major Depressive Disorder (MDD) (Noyes, Hoenk, Kuperman, & Slymen, 1977; Sedman & Reed, 1963; Strickland et al., 2002) and have been noted in eating disorders (Meyer & Waller, 1998), Obsessive-Compulsive Disorder (Lochner et al., 2004; Torch, 1978), and Schizophrenia (Noyes et al., 1977; Sedman & Kenna, 1963). Depersonalization symptoms may also occur with Schizotypal and Borderline Personality Disorders (Simeon et al., 1997). Additionally, depersonalization or derealization is listed in the criteria set for panic attack (which is used to diagnose Panic Disorder, Specific Phobia, and Social Phobia), Acute Stress Disorder, and Borderline Personality Disorder. This also contributes to diagnostic overlap and difficulty differentiating DPD from other disorders. Considering the frequency with which episodes of depersonalization are noted in other psychopathology, clinicians need to obtain very specific information regarding the onset and duration of depersonalization symptoms when determining whether or not to assign a diagnosis of DPD.

Comorbidity. The diagnosis of DPD is also comorbid with a variety of Axis I and Axis II disorders that may be diagnosed instead of DPD. Research has suggested that anxiety and mood disorders, in particular, are frequently seen in individuals with DPD (Baker et al., 2003; Simeon, 2004; Simeon & Abugel, 2006). Research has also suggested that individuals with

DPD frequently present with characterological features (primarily cluster B and C personality disorders) and PTSD (Pias, 1991; Simeon et al., 1997). In addition, some researchers have noted that symptoms of obsessionalism, depression, and hypochondriasis are commonly reported in individuals diagnosed with DPD (Torch, 1987). These symptom presentations often lead clinicians to diagnose anxiety or mood disorders, even when symptoms of depersonalization are prominent and a diagnosis of DPD is most appropriate (Simeon et al., 1997).

Simeon et al. (1997) examined 30 cases of DPD and found that the majority (53%) had experienced Major Depressive Disorder (MDD) and/or Social Phobia at some point in their lives. Nearly 40% had a history of Panic Disorder and/or Dysthymia, and nearly 20% had experienced Generalized Anxiety Disorder (GAD), Obsessive-Compulsive Disorder (OCD), and/or drug dependence. Simeon and her colleagues reported that 60% of their sample had Axis II diagnoses; 33% had personality disorders from multiple clusters, approximately 20% had cluster C personality disorders, and 10% had cluster B personality disorders. None of the individuals in their sample exhibited Cluster A personality disorders.

More recently, Baker et al. (2003) studied a sample of 204 individuals diagnosed with DPD using cutoff scores on the Dissociative Experiences Scale, Version II (DES) (Bernstein & Putnam, 1986), which is considered to be sensitive to the detection of DPD. Conducting a full psychiatric interview that included several assessment measurements (e.g., Present State Examination [PSE], Beck Anxiety Inventory [BAI], Beck Depression Inventory [BDI], and the DES), they found that approximately 62% of the sample met criteria for depression, 41% met criteria for an anxiety disorder, 16% met criteria for OCD, and 14% met criteria for agoraphobia. They also found that 8% met criteria for Bipolar Disorder, 7% for Schizophrenia,

7% for drug dependency, and, 5% met criteria for alcohol dependency. Overall, these results indicate that the clinical presentation of DPD is often confounded by the presence of comorbid diagnoses, suggesting that diagnosing DPD can be quite difficult.

Simeon, Knutelska, Nelson, and Guralnik (2003) conducted a review of 117 patients diagnosed with DPD using cutoff scores on the DES and the Structured Clinical Interview for Dissociative Disorders (SCID-D) (Steinberg et al., 1993). Approximately 73% of the sample had experienced a lifetime comorbid mood disorder, such as MDD or Dysthymic Disorder, and 64% had experienced a lifetime comorbid anxiety disorder. Only 13% of the sample had no lifetime history of either mood or anxiety disorders. Nearly 23% of the sample experienced current comorbid dysthymia. Approximately 10% were also diagnosed with MDD, 28% were diagnosed with Social Phobia, and 12% experienced comorbid Panic Disorder. Interestingly, no comorbid disorder appeared to have a significantly earlier onset than DPD, and both MDD and Panic Disorder were noted to have significantly later onset than DPD. Results also indicated that approximately 50% of the sample met criteria for a personality disorder. The most commonly observed personality disorders in the remaining sample were Avoidant (23%), Borderline (21%), and Obsessive-Compulsive (21%).

Primary and Secondary DPD. Although the *DSM-IV-TR* allows for the assignment of multiple diagnoses, it specifies that the diagnosis of DPD cannot be made if the depersonalization experience occurs exclusively during the course of another mental disorder. Some European clinicians, using the *ICD-10* for diagnostic criteria, differentiate between primary and secondary DPD and would diagnose the latter phenomenon as "secondary DPD." Primary DPD is conceptualized similarly to the *DSM-IV-TR* in that there is a period in which the diagnostic criteria were met for DPD without the co-occurrence of other psychopathology.

Lambert et al. (2001) conducted a study in the United Kingdom examining the differences between primary and secondary DPD. They administered a variety of self-report questionnaires to a sample of 35 patients with primary DPD, seven patients with secondary DPD, 13 non-depersonalized patients, and 28 healthy controls. They found that although depersonalized patients were easily differentiated from non-depersonalized patients and normal controls, primary and secondary DPD were indistinguishable from one another on scales measuring anxiety and depersonalization. However, when they compared the four cases of individuals with pure derealization to the pure depersonalization group and the mixed group (both derealization and depersonalization), they found significant differences in scores on the Fewtrell Depersonalization Scale (FDS) (Fewtrell, 2000). Individuals with pure derealization scored significantly higher than the pure depersonalization group on the FDS, and the mixed group scored the highest, indicating more severe levels of depersonalization. Overall, the findings suggest a spectrum of severity of the disorder, but that regardless of whether depersonalization is primary or occurs within the context of other psychopathology (i.e., secondary), the experience is similar. Obviously, a serious limitation in these findings is the small sample size for the secondary DPD group. Nevertheless, an implication of their findings is that the distinction between primary and secondary DPD may not be meaningful. Another implication relevant to the present research is that the *DSM-IV* criteria may be too narrow in the exclusion of cases of secondary DPD, contributing to the under-diagnosis of DPD in the United States.

Alternative conceptualizations of depersonalization and DPD. Some clinicians and researchers believe that the diagnostic criteria for DPD are incomplete or too vague, which could contribute to the under-diagnosis of DPD. Several researchers have suggested more

comprehensive definitions of DPD or identified multiple dimensions of depersonalization that are not adequately addressed in the current diagnostic criteria. For example, Torch (1987) offered the following criteria for DPD: 1) "a feeling of change throughout" involving estrangement from the self and/or a subjective change in one's perception of the environment; 2) a distinct, non-delusional, and ego-dystonic feeling of unreality; 3) the experience is considered unpleasant; and 4) emotional numbing (p. 134). Torch asserted that certain symptoms (specifically, emotional numbing) were essential for DPD and needed to be included in the diagnostic criteria.

Jacobs and Bovasso (1992) found empirical support for multiple dimensions of depersonalization among a sample of 368 college students. In their study, they constructed and administered a depersonalization scale consisting of 32 items representing symptoms commonly attributed to depersonalization. In addition, they used the Differential Personality Inventory (DPI) (Jackson & Messick, 1972) to assess pathological traits associated with depersonalization. Principle components analysis revealed the existence of five dimensions of depersonalization based on clusters of commonly occurring symptoms within the disorder. The first dimension was labeled *inauthenticity*, which is the loss of a sense of genuineness about one's behaviors. The second dimension, *derealization*, is a loss of familiarity with friends and one's environment. The third dimension consisted of symptoms of *body detachment*, which involves distorted and/or detached perceptions of one's body. The fourth dimension, *self-negation*, was described as reluctance to acknowledge involvement in certain situations or the experience of certain emotions or thoughts. The final dimension was *self-objectification*, which involves a generalized disorientation and the feeling that one's self is numb, dead, or inanimate.

Jacobs and Bovasso (1992) proposed that these clusters of symptoms provide a more complete description of depersonalization.

Although they did not specifically propose subtypes of DPD, Jacobs and Bovasso (1996) hypothesized that individuals may experience different levels of the depersonalization dimensions. They administered the five depersonalization scales developed in their 1992 study to a sample of 232 university students and found evidence for six different groups: 1) Non-depersonalized, 2) Fleetingly Depersonalized, 3) Derealized (derealization), 4) Self-negating (derealization and self-negation), 5) Body-detached (derealization and body detachment), and 6) Profoundly Depersonalized (all types). These groups differed significantly on a number of scales on the DPI. Only the Profoundly Depersonalized group experienced episodes of inauthenticity and self-objectification. This group also struggled with depression and evidenced disorganization and inefficiency, implicating a potentially impaired ability to function. The Body-detached group experienced their bodies as unfamiliar and tended to be depressed as well. The Self-negating group experienced alienation from emotions, thoughts, and situations that they were capable of recognizing but were reluctant to acknowledge because the experiences were ego-dystonic. Jacobs and Bovasso (1996) also found that the Derealized, Fleetingly Depersonalized, and Self-negating groups displayed mild to moderate levels of pathology, and hypothesized that these individuals may use depersonalization to defend against threatening stimuli. The Body-detached and Profoundly Depersonalized groups displayed more severe levels of pathology. The study was limited in the extent to which the results generalize to a clinical sample of patients with DPD because the sample included only university students and the researchers did not determine whether participants met criteria for a diagnosis.

In their literature review examining the historical, epidemiological, and phenomenological stability of depersonalization, Sierra and Berrios (2001) found that the presence of visual unreality, altered body experience, emotional numbing, and feelings of loss of agency (automatization feelings) were the most commonly experienced symptoms of DPD, yet are not included in the *DSM-IV* criteria. Visual unreality may be characterized by statements like, "Everything just seems to be a painted picture, deathly quiet" (Serra & Berrios, 2001, p. 631). In data gathered from a variety of sources over the last 100 years, they found that client-reported visual unreality was most frequently associated with a DPD diagnosis, followed by auditory, tactile, gustatory, and olfactory unreality. Altered body experiences may be described as subjective feelings of changes in the body including distorted size of specific body parts, feelings of being weightless, or feeling as though certain body parts do not belong to oneself. Emotional numbing is characterized by an absence or reduction in an individual's ability to experience emotion, although the individual remains capable of physically expressing emotion (e.g., tearfulness without the experience of sadness). Loss of feelings of agency may be described as the feeling that an individual is not in control of his or her movements or thoughts.

In his review of the clinical features associated with DPD, Blanco-Campal (2006) proposed that the symptoms of the disorder can be divided into five domains: depersonalization, derealization, desomatization, de-affectualization, and de-ideation. Depersonalization is viewed as a loss of feelings of agency (i.e., loss of control over movement or thoughts). Derealization is described as changes in visual, auditory, tactile, gustatory, and olfactory experiences that result in an absence of emotional responding (i.e., experiences are no longer accompanied by feelings of pleasure or dislike). Desomatization is described as changes

in body experience, such that parts of the body feel weightless or 'as if' they do not belong to the self. De-affectualization is defined as emotional numbing and is described as an absence or reduction in the experience of emotions/feelings. De-ideation includes feelings of thought emptiness (i.e., mind is empty), distortions in experience of time (i.e., inability to conceive past/future or subjective change in perception of time), changes in subjective experiencing of memory (i.e., doubts regarding memories as real events or part of a vivid dream), and heightened self-observation (i.e., increased self-awareness of feelings of disembodied observer).

Overall, the literature suggests that depersonalization may be a heterogenous construct with multiple dimensions and/or symptoms. Recent research supports the idea that depersonalization, as a distinct psychological phenomenon, consists of an array of symptoms that vary in the extent and severity to which they are present in depersonalized individuals. The *DSM-IV-TR*, with its single descriptive criterion for depersonalization, may present a limited and potentially insufficient set of diagnostic criteria for DPD. Indeed, clinicians that restrict themselves to this criteria set may be at risk for under-diagnosing the disorder. Specific symptoms and/or dimensions identified in the literature may be particularly helpful in identifying individuals with Depersonalization Disorder.

Diagnostic Decision-Making

In addition to the inadequacy of the current diagnostic criteria for DPD, limitations and biases in clinicians' judgment may also contribute to the under-diagnosis of DPD. Such biases are frequently related to the use of cognitive heuristics (Hall, 2002; Tversky & Kahneman, 1974) and prototypes in clinical decision-making (Garb, 2005). Heuristics have been described as "...a rule or guideline that is easily applied to make complex tasks more simple" (Detmer,

Fryback, & Gassner, 1978, p. 682). As such, heuristics may be considered decision-making short-cuts that, although expeditious, can lead to decreased decisional accuracy (Hall, 2002). Indeed, a number of researchers have shown that many clinicians fail to adhere to diagnostic criteria (Blashfield & Herkov, 1996; Morey & Ochoa, 1989), preferring instead to rely upon idiosyncratic methods of diagnostic conceptualization (Whaley & Geller, 2007).

Cognitive heuristics and biases. The effects of cognitive heuristics on diagnostic decision-making have been examined in a number of studies. Tversky and Kahneman (1973) were among the first to empirically examine decision-making processes and the use of two specific types of cognitive heuristics: representativeness and availability heuristics. The representativeness heuristic refers to the act of estimating the probability of an event by judging its similarity to a specific category. The representativeness heuristic may be apparent in clinical decision-making when clinicians assign a diagnosis based upon the degree to which the patient's presentation fits that of a clinician's pre-existing schema for a given disorder. The representativeness heuristic may be in effect when clinicians assign an incorrect diagnosis due to the fact that some of the symptoms of DPD are similar to other more commonly occurring disorders (e.g., anxiety disorders).

Tversky and Kahneman (1973) described the availability heuristic as the act of judging the probability of an event based on the ease with which relevant instances are recalled. Thus, clinicians may tend to overestimate the frequency of vivid, or easily recalled events and underestimate the likelihood of events that are ordinary, or difficult to recall. Elstein and Schwarz (2002) proposed that availability heuristics may contribute to the overemphasis of rare conditions, as rare cases may be more memorable. Alternatively, rare diagnoses may be missed because the category and its criteria may not be easily remembered, or the clinician has

received little training or encountered few instances of the diagnosis. For example, Dorahy et al. (2005) presented three vignettes representing Dissociative Identity Disorder (DID) to clinical psychologists and psychiatrists in Northern Ireland and asked them to assign probable and most likely diagnoses. Although the majority of clinicians failed to diagnose DID for even the most clear case example, the number of clinicians who entertained the diagnosis increased with the number of DID symptoms included in the case. The authors concluded that clinicians' lack of training and knowledge of dissociative disorders contributed to their failure to consider DID as a diagnosis. Given the dearth of literature on DPD relative to DID (i.e., Sprock & Herrmann, 2000) it seems likely that clinicians may fail to diagnose DPD because the disorder and its diagnostic criteria are not well known and may be difficult to recall, whereas other disorders, such as psychotic and mood disorders, may come to mind with more ease.

Prototype approach to diagnosis. A significant body of research has examined a prototype approach to diagnostic decision-making (as cited in Garb, 2005). Prototypes are described as a "clinician's conception of a hypothetical client who best exemplifies a particular disorder" (Garb, 2005, p. 71). Thus, a prototype approach can be viewed as an example of the representative heuristic (Whaley & Geller, 2007). Prototype models are active when individuals attempt to categorize new objects by assessing the degree to which that object shares common features with an existing category. In clinical decision-making, diagnoses are assigned based on the degree to which that patient's symptoms are similar to the prototype for a diagnosis.

A number of researchers have proposed that a prototype approach to diagnosis can be advantageous, as clinicians using prototype approaches for 'typical' case presentations tend to have more confidence and greater accuracy in their diagnoses (Kim & Ahn, 2002; Russell,

1991; Widiger, 1982). For example, Blashfield and Herkov (1996) suggested that use of a prototype approach might be appropriate with Borderline Personality Disorder, as clinicians tend to differentially weight certain criteria because they are more typical of the disorder. Indeed, a prototype approach to diagnosis can expedite the diagnostic decision-making process and allow for greater diagnostic flexibility (Kim & Ahn, 2002). A prototype matching approach to diagnosis has also been shown to improve differential diagnosis and reduce comorbidity (Westen & Shedler, 2000; Westen, Shedler, & Bradley, 2006).

Other researchers have proposed that a prototype approach may lead to misdiagnosis. This may be particularly true in cases when clinicians are unfamiliar with the diagnostic criteria for a given disorder, or if there is heterogeneity in the presentation, as with DPD. Garb (2005) suggested that clinicians' prototypes may be dissimilar, leading to low interrater reliability and decreased diagnostic accuracy. Additionally, Whaley and Geller (2007) indicated that prototype approaches are sometimes akin to "fuzzy" comparisons, resulting in diagnostic inaccuracy for disorders with more complicated presentations, like DPD. As such, clinicians may be more likely to misdiagnose or under-diagnose DPD if they utilize a prototype approach to diagnosis.

By comparison, diagnosis using a structured approach, such as a structured interview or *DSM-IV* diagnostic criteria, is considered more exact (Garb, 2005; Morey & Ochoa, 1989; Wood, Garb, Lillienfeld, & Nezworski, 2002). Compared to these structured approaches, clinicians are prone to under-diagnose, over-diagnose, or misdiagnose a range of disorders when relying upon clinical judgment (Whaley & Geller, 2007). In two studies examining diagnostic bias, the diagnosis assigned by clinicians was compared to a criterion-based diagnosis, which was based on ratings of the patients' symptoms (Blashfield & Herkov, 1996;

Morey & Ochoa, 1989). Both studies found considerable disparity between the assigned diagnosis and the criterion diagnosis, with both over-diagnosis (i.e., assigning a diagnosis when the symptom ratings suggested the patient did not meet criteria) and under-diagnosis (i.e., failing to assign a diagnosis when symptom ratings indicated that the patient met criteria for the diagnosis). Although Morey and Ochoa (1989) concluded that when clinicians failed to adhere to diagnostic criteria it resulted in misdiagnosis, Blashfield and Herkov (1996) suggested that the results reflected two different styles of decision-making: a prototype approach and the *DSM* approach.

More recently, Crosby and Sprock (2004) attempted to compare these two approaches by manipulating the order of diagnosis and symptom ratings for cases representing cluster B personality disorders. Half of their participants assigned a diagnosis first (i.e., a simulated prototype approach) and then rated the patients' symptoms, whereas the other participants were asked to rate the patients' symptoms using *DSM-IV* criteria first and then assign a diagnosis (i.e., a simulated *DSM-IV* approach). Like Morey and Ochoa (1989) and Blashfield and Herkov (1996), they found a fair degree of disagreement between the assigned diagnosis and the criterion-based diagnosis, with almost half of the participants showing under-diagnostic or over-diagnostic bias. In addition, they found a significant effect of order of the diagnostic and symptom ratings. More participants in the simulated prototype approach over-diagnosed compared to their criterion diagnosis (i.e., assigned a diagnosis even though their symptom ratings suggested the case did not meet criteria) and those in the simulated *DSM-IV* approach under-diagnosed relative to their symptom ratings (i.e., did not assign a diagnosis even though their symptom ratings suggested the case met criteria). Crosby and Sprock (2004) attributed the

under-diagnosis to participants considering additional diagnoses since the cases were subthreshold for the diagnoses of interest and included symptoms of other disorders.

Statement of Problem

Based on the review of the literature, Depersonalization Disorder is considered to be under-researched and under-diagnosed. Researchers have offered numerous reasons for under-diagnosis of DPD, including confusion over the distinction between depersonalization symptoms and the diagnosis of DPD, high overlap and comorbidity of DPD with other disorders, inadequate diagnostic criteria in the *DSM-IV*, and biases in clinical decision-making. At present, however, no research has examined clinical decision-making processes in the diagnosis of DPD. The present study examined whether clinicians would under-diagnose DPD when presented with one of two representative case vignettes of an individual with DPD. It was expected that the majority of clinicians would not identify and diagnose DPD because DPD has received little attention in the literature or in clinical training. As a result, its diagnostic criteria may be difficult to recall, and other disorders that are more vivid (e.g., psychotic and mood disorders) or more common (e.g., mood and anxiety disorders), and overlap with or are comorbid with DPD, may come to mind with more ease (i.e., availability heuristic). In addition, clinicians' reliance on prototypes may result in under-diagnosis of DPD compared to more structured approaches of evaluating symptoms. As a result, it was expected that clinicians who were asked to assign a diagnosis before completing symptom ratings (i.e., a simulated prototype approach) would be more likely to under-diagnose DPD than clinicians who were asked to first complete symptom ratings and then assign a diagnosis (i.e., a simulated *DSM-IV* approach). Similarly, ratings of the representativeness of a diagnosis of DPD were expected to

be higher for those who rated the symptoms before assigning a diagnosis because of their more complete evaluation of the patient's symptoms.

Finally, the current diagnostic criteria for DPD may be incomplete or too vague, further contributing to the under-diagnosis of DPD. The *DSM-IV* DPD criteria consist of a single symptom of depersonalization (i.e., persistent or recurrent experiences of feeling detached…) plus exclusionary criteria (i.e., reality testing is intact; not related to another mental disorder) and the general criteria for a mental disorder (i.e., causes distress or impairment). Several researchers have offered more comprehensive definitions of DPD or have identified multiple dimensions of depersonalization that are not adequately addressed in the current criteria. Thus, the current study also sought to determine whether endorsement of the *DSM-IV* symptom of depersonalization is associated with a diagnosis of DPD. In addition, the study examined whether the symptoms and dimensions of DPD and depersonalization proposed by researchers have increased predictive value for a diagnosis of DPD over the current *DSM-IV* criteria.

Statement of Hypotheses

Taking the review of the literature into consideration, the hypotheses of this study were:

$H_0$1. Given a representative case of DPD, the majority of clinicians will fail to diagnose DPD even though the case had been presented as a good example of DPD within the literature.

$H_0$2. Clinicians will be more likely to diagnose DPD when asked to complete the symptom ratings first and then choose a diagnosis (i.e., a simulated *DSM-IV* approach) versus choosing a diagnosis before providing symptom ratings (i.e., a simulated prototype approach).

$H_0$3. Participants asked to use the simulated *DSM-IV* approach (rate symptoms first) will also assign higher DPD representativeness ratings than those using the simulated prototype approach (assign a diagnosis first).

$H_0$4. Clinicians will under-diagnose DPD relative to their own symptom ratings (i.e., criterion-based diagnosis), such that clinicians will fail to diagnose DPD despite having rated the *DSM-IV* criterion for depersonalization as present in the case.

$H_0$5. Clinicians in the simulated prototype approach will more frequently under-diagnose DPD relative to their rating for the DSM-IV criterion for depersonalization than clinicians in the simulated *DSM-IV* approach.

$H_0$6. The symptoms and dimensions of DPD and depersonalization proposed by researchers will have better predictive value for a diagnosis of DPD and DPD representativeness ratings than the current *DSM-IV* criteria.

CHAPTER 2

Methodology

Design of the study

The study was experimental in nature, involving the direct manipulation of the order in which participants were asked to assign a diagnosis and rate the symptoms for the case, thereby comparing simulated *DSM-IV* and simulated prototype approaches to diagnosis. The independent variable was the order in which clinicians were asked to assign a diagnosis and rate the symptoms in the case. The primary dependent variables were the diagnosis chosen by clinicians (clinical diagnosis) and the DPD representativeness rating. Additional dependent variables included the ratings for DPD symptoms and the criterion-based diagnosis. The criterion-based diagnosis was determined by the symptom ratings for the *DSM-IV* criteria for DPD (i.e., whether the *DSM-IV* depersonalization criterion was rated as present in the case). Two representative cases of DPD were used to help establish the generalizeability of the results.

Power analysis

In order to detect a medium effect size with desired power of .80 and alpha of .05, 66 participants were needed for each of the four groups (Cohen, 1992), which varied by vignette and the order in which they were asked to assign diagnostic and symptom ratings. Thus, the total number of needed participants was estimated to be 264. Although no study has directly examined the effect of style of decision-making on diagnosis for DPD, similar studies

examining style of decision-making on personality disorders found a medium-sized main effect (Blashfield & Herkov, 1996).

Participants

The participants were recruited from a national sample of licensed, doctoral-level clinical and counseling psychologists who are members of the American Psychological Association. These psychologists were randomly selected and recruited using their email addresses, which were accessible through the APA's web-directory. The sample was also stratified according to geographic region such that participants were selected to represent the percentage of APA members within each state. A total of 2,640 invitational e-mails were sent to APA-registered clinical and counseling psychologists (660 per group) and 20% of the emails were returned as 'undeliverable' due to no longer functional email addresses.

A total of 332 psychologists responded to the survey (12.6% response rate), with an approximately equal number in each of the groups (n = 84, n = 74, n = 84, n = 90). However, 99 participants were eliminated from the final sample due to incomplete data. In addition, the data were examined prior to analysis to determine if there were outliers. This examination revealed two participants who were more than three standard deviations above the mean for years of clinical experience; these participants were removed from the sample. A number of the participants did not finish the demographic and professional information questions but were retained in the study if they had responded to the diagnostic and symptom ratings or assigned a diagnosis (n = 20). In addition, one participant who assigned a diagnosis but did not provide diagnostic ratings, four participants who provided diagnostic ratings but did not assign a diagnosis, and 15 individuals who provided diagnoses and diagnostic ratings but not symptom ratings were retained in the study.

The final sample consisted of 231 psychologists, 114 who received Vignette 1 and 117 who received Vignette 2, 110 assigned to the simulated *DSM-IV* condition and 121 assigned to the simulated prototype condition. All participants were doctoral-level psychologists who were licensed to independently diagnose and treat mental disorders. Demographic characteristics for participants who completed the Demographic and Professional Information Questionnaire (n = 211) are presented in Table 1 and Table 2 (based upon vignette) and Table 3 and Table 4 (according to diagnostic condition).

Table 1

Characteristics of Participants for the Two Vignettes: Means and Standard Deviations (n = 211)[a]

	Vignette 1[b] (n = 102)	Vignette 2[c] (n = 109)	Total Participants (n = 211)
Variable	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
Age	52.37 (10.10)	52.98 (10.39)	52.68 (10.22)
Years of Experience	18.62 (10.05)	18.45 (10.27)	18.53 (10.14)
Percent Time Clinical	58.55 (36.33)	59.77 (37.81)	59.18 (37.03)
Familiarity with *DMS-IV*[d]	5.43 (1.16)	5.62 (1.19)	5.53 (1.17)
Frequency of *DSM-IV* use[d]	4.89 (1.77)	5.06 (1.86)	4.98 (1.82)
Familiarity with DPD[d]	3.12 (1.71)	3.27 (1.59)	3.20 (1.64)
Frequency treating DPD[d]	1.61 (0.97)	1.81 (1.22)	1.71 (1.11)

[a]Demographic data reported for the participants who completed the *Demographic and Professional Information Questionnaire* (n = 211)
[b]Vignette 1: 20-year old male college student (Appendix D)
[c]Vignette 2: 29-year old female (Appendix E)
[d]Ratings using a scale of 1 (Low) to 7 (High)

Table 2

Characteristics of Participants for the Two Vignettes: Frequency and Percent

	Vignette 1[b] (*n* = 102)	Vignette 2[c] (*n* = 109)	Total Participants (*n* = 211)
Variable	*f* (%)	*f* (%)	*f* (%)
Sex			
Male	43 (42.2%)	50 (45.9%)	93 (44.1%)
Female	59 (57.8%)	59 (54.1%)	118 (55.9%)
Race/Ethnicity			
White/Caucasian	87 (85.3%)	93 (85.3%)	180 (85.3%)
Black/African American	1 (1.0%)	5 (4.6%)	6 (2.8%)
Asian/Pacific Islander	1 (1.0%)	0 (0.0%)	1 (0.5%)
Hispanic/Latino	4 (3.9%)	3 (2.8%)	7 (3.3%)
Other	9 (8.8%)	8 (7.3%)	17 (8.1%)
Degree			
Ph.D.	82 (80.4%)	89 (81.7%)	171 (81.0%)
Psy.D.	20 (19.6%)	20 (18.3%)	40 (19.0%)
Theoretical Orientation			
Integrative/Eclectic	43 (37.7%)	37 (31.6%)	80 (37.9%)
Cognitive-Behavioral	27 (23.7%)	34 (29.1%)	61 (28.9%)
Psychodynamic	21 (18.4%)	28 (23.9%)	49 (23.2%)
Other	11 (9.6%)	9 (7.7%)	20 (9.5%)
Not reported	0 (0.0%)	1 (0.9%)	1 (0.5%)

Table 3

Characteristics of Participants for the Two Diagnostic Conditions: Means and Standard Deviations (n = 211)[a]

	DSM-IV Condition (*n* – 108)	Prototype Condition (*n* = 103)
Variable	*M* (*SD*)	*M* (*SD*)
Age	51.87 (10.26)	53.54 (10.17)
Years of Experience	16.91 (9.56)	20.23 (10.50)
Percent Time Clinical	58.13 (37.27)	60.27 (36.92)
Familiarity with *DSM-IV*[b]	5.50 (1.22)	5.56 (1.13)
Frequency of *DSM-IV* use[b]	4.96 (1.83)	5.00 (1.82)
Familiarity with DPD[b]	3.10 (1.74)	3.30 (1.53)
Frequency treating DPD[b]	1.60 (0.99)	1.83 (1.23)

[a] Demographic data is reported for the participants who completed the Demographic and Professional Information Questionnaire (*n* = 211).
[b]Ratings using a scale of 1 (Low) to 7 (High).

Table 4

Characteristics of Participants for the Two Diagnostic Conditions: Frequency and Percent

	DSM-IV Condition (*n* – 108)	Prototype Condition (*n* = 103)
Variable	*f* (%)	*f* (%)
Sex		
Male	48 (44.9%)	45 (45.9%)
Female	59 (55.1%)	59 (56.7%)

Table 4 (continued)

	DSM-IV Condition (*n* – 108)	Prototype Condition (*n* = 103)
Variable	*f* (%)	*f* (%)
Race/Ethnicity		
White/Caucasian	92 (86.0%)	88 (84.6%)
Black/African American	6 (5.6%)	0 (0.0%)
Asian/Pacific Islander	0 (0.0%)	1 (1.0%)
Hispanic/Latino	2 (1.9%)	5 (4.8%)
Other	7 (6.5%)	10 (9.6%)
Degree		
Ph.D.	85.00 (79.4%)	86 (84.6%)
Psy.D.	22 (20.6%)	18 (17.3%)
Theoretical Orientation		
Cognitive-Behavioral	30 (27.8%)	31 (30.1%)
Psychodynamic	21 (19.4%)	28 (27.2%)
Integrative/Eclectic	51 (47.2%	29 (28.2%)
Other	6 (5.6%)	14 (13.6%)
Not reported	0 (0.0%)	1 (1.0%)

Participants had an average of nearly 19 years of clinical experience, rated themselves as quite familiar with the *DSM-IV,* and reported using it frequently in their clinical work. Their average ratings suggested moderate familiarity with DPD, but low frequency of treating individuals with DPD. In addition, few (25%) reported that they commonly encountered dissociative disorders in their clinical practice. More than half of the sample was female, and the majority was Caucasian and held a Ph.D. degree. The most frequently identified theoretical orientation was Integrative/Eclectic. In addition, the most frequent employment setting was private practice (48%), and on average participants reported spending most of their time working in an outpatient setting (M = 83.41%, SD = 33.52).

A series of chi-square analyses and one-way analysis of variance (ANOVA) were used to compare demographic and professional characteristics of participants who received Vignette 1 and those who received Vignette 2, and between participants assigned to the simulated *DSM-IV* versus the simulated prototype conditions. No statistically significant differences were found for gender, theoretical orientation, frequency of use and familiarity with the *DSM-IV,* or familiarity with and frequency of treating DPD. A statistically significant difference was observed between participants in the diagnostic conditions based upon years of clinical experience, F (1, 203) = 5.60, p = .019. Participants in the simulated *DSM-IV* condition (M = 16.91, SD = 9.56) had significantly less clinical experience than those within the simulated prototype condition (M = 20.23, SD = 10.50). The data were also examined with regard to the relationship between years of clinical experience and the primary dependent variables (i.e., DPD diagnosis, DPD diagnostic representativeness ratings). For the purpose of these analyses, years experience was categorized into four groups (i.e., less than 10 years, 10-19 years, 20-29 years, 30 or more years). Results of chi-square analyses (DPD diagnosis) and ANOVA (DPD

diagnostic representativeness ratings) indicated no significant effects of years experience on the dependent variables. Therefore, years experience was not used as a covariate in the primary analyses. Further examination of the relationship between participant variables and the dependent variables is presented at the end of the Results section.

Materials

The entire study was conducted on the Internet using the Qualtrics program (a suite of integrated software programs designed for online surveys). The survey consisted of the introduction (Appendix C), which explains the study and participants' rights, one of two vignettes (Appendix D and E), the Diagnostic and Symptom Rating Scale (Appendix F), and the Demographic and Professional Information Questionnaire (Appendix G).

Vignettes. Participants received one of two vignettes that met *DSM-IV* criteria for DPD. The vignettes were chosen from examples of DPD found in the literature. The first vignette (Vignette 1, Appendix D) was taken from the *DSM-IV Casebook* (APA, 1994) and described the case of a 20-year-old male college student who feared he was going insane after experiencing increasingly frequent episodes of feeling 'outside' himself. The second vignette (Vignette 2, Appendix E) was taken from a book that included case studies of individuals with DPD (Baker, Hunter, Lawrence, & David, 2007). Vignette 2 described the case of a woman who began experiencing symptoms of depersonalization in her late 20s and reported changes in visual experiences, feeling as though she was an 'observer on the outside and looking in,' and feeling detached from herself. The DPD vignettes were selected to present a variety of symptoms and presentations that are characteristic of DPD and were considered good examples of the disorder.

Measures

Diagnostic and symptom rating scales. After reading the vignette, participants completed the Diagnostic and Symptom Rating Scale, which asked them to provide symptom ratings, diagnostic representativeness ratings, and a diagnosis. The symptom ratings consisted of symptoms of DPD taken from the *DSM-IV*, *ICD-10*, and from the literature, as well as the dimensions and symptoms of depersonalization and DPD (i.e., Blanco-Campal, 2006; Jacobs & Bovasso, 1992, 1996; Sierra & Berrios, 2001; Torch, 1987). Additionally, the rating scale included relevant *DSM-IV* criteria from selected anxiety (Acute Stress Disorder, PTSD, Social Phobia, Specific Phobia, Panic Disorder, Obsessive-Compulsive Disorder), mood (Major Depressive Disorder, Dysthymic Disorder), psychotic (Schizophrenia, Schizoaffective Disorder, Psychotic Disorder NOS), and personality disorders (Schizotypal, Schizoid, Borderline, and Avoidant) that overlap and are comorbid with DPD (i.e., Pias, 1991; Simeon et al., 1997) and are relevant to the symptomology in the cases. Participants were asked to rate the presence of the symptoms in the vignette using a Likert-type scale ranging from 1 (definitely absent) to 5 (definitely present). The symptom ratings were used for several purposes including the experimental manipulation of diagnostic approach (i.e., symptoms rated before or after assigning a diagnosis) and to obtain mean ratings for the *DSM-IV* and *ICD-10* DPD criteria and for the proposed sets of symptoms and dimensions of DPD and depersonalization. In addition, the symptom rating for the *DSM-IV* depersonalization criterion was used to determine participants' criterion-based diagnoses. A criterion-based diagnosis of DPD was determined by whether a participant endorsed as present the *DSM-IV* DPD diagnostic criterion for depersonalization. A rating of 4 or higher was designated as an indication that the symptom was rated as present.

Participants were also instructed to select the most representative diagnosis from a list of disorders including DPD and Dissociative Disorder NOS, as well as relevant mood, anxiety, psychotic, and personality disorders (i.e., the clinical diagnosis). Clinicians were then asked to rate the representativeness of a series of *DSM-IV* diagnoses from the same list of disorders. Representativeness was rated using a Likert-type scale ranging from 1 (not at all representative) to 7 (highly representative).

There were four versions of the Questionnaire, which varied by vignette and by condition. One version presented Vignette 1 and required clinicians to first assign a diagnosis, complete the diagnostic representativeness ratings, and finally complete the symptom rating scale (simulated prototype approach). A second version also included Vignette 1, but required clinicians to first complete the symptom rating scale, then complete the diagnostic representativeness ratings, and finally assign a diagnosis (simulated *DSM-IV* approach). Versions three and four of the questionnaire again varied by condition (simulated prototype versus *DSM-IV* approach), but presented Vignette 2.

Demographic and professional information questionnaire. Demographic information was requested including age, ethnicity, and gender. Questions about professional experience and training included type of degree (i.e., Ph.D., Psy.D., Ed.D.), year in which the participant received the doctoral degree, years of clinical experience, theoretical orientation, work setting, and percentage of time spent in various clinically-related activities. Participants were also asked to provide information regarding their patient demographics, types of disorders they commonly encounter, frequency of use and familiarity with the *DSM-IV*, and familiarity with DPD and experience treating individuals with DPD.

Piloting. In order to determine potential procedural flaws as well as completion time, the study was pilot-tested using a small group of doctoral students from Indiana State University that were trained in psychopathology.

Procedure

A national sample of doctoral level psychologists was randomly selected and recruited from the American Psychological Association's membership database. Selected clinicians were sent an invitational e-mail asking them to participate in a study on diagnostic decision-making. Interested clinicians were asked to follow a link to the website where they could access the study. Participants were randomly assigned to one of the four versions of the questionnaire (varying by vignette and condition).

When participants clicked on the link for the survey, they were taken to the introduction page. This page informed them that all reasonable precautions had been taken to preserve their anonymity, that they had the right to withdraw from the study at any time, and that submission of their responses on the web page constituted their consent to participate. They were asked to use their clinical judgment and experience and to refrain from referring to the *DSM-IV* or other materials. If they agreed, participants were directed to click on the button to 'proceed with the study.' They then received one of the case vignettes and were asked to read and complete the Diagnostic and Symptom Rating Scale. Having completed the case, participants were then presented with the Demographic and Professional Information Questionnaire. At the end of the study, participants were asked to click on the 'submit' button and received a message thanking them for their participation. The Qualtrics program automatically entered participants' responses into a database that was copied into an SPSS file. As an incentive, participants were offered the opportunity to enter a drawing for two $50 gift certificates.

CHAPTER 3

Results

Statistical analyses were performed using SPSS-16. The alpha level for all statistical analyses was set at .05. Additionally, assumptions for each statistical test were checked. Results were analyzed across vignettes and for each vignette separately. Preliminary analyses identified missing data and outliers. This involved visually inspecting the data in order to determine participants who were ineligible for further analysis due to excessive amounts of missing data (greater than 10%) or missing data on multiple key variables (e.g., failure to assign a diagnosis and to complete the symptom rating scale). The data were also examined for outliers by reviewing relevant scatterplots and tables of all data points.

Descriptive statistics were obtained for all dependent variables. The primary analyses addressed each of the proposed hypotheses. Results are presented according to the dependent variables and the hypotheses. The final set of analyses assessed the extent to which demographic and professional variables (gender, years experience, theoretical orientation, familiarity with the *DSM-IV* and with DPD) were related to the primary variables of interest.

Diagnoses

The frequency and percent of assigned diagnoses were examined in order to determine how often DPD was chosen as the most representative diagnosis for Vignettes 1 and 2 (Table 5). Diagnostic agreement (*kappa*) is also presented. For both vignettes, the most frequently assigned diagnosis was DPD, followed by Dissociative Disorder NOS (DD NOS). Diagnostic

agreement was weak. Although DPD was the most frequently diagnosed disorder for both vignettes, less than half of participants diagnosed DPD, supporting the primary hypothesis that the majority of clinicians would fail to diagnose DPD. A chi-square analysis revealed that there was not a significant difference in DPD diagnoses assigned to Vignette 1 versus Vignette 2, x^2 (1, N = 227) = .24, *ns*.

Table 5

Assigned Diagnoses by Vignette: Frequency and Percent (N = 231)

	Vignette 1 (n = 114)	Vignette 2 (n = 117)	Across Vignettes (N = 231)
Diagnoses	*f* (%)	*f* (%)	*f* (%)
Depersonalization Disorder	49 (43.0%)	55 (47.0%)	104 (45.0%)
Dissociative Disorder NOS	25 (21.9%)	31 (26.5%)	56 (24.2%)
Acute Stress Disorder	6 (5.3%)	4 (3.4%)	10 (4.3%)
PTSD	3 (2.6%)	7 (6.0%)	10 (4.3%)
Panic Disorder	8 (7.0%)	0 (0.0%)	8 (3.5%)
Generalized Anxiety Disorder	5 (4.4%)	3 (2.6%)	8 (3.5%)
Psychotic Disorder NOS	5 (4.4%)	3 (2.6%)	8 (3.5%)
Schizoaffective Disorder	1 (0.9%)	5 (4.3%)	6 (2.6%)
Schizophrenia	3 (2.6%)	2 (1.7%)	5 (2.2%)
Major Depressive Disorder	0 (0.0%)	4 (4.6%)	4 (1.7%)
Somatization Disorder	4 (3.5%)	0 (0.0%)	4 (1.7%)
Other[a]	2 (1.8%)	2 (1.7%)	4 (1.7%)
No Diagnosis	3 (2.6%)	1 (0.9%)	4 (1.7%)

[a]Other: Diagnoses assigned by less than three participants in either group: Dysthymic Disorder, Mood Disorder NOS, Obsessive-Compulsive Disorder

Table 6

Assigned Diagnoses by Diagnostic Condition: Frequency and Percent (N = 231)

	DMS-IV condition (*n* = 110)	Prototype condition (*n* = 121)
Diagnoses	*f* (%)	*f* (%)
Depersonalization Disorder	55 (50.0%)	49 (40.5%)
Dissociative Disorder NOS	27 (24.5%)	29 (24.0%)
Generalized Anxiety Disorder	0 (0.0%)	8 (6.6%)
Acute Stress Disorder	5 (4.5%)	5 (4.1%)
Panic Disorder	5 (4.5%)	3 (2.5%)
PTSD	4 (3.6%)	6 (5.0%)
Psychotic Disorder NOS	4 (3.6%)	4 (3.3%)
Schizoaffective Disorder	4 (3.6%)	2 (1.7%)
Schizophrenia	2 (1.8%)	3 (2.5%)
Major Depressive Disorder	0 (0.0%)	4 (3.3%)
Other[a]	4 (3.6%)	4 (3.3%)
No Diagnosis	0 (0.0%)	4 (3.3%)
kappa	.48	.38

[a] Other: Diagnoses assigned by less than three participants in either group: Somatization Disorder, Dysthymic Disorder, Mood Disorder NOS, Obsessive-Compulsive Disorder

Table 6 presents the assigned diagnoses based on diagnostic condition (simulated *DSM-IV* versus simulated prototype approach). Although a higher percentage of participants diagnosed DPD in the simulated *DSM-IV* condition, a chi-square analysis revealed that the difference was not significant, $x^2(1, N = 227) = 1.51$, *ns*. Chi-square analyses comparing DPD diagnoses for the diagnostic conditions within each vignette also were not significant. As such,

the second hypothesis was not supported. Clinicians were not more likely to diagnose DPD when asked to complete the symptom rating scale first (simulated *DSM-IV* approach) versus assigning a diagnosis before rating the symptoms (i.e., simulated prototype approach).

Diagnostic Ratings

Table 7 presents the diagnostic representativeness ratings for both vignettes and diagnostic conditions. Results are presented only for diagnoses with mean representativeness ratings of 3.0 or higher. Overall, DD NOS was rated as most representative of both vignettes, followed by DPD. The next most highly rated disorders included Generalized Anxiety Disorder, Posttraumatic Stress Disorder, and Panic Disorder.

Table 7

Diagnostic Representativeness Ratings[a] *for Vignettes 1 and 2, Simulated Prototype and DSM-IV Conditions, and Overall Sample: Means and Standard Deviations (n – 230)*[b]

	Vignette 1 (*n* = 114)	Vignette 2 (*n* =116)	Prototype (*n* = 120)	*DSM-IV* (*n* = 110)	Overall Sample (*n* = 230)
Diagnoses	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
DD NOS	5.27 (1.82)	5.82 (1.35)	5.23 (1.75)	5.89 (1.39)	5.55 (1.62)
DPD	4.38 (1.95)	5.07 (1.66)	4.37 (1.85)	5.09 (1.76)	4.73 (1.84)
GAD[c]	3.03 (1.57)	2.70 (1.54)	2.82 (1.56)	2.91 (1.56)	2.86 (1.56)
PTSD[d]	2.29 (1.55)	3.03 (1.82)	2.53 (1.70)	2.79 (1.75)	2.66 (1.73)
Panic[e]	3.04 (1.74)	2.21 (1.36)	2.69 (1.69)	2.55 (1.55)	2.62 (1.61)

[a] Ratings using a scale of 1 (Not at all Representative) to 7 (Highly Representative). Only diagnoses with mean representativeness ratings of 3.0 or higher are included.
[b] One participant who received Vignette 2 did not provide diagnostic ratings.
[c] Generalized Anxiety Disorder.
[d] Posttraumatic Stress Disorder
[e] Panic Disorder

Paired samples *t*-tests were used for descriptive purposes to compare representativeness ratings for DPD and DD NOS for vignettes (Table 8) and diagnostic condition (Table 9). These analyses revealed that DD NOS was rated as significantly more representative than DPD for both Vignette 1 and Vignette 2 and for both diagnostic conditions.

Table 8

Differences Between DPD and DD NOS Ratings[a] *for Vignette 1 (n = 114) and Vignette 2 (n = 116)*[b]

	M	*SD*	*t*	*p*	*df*
Vignette 1					
DPD/	4.38	1.95	4.95	<.001	113
DD NOS	5.27	1.82			
Vignette 2					
DPD/	5.07	1.66	4.52	<.001	115
DD NOS	5.82	1.35			

[a] Ratings using a scale of 1 (Not at all Representative) to 7 (Highly Representative).
[b] One participant who received Vignette 2 did not provide diagnostic ratings.

Table 9

Differences Between DPD and DD NOS Ratings[a] *for Simulated DSM-IV (n = 110) and Simulated Prototype Conditions (n = 120)*

	M	*SD*	*t*	*p*	*df*
DSM-IV Condition					
DPD/	5.09	1.76	4.87	<.001	109
DD NOS	5.89	1.39			
Prototype Condition					
DPD/	4.37	1.85	4.66	<.001	118
DD NOS	5.23	1.75			

[a] Ratings using a scale of 1 (Not at all Representative) to 7 (Highly Representative).

Two-way ANOVAs were conducted to examine differences between the vignettes and the effects of diagnostic condition on the representativeness ratings for DPD. Two-way analyses were also performed for DD NOS, because it was the highest rated diagnostic dimension. The results are presented in Table 10. Results for the DPD representativeness ratings revealed significant main effects for vignette and diagnostic condition. DPD ratings were significantly higher for Vignette 2 than Vignette 1 and significantly higher in the simulated *DSM-IV* condition than the simulated prototype condition. A significant interaction was also observed. Follow-up with one-way analyses revealed that DPD ratings were significantly higher for the simulated *DSM-IV* condition than the prototype condition for Vignette 1 but not for Vignette 2. These results provide support for the hypothesis that participants using a simulated *DSM-IV* approach would assign higher DPD representativeness ratings than those using the simulated prototype approach. Results from the two-way ANOVA

for the DD NOS representativeness ratings also revealed significant main effects for vignette and diagnostic condition. DD NOS was rated significantly higher for Vignette 2 than Vignette 1, and significantly higher in the simulated *DSM-IV* condition than the prototype condition. There was no significant interaction between vignette and diagnostic condition for the DD NOS ratings.

Table 10

Two-Way Analysis of Variance for Vignettes and Diagnostic Conditions for DPD and DD NOS Representativesness Ratings[a]

	df[b]	*F*	*p*	partial η^2
DPD				
Vignette	1, 225	8.83	.003	.037
Diagnostic Condition	1, 225	5.16	.006	.041
Vignette x Diagnostic Condition	1, 225	8.32	.004	.037
DD NOS				
Vignette	1, 224	7.53	.007	.032
Diagnostic Condition	1, 224	10.86	<.001	.046
Vignette x Diagnostic Condition	1, 224	.43	.512	.002

[a] Ratings using a scale of 1 (Not at all Representative) to 7 (Highly Representative).
[b] In the prototype condition for Vignette 1, 57 participants assigned a rating to DD NOS and 58 assigned a rating to DPD.

Clinical and Criterion-based Diagnoses

The fourth hypothesis proposed that clinicians would under-diagnose DPD relative to a criterion diagnosis based on their ratings of the *DSM-IV* criteria for DPD. The *DSM-IV* criteria consist of a single symptom describing depersonalization (plus exclusionary criteria and the

general criterion for a mental disorder) and may be inadequate. Therefore, it was expected that clinicians would fail to diagnose DPD despite having rated the *DSM-IV* depersonalization symptom as present in the vignette. A rating of 4 or higher on the 5-point rating scale was used to determine that the symptom was rated as present. Table 11 presents the criterion-based diagnoses and the assigned diagnoses for the two vignettes. Using this cutoff score, most participants rated the *DSM-IV* DPD criterion as present resulting in a criterion-based diagnosis of DPD (i.e., 89% for Vignette 1, 95% for Vignette 2).

Table 11

Assigned and Criterion-based Diagnoses for Vignette 1 (n = 102) and Vignette 2 (n = 110)

	Vignette 1 Criterion Diagnosis		Vignette 2 Criterion Diagnosis	
Assigned Diagnosis	DPD *f* (%)	Not DPD *f* (%)	DPD *f* (%)	Not DPD *f* (%)
DPD	41 (40.0%)	2 (1.9%)	40 (45.0%)	1 (1.4%)
Not DPD	50 (49.0%	9 (9.1%)	55 (50.0%)	4 (3.6%)

Consistency between the assigned diagnosis and the criterion-based diagnosis was examined. Consistent diagnosis included when a participant rated the *DSM-IV* depersonalization criterion for DPD as present and also assigned the diagnosis of DPD (i.e., accurate diagnosis), and when the *DSM-IV* symptom was not endorsed and the diagnosis was not assigned (i.e., labeled inaccurate diagnosis because the cases were chosen to be good examples of DPD). Inconsistent diagnosis included under-diagnosis (i.e., when a participant endorsed the *DSM-IV* DPD symptom but failed to assign the diagnosis) and over-diagnosis (i.e., when a participant diagnosed DPD but did not endorse the *DSM-IV* DPD symptom).

Participants were approximately equally divided between consistent and inconsistent diagnoses, with an overall percent agreement between the criterion diagnosis and the clinical diagnosis of only 49% (kappa = .32). However, over-diagnosis was rare, with nearly all participants who were inconsistent in their clinical diagnosis and criterion diagnosis demonstrating under-diagnosis (i.e., failing to diagnose DPD despite having rated that the *DSM-IV* DPD symptom was present in the vignette). The finding that half of the participants under-diagnosed DPD relative to the criterion diagnosis provides support for the fourth hypothesis.

Table 12

Frequency and Percent for Accurate, Inaccurate, Under- and Over-Diagnosis of DPD (n = 212)

	DSM-IV Condition (n = 110)	Prototype Condition (n = 102)	All Participants (n = 212)
Variable	*f* (%)	*f* (%)	*f* (%)
Accurate Diagnosis	54 (49.1%)	37 (36.3%)	91 (42.9%)
Under-diagnosis	53 (48.2%)	52 (51.0%)	105 (49.5%)
Over-diagnosis	1 (0.9%)	2 (2.0)%	3 (1.4%)
Inaccurate Diagnosis	2 (1.8%)	11 (10.8%)	13 (6.1%)

The fifth hypothesis asserted that clinicians who used a simulated prototype approach would more frequently under-diagnose DPD relative to their criterion diagnosis than clinicians who used a simulated *DSM-IV* approach. Frequencies and percentages for the four categories of diagnosis (accurate diagnosis, inaccurate diagnosis, under-diagnosis, over-diagnosis) for the

two diagnostic conditions (i.e., simulated *DSM-IV* and simulated prototype) are presented in Table 12.

A two-way chi-square analysis was conducted to determine if there were significant differences between the diagnostic conditions with regard to accuracy, inaccuracy, over- and under-diagnosis of DPD. Indeed, significant differences were observed, x^2 (1, N = 212) = 9.469, p = .024. When examined more closely, only the difference between conditions on accurate diagnosis was significant, x^2(1, N = 212) = 3.55, p = .040. Thus, the hypothesis was not supported; clinicians in the simulated prototype and *DSM-IV* conditions did not differ in the extent to which they under-diagnosed DPD. However, clinicians in the simulated *DSM-IV* condition were more accurate (i.e., more likely to both endorse the *DSM-IV* criterion for depersonalization and assign a diagnosis of DPD). No significant differences were observed when comparing the two diagnostic conditions within Vignettes 1 and 2.

Symptom Ratings

Table 13 presents the highest rated symptoms for Vignettes 1 and 2. A complete listing of the ratings for all symptoms and dimensions of DPD and depersonalization can be found in Appendix H. Symptoms are paraphrased in the tables. For Vignette 1, the highest rated symptoms were: 'fear of losing control,' 'persistently feels detached,' 'self-objectification,' 'loss of feelings of agency,' 'a feeling of change throughout,' 'heightened self-observation,' and 'feelings of unreality.' For Vignette 2, the highest rated symptoms were: 'persistently feels detached,' 'a feeling of change throughout,' 'heightened self-observation,' 'feelings of unreality,' 'objects/people/surroundings seem unreal,' 'derealization,' 'self-objectification,' 'fear of losing control,' 'changes in body experience,' and 'body detachment.' A one-way between-groups multivariate analysis of variance was performed to compare the highest rated

symptoms for the two vignettes for descriptive purposes. Results are presented in Appendix I. The majority of the symptoms were rated significantly higher for Vignette 2 than Vignette 1.

Table 13

Highest Rated[a] *Symptoms for Vignette 1 and Vignette 2 and Across Vignettes*

	Vignette 1 (n = 104)	Vignette 2 (n = 110)	Across Vignettes (n = 214)
Variable	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
persistently feels detached[b]	4.48 (1.00)	4.76 (0.62)	4.62 (0.81)
fear of losing control[c]	4.62 (0.61)	4.06 (1.02)	4.34 (0.82)
feeling of change throughout[d]	4.13 (1.03)	4.59 (0.71)	4.36 (0.87)
heightened self-observation[e]	4.11 (0.93)	4.48 (0.72)	4.30 (0.83)
self-objectification[f]	4.36 (1.00)	4.14 (1.05)	4.25 (1.03)
feeling of unreality[d]	4.03 (0.89)	4.28 (0.98)	4.16 (0.94)
objects/surroundings seem unreal[g]	3.29 (0.89)	4.24 (0.87)	3.78 (0.99)
derealization[e, f]	3.25 (1.33)	4.24 (1.01)	3.75 (1.17)
loss of feelings of agency [e, h]	4.20 (0.90)	3.89 (1.05)	4.05 (0.98)
body detachment[f]	3.78 (1.11)	4.00 (1.17)	3.89 (1.14)
changes in body experience[e. h]	3.62 (1.19)	4.00 (1.27)	3.81 (1.23)

[a] Ratings using a scale of 1 (Definitely Absent) to 5 (Definitely Present).
[b] *DSM-IV* DPD
[c] *DSM-IV* panic attack
[d] Torch (1987): Dimensions of depersonalization
[e] Blanco-Campal (2006): DPD symptoms
[f] Jacobs and Bovasso (1992; 1996): Dimensions of depersonalization
[g] *ICD-10* DPD
[h] Sierra and Berrios (2001): Dimensions of DPD

Table 14 presents the average symptom ratings for the *DSM-IV* and *ICD-10* DPD criteria sets and for each of the proposed sets of symptoms and dimensions for DPD and

depersonalization (i.e., Blanco-Campal, 2006; Jacobs & Bovasso, 1992; Sierra & Berrios, 2001; Torch, 1987). The *DSM-IV* DPD criteria consisted of the single depersonalization symptom, the *ICD-10* criteria had two symptoms, and the proposed sets of symptoms and dimensions ranged from three dimensions (Torch, 1987) to eight symptoms (Blanco-Campal, 2006). A one-way between groups multivariate analysis of variance was performed for descriptive purposes to investigate differences between the vignettes with regard to the six sets of symptoms/dimensions. These results are presented in Appendix J. In each case, the mean ratings were significantly higher for Vignette 2 than Vignette 1.

Table 14

Average Symptom Ratings[a] *for DPD Criteria and Proposed Symptoms and Dimensions of DPD and Depersonalization for Vignettes 1 and 2 and Across Vignettes (n = 207)*

	Vignette 1 (*n* = 99)	Vignette 2 (*n* = 108)	Across Vignettes (*n* = 207)
Variable	*M* (*SD*)	*M* (*SD*)	*M* (*SD*)
DSM-IV	4.48 (0.81)	4.76 (0.62)	4.62 (0.72)
ICD-10	3.27 (1.11)	4.24 (0.94)	3.76 (1.03)
Torch	3.69 (0.69)	4.06 (0.61)	3.88 (0.65)
Jacobs & Bovasso	3.20 (0.72)	3.70 (0.64)	3.45 (1.36)
Sierra & Berrios	3.31 (0.69)	3.61 (0.74)	3.46 (0.72)
Blanco-Campal	3.18 (0.64)	3.56 (0.62)	3.37 (0.63)

[a] Ratings using a scale of 1 (Definitely Absent) to 5 (Definitely Present).

Paired sample *t*-tests were used to compare the average rating of the *DSM-IV, ICD-10,* and researchers' criteria sets for DPD for each vignette to examine how well each described the symptoms in the case. For Vignette 1, the *DSM-IV* was consistently rated higher than the *ICD-*

10 and each of the proposed sets of symptoms and dimensions for DPD and depersonalization (Table 15 and Figure 1). Among the proposed sets of symptoms and dimensions, the Torch criteria were rated significantly higher than the others. For Vignette 2, the *DSM-IV* was also rated higher than the other sets of symptoms and dimensions (Table 16 and Figure 2). The *ICD-10* was rated next highest and was significantly higher than the other sets of symptoms and dimensions. Like Vignette 1, the Torch criteria set were rated significantly higher than the other proposed sets of symptoms and dimensions for Vignette 2.

Table 15

Differences Between Average Ratings[a] *for the DPD Criteria Sets and Proposed DPD and Depersonalization Symptoms and Dimensions for Vignette 1*

	n	*M*	*SD*	*t*	*p*	*df*
DSM-IV /	103	4.48	0.82	10.95	<.001	102
Torch	103	3.69	0.69			
DSM-IV /	103	4.48	0.82	14.22	<.001	102
Sierra & Berrios	103	3.31	0.69			
DSM-IV /	104	4.48	0.81	11.20	<.001	103
ICD-10	104	3.27	1.11			
DSM-IV /	102	4.47	0.82	16.79	<.001	101
Jacobs & Bovasso	102	3.20	0.72			
DSM-IV /	101	4.50	0.81	17.27	<.001	100
Blanco-Campal	101	3.18	0.64			
Torch /	103	3.69	0.69	6.91	<.001	102
Sierra & Berrios	103	3.31	0.69			
Torch ?	103	3.69	0.69	4.50	<.001	102
ICD-10	103	3.26	1.11			
Torch /	101	3.69	0.69	8.16	<.001	100
Jacobs & Bovasso	101	3.19	0.71			

Table 15 (continued)

	n	*M*	*SD*	*t*	*p*	*df*
Torch /	101	3.71	0.68	9.73	<.001	100
Blanco-Campal	101	3.18	0.64			
Sierra & Berrios /	103	3.31	0.69	0.45	.654	102
ICD-10	103	3.26	1.11			
Sierra & Berrios /	101	3.30	0.69	1.76	.82	100
Jacobs & Bovasso	101	3.19	0.71			
Sierra & Berrios /	101	3.33	0.68	3.16	.002	100
Blanco-Campal	101	3.18	0.64			
ICD-10 /	102	3.25	1.11	0.60	.551	101
Jacobs & Bovasso	102	3.20	0.72			
ICD-10 /	101	3.29	1.10	1.14	.256	100
Blanco-Campal	101	3.18	0.64			
Jacobs & Bovasso /	99	3.21	0.71	0.58	.565	98
Blanco-Campal	99	3.18	0.64			

[a] Ratings using a scale of 1 (Not at all Representative) to 7 (Highly Representative).

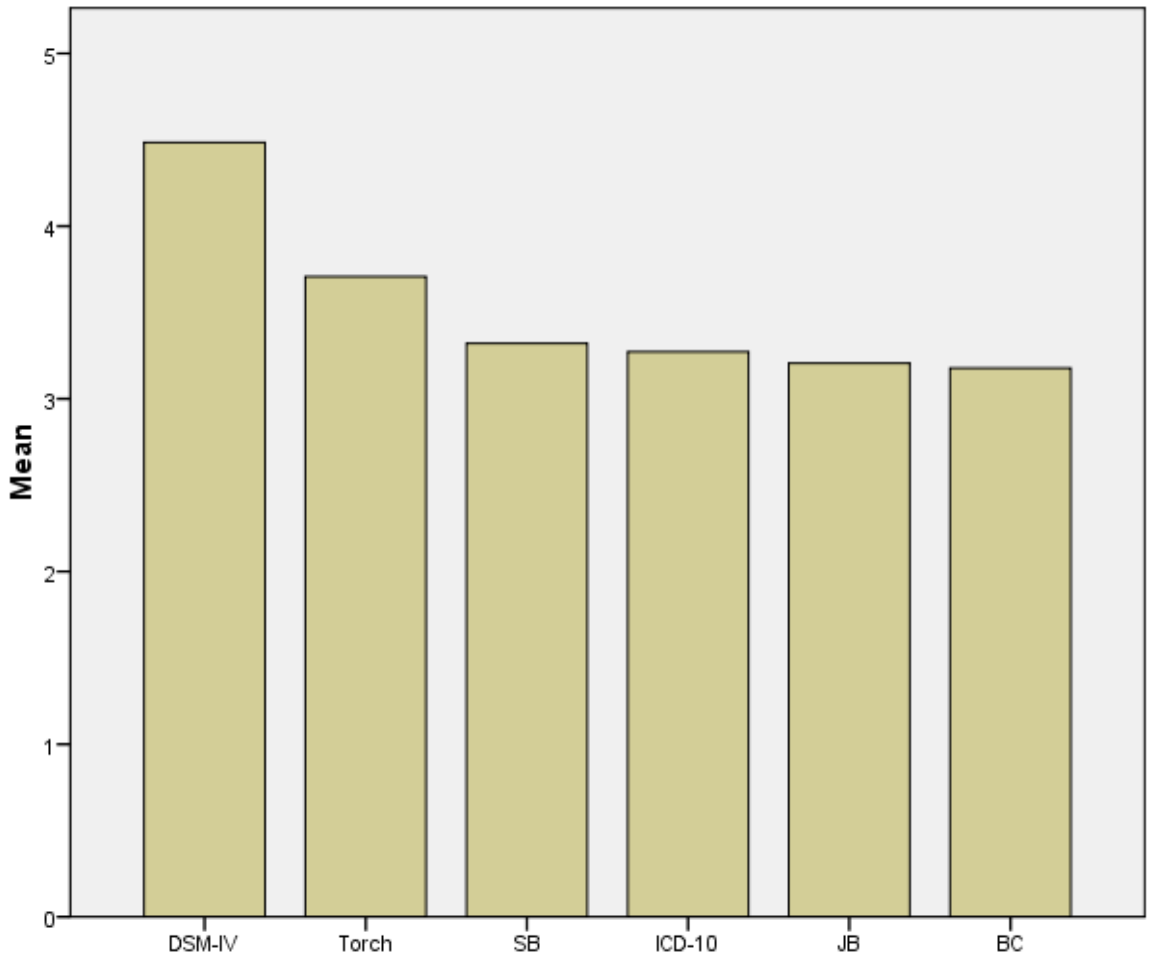

Figure 1.

Mean ratings[a] for the DPD criteria sets and proposed DPD and Depersonalization sumptoms and dimensions for Vignette 1.

[a] Ratings using a scale of 1 (Not at all Representative) to 7 (Highly Representative). *Note.* JB = Jacobs & Bovasso. SB = Sierra & Berrios. BC = Blanco-Campal.

Table 16

Differences Between Average Ratings[a] *for the DPD Criteria Sets and Proposed DPD and Depersonalization Symptoms and Dimensions for Vignette 2*

	N[b]	*M*	*SD*	*t*	*p*	*df*
DSM-IV /	111	4.76	0.62	5.80	<.001	110
ICD-10	111	4.24	0.94			
DSM-IV /	111	4.76	0.62	13.01	<.001	110
Torch	111	4.06	0.61			
DSM-IV /	110	4.75	0.62	16.92	<.001	109
Jacobs & Bovasso	110	3.70	0.64			
DSM-IV /	109	4.79	0.56	16.56	<.001	108
Sierra & Berrios	109	3.61	0.74			
DSM-IV /	110	4.78	0.57	19.05	<.001	109
Blanco-Campal	110	3.56	0.62			
ICD-10 /	111	4.24	0.94	2.29	.024	110
Torch	111	4.06	0.61			
ICD-10 /	110	4.24	0.94	6.27	<.001	109
Jacobs & Bovasso	110	3.70	0.64			
ICD-10 /	109	4.25	0.93	6.57	<.001	108
Sierra & Berrios	109	3.61	0.74			
ICD-10 /	110	4.25	0.93	8.00	<.001	109
Blanco-Campal	110	3.56	0.62			
Torch /	110	4.06	0.61	6.23	<.001	109
Jacobs & Bovasso	110	3.70	0.64			
Torch /	109	4.08	0.58	6.78	<.001	108
Sierra & Berrios	109	3.61	0.74			
Torch /	110	4.08	0.58	8.96	<.001	109
Blanco-Campal	110	3.56	0.62			

Table 16 (continued)

	N[b]	*M*	*SD*	*t*	*p*	*df*
Jacobs & Bovasso /	108	3.71	0.63	1.65	.102	107
Sierra & Berrios	108	3.60	0.73			
Jacobs & Bovasso /	109	3.71	0.63	3.77	<.001	108
Blanco-Campal	109	3.55	0.61			
Sierra & Berrios /	109	3.61	0.74	1.03	.305	108
Blanco-Campal	109	3.56	0.62			

[a] Ratings using a scale of 1 (Not at all Representative) to 7 (Highly Representative).
[b] The number of participants varies because cases are excluded per comparison, resulting in slightly varying means.

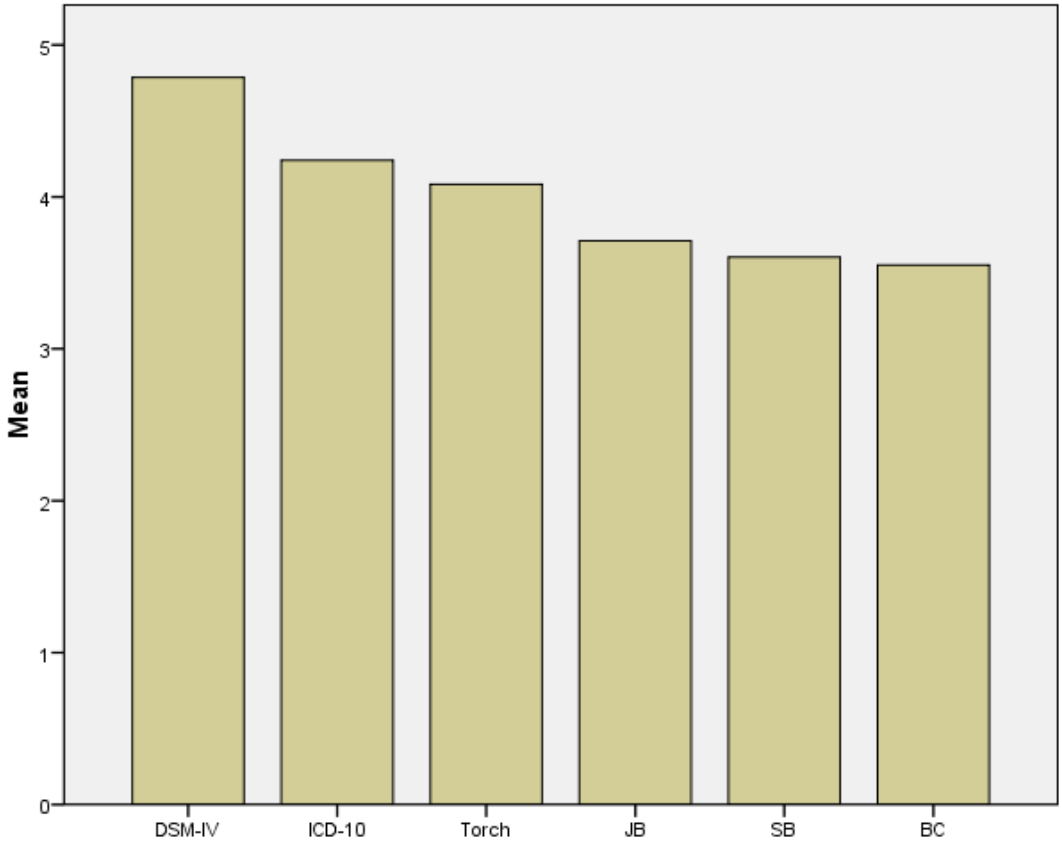

Figure 2.

Mean ratings[a] for the DPD criteria sets and proposed DPD and Depersonalization symptoms and dimensions for Vignette 2.
[a] Ratings using a scale of 1 (Not at all Representative) to 7 (Highly Representative).
Note. JB = Jacobs & Bovasso. SB = Sierra & Berrios. BC = Blanco-Campal.

Predictive Value of Proposed Sets of Symptoms and Dimensions

Multivariate analyses were used to determine whether a diagnosis of DPD and DPD representativeness ratings were better predicted by the symptoms and dimensions of DPD proposed by researchers than by the current *DSM-IV* criteria. The initial intent was to use the mean rating for each of the criteria and symptom sets as predictors of a diagnosis of DPD (logistic regression) and as predictors of the DPD representativeness ratings (multiple regression). Due to high correlation of the independent variables (Appendix K) the data were examined for multicollinearity. According to Tabachnick and Fidell (2001), multicollinearity may be determined by variance inflation factors (VIF; greater than 10 or greater than 2.5 in weaker models), tolerance values (lower than .50), the condition index (values greater than 30), and variance proportions (two variance proportions greater than .50 for any item). Results suggested that multicollinearity was evidenced for the overall sample and within both vignettes.

Therefore, separate regression analyses were performed that used the mean rating for the *DSM-IV* DPD criteria with the mean for each of the proposed sets of symptoms and dimensions for DPD and depersonalization (i.e., Blanco-Campal, 2006; Jacobs & Bovasso, 1992; 1996; Sierra & Berrios, 2001; Torch, 1987) as predictors. The purpose was to determine if any of the proposed sets of symptoms or dimension sets contributed to prediction of DPD beyond the current *DSM-IV* definition.

Logistic regressions. Separate binary logistic regressions were performed using the mean rating for the *DSM-IV* criterion for depersonalization with the mean for each of the proposed sets of symptoms and dimensions of DPD and depersonalization and the *ICD-10* as predictors of a diagnosis of DPD (i.e., DPD versus other diagnosis). A total of five analyses were run. Table 15 provides coefficients, the Wald statistic, associated degrees of freedom, and

probability values of the predictor variables for each of the models. As can be seen, only the *DSM-IV* made a unique statistically significant contribution to the prediction of a diagnosis of DPD in any of the models.

Table 17

Logistic Regression Analyses for Prediction of DPD Diagnosis

	n	*B*	*SE*	Wald	*df*	*p*
Model 1						
DMS-IV /	209	.401	.255	2.467	1	.116
Jacobs & Bovasso	209	.254	.233	1.189	1	.276
Model 2						
DSM-IV /	211	.410	.265	2.399	1	.121
Torch	211	.253	.258	.964	1	.326
Model 3						
DSM-IV /	209	.612	.250	6.006	1	.014
Sierra & Berrios	209	-.232	.213	1.183	1	.277
Model 4						
DSM-IV /	209	.557	.252	4.872	1	.027
Blanco-Campal	209	-.104	.241	.186	1	.666
Model 5						
DSM-IV /	212	.440	.242	3.313	1	.069
ICD-10	212	.167	.139	1.438	1	.231

The first model, which included the mean for the *DSM-IV* criteria and the mean for the Jacobs and Bovasso dimensions of depersonalization, successfully predicted DPD (omnibus chi-square = 7.62, $df = 2$, $p = .022$). However, the model only accounted for between 3.6% and 4.8% of the variance (Cox & Snell $R^2 = .036$; Negelkerke $R^2 = .048$), with 57.9% accuracy (33.7% for DPD, 76.9% for other diagnosis). This represents a slight improvement over a model using none of the predictors (i.e., base rates; 56%). Neither the *DSM-IV* criterion nor the

Jacobs and Bovasso set of depersonalization dimensions were statistically significant predictors of a DPD diagnosis.

A second binary logistic regression included the *DSM-IV* and the mean for the Torch dimensions of DPD as predictors. The model successfully predicted diagnosis of DPD (omnibus chi-square = 7.79, $df = 2$, $p = .020$). However, the model only accounted for between 3.6% and 4.8% of the variance (Cox & Snell $R^2 = .036$; Negelkerke $R^2 = .048$). The accuracy of the model was only 57.8% (44.7% for DPD, 68.4% for other diagnosis) which was a slight improvement over base rates of 55.5%. Neither the *DSM-IV* criterion nor the Torch set of DPD dimensions were statistically significant predictors of a DPD diagnosis.

The third binary logistic regression used the *DSM-IV* and the mean for the Sierra and Berrios symptoms of DPD as predictors. The model successfully predicted diagnosis of DPD (omnibus chi-square = 6.89, $df = 2$, $p = .032$), but only accounted for between 3.2% and 4.3% of the variance (Cox & Snell $R^2 = .032$; Negelkerke $R^2 = .043$). Accuracy of prediction was 56.9% (25.2% for DPD, 82.6% for other diagnosis). This represents a slight improvement over base rates of 55.0%. Only the *DSM-IV* criterion was a statistically significant predictor of DPD diagnosis.

The fourth binary logistic regression, which included the *DSM-IV* and the mean for the Blanco-Campal domains of DPD, was not significant (omnibus chi-square = 5.89, $df = 2$, $p = .053$) and accounted for only 2.8% to 3.7% of the variance in prediction of a diagnosis of DPD (Cox & Snell $R^2 = .032$; Negelkerke $R^2 = .043$). Accuracy of prediction was only 57.4% (25.5% for DPD, 83.5% for other diagnosis). This represents a slight improvement over base rates of 55.0%. The *DSM-IV* criterion was a statistically significant predictor of DPD diagnosis.

The final binary logistic regression, which included the *DSM-IV* and the mean for the *ICD-10* criteria for DPD, was significant (omnibus chi-square = 8.10, *df* = 2, *p* = .017) and accounted for 3.7% to 5.0% of the variance in prediction of a diagnosis of DPD (Cox & Snell R^2 = .037; Negelkerke R^2 = .050). Accuracy of prediction was only 58.5% (36.2% for DPD, 76.3% for other diagnosis). This represents a slight improvement over base rates of 55.7%. Neither the *DSM-IV* criterion nor the *ICD-10* criteria were statistically significant predictors of DPD diagnosis.

Multiple regressions. A series of multiple regression analyses were conducted with the DPD representativeness ratings as the criterion variable and the mean rating for the *DSM-IV* depersonalization criterion with the mean for each of the proposed sets of DPD symptoms and dimensions and the *ICD-10* criteria as predictors. Table 18 presents the results for these analyses.

The first analysis, using the means for the *DSM-IV* criterion and for the Jacobs and Bovasso's dimensions of depersonalization as predictors, was significant in predicting DPD representativeness ratings, F (2, 209) = 11.85, p <.001. Although the *DSM-IV* was not a significant predictor, the mean rating for the Jacobs and Bovasso dimensions was a significant predictor of DPD representativeness ratings. The model using the *DSM-IV* DPD criterion with the mean for Torch's dimensions of DPD was significant, F (2, 211) = 15.05, p <.001, but only the mean for the Torch dimensions was a significant predictor of the DPD representativeness ratings. The third analysis using the *DSM-IV* with the mean for Sierra and Berrios' symptoms of DPD was significant, F (2, 209) = 11.19, p <.001. Both the means for the *DSM-IV* criterion and the Sierra and Berrios dimensions were significant predictors of DPD representativeness ratings. The fourth model using the *DSM-IV* with the mean for Blanco-Campal's domains of

DPD to predict DPD representativeness ratings was also significant, F (2, 208) = 14.59, p <.001, but only the mean for the Blanco-Campal domains was a significant predictor. The final model using the *DSM-IV* with the mean of the *ICD-10* criteria to predict DPD representativeness ratings was also significant, F (2, 212) = 9.77, p <.001. Both the means for the *DSM-IV* and the *ICD-10* were significant predictors. Overall, the mean rating for each of the proposed symptoms or dimensions of DPD and depersonalization contributed unique variance to the prediction of DPD ratings, thereby supporting the hypothesis.

Table 18

Multiple Regression Analyses for Variables Predicting DPD Representativeness Ratings

	β	t	p	R	R^2	ΔR^2
Model 1						
DSM-IV /	.112	1.46	.146	.319	.102	.093
Jacobs & Bovasso	.247	3.22	<.001			
Model 2						
DSM-IV /	.054	.68	.497	.353	.125	.117
Torch	.320	4.05	<.001			
Model 3						
DSM-IV /	.148	2.06	.040	.311	.097	.088
Sierra & Berrios	.220	3.06	.003			
Model 4						
DSM-IV /	.100	1.38	.170	.351	.123	.115
Blanco-Campal	.295	4.06	<.001			
Model 5						
DSM-IV /	.168	2.35	.020	.290	.084	.076
ICD-10	.179	2.50	.013			

Effects of Demographic and Professional Variables

The final set of analyses examined the relationship of demographic and professional variables to DPD diagnoses and DPD representativeness ratings. First, differences in the frequency of DPD diagnoses and inconsistency between assigned and criterion diagnosis (i.e., under-diagnosis and over-diagnosis) were examined according to participant gender, years of experience (i.e., less than 10 years, 10-19 years, 20-29 years, 30 or more years), and theoretical orientation (Cognitive-behavioral, Psychodynamic, Integrative/Eclectic, and Other) using chi-square analyses. Results from the analyses revealed no significant differences for years of clinical experience, gender or theoretical orientation on DPD diagnoses, under-diagnosis, or over-diagnosis. For the DPD representativeness ratings, results of one-way ANOVAs indicated that there was not a significant effect of gender or years experience on the ratings. However, there was a significant effect of theoretical orientation, F (3, 206) = 3.36, p=.020. *Post-hoc* analyses using Tukey's HSD test revealed that participants who identified as having an Integrative or Eclectic theoretical orientation assigned significantly higher DPD representativeness ratings (M = 5.18, SD = 1.50 *vs.* M = 3.95, SD = 2.04) than participants who selected 'Other' orientation (i.e., not Integrative, Cognitive-Behavioral, or Psychodynamic). No significant results were found for the effect of participants' ratings of familiarity with DPD and the *DSM-IV,* or their frequency of using the *DSM-IV* or treating individuals with DPD on the dependent variables. Specifically, one-way ANOVAs revealed no significant differences on any of these ratings between participants who diagnosed DPD and those who assigned other diagnoses. There also were no significant correlations between the familiarity and frequency ratings and DPD representativeness ratings.

CHAPTER 4

Discussion

The purpose of this study was to examine whether clinicians under-diagnose DPD when presented with two representative cases of DPD selected from the literature. Although the literature has suggested that the disorder is both under-researched and under-diagnosed (Lambert et al., 2000; Simeon, 2004), there has been no empirical support for the claim of under-diagnosis. Given that the disorder may be prevalent in nearly 2.4% of the population (Blanco-Campal, 2006; Ross et al., 1991), the implications for under-diagnosis of DPD are far-reaching and include inappropriate treatment and potential social and legal stigmatization resulting from misdiagnosis (Hare-Mustin & Maracek, 1997).

The present study provides support for the proposal that DPD is under-diagnosed by clinicians. Although DPD was the most frequently assigned diagnosis, followed by DD NOS, less than half (45%) of the overall sample (i.e., 43% of participants for Vignette 1, 47% of participants for Vignette 2) assigned the diagnosis. As such, the primary hypothesis, that the majority of clinicians would fail to diagnose DPD even though the cases had been presented as good examples of DPD within the literature, was supported. Of note, the majority of the sample (nearly 70%) assigned a dissociative disorder diagnosis (DPD or DD NOS), suggesting that most clinicians recognized that the cases represented psychopathology within the dissociative spectrum of disorders.

Under-diagnosis may occur for a variety of reasons. It has been proposed that DPD is under-researched (Lambert et al., 2000; Simeon, 2004; Sprock & Herrmann, 2000). In addition, clinicians receive little training on the diagnosis of dissociative disorders (Dorahy et al., 2005), suggesting that many clinicians may not be familiar with DPD. Indeed, in the present study, clinicians rated their familiarity with DPD as moderate and rated their frequency of treating individuals with DPD as very low. As noted previously, under-diagnosis could also be attributed to the fact that depersonalization experiences frequently occur within the context of other mental disorders and medical conditions (Cox et al., 1994; Mayou et al., 2001; Strickland et al., 2002). In addition, individuals with DPD frequently experience symptoms of other disorders, such as mood and anxiety disorder symptoms (Baker et al., 2003; Simeon, 2004; Simeon & Abugel, 2006), which may complicate differential diagnosis. In the vignettes used in the present study, a symptom of panic disorder (i.e., fear of losing control) was among the highest rated symptoms for the cases, and approximately 16% of the diagnoses that were assigned were anxiety disorders. The presence of the symptoms from other disorders may have resulted in some participants diagnosing DD NOS. Also, according to the *DSM-IV*, one use of NOS is when there is not sufficient information to assign a specific diagnosis but the symptomology fits within a class of disorders. Some participants may have felt the brief vignette did not contain adequate information to assign a specific diagnosis, but the symptoms in the case clearly fell within the dissociative disorders and therefore diagnosed DD NOS.

Another explanation for the under-diagnosis of DPD is that biases in clinical decision-making and failure to adhere to diagnostic criteria contribute to inaccurate diagnosis (Blashfield & Herkov, 1996; Crosby & Sprock, 2004; Tversky & Kahneman, 1973, 1974). As such, this study also sought to examine whether the use of a prototype approach to diagnosis would

contribute to under-diagnosis of DPD. Previous research suggests that a systematic evaluation of symptoms prior to assigning a diagnosis (e.g., using a structured interview) increases diagnostic accuracy compared to unstructured approaches to diagnosis (Garb, 2005; Morey & Ochoa, 1989; Whaley & Geller, 2007; Wood et al., 2002). This is the approach used in the *DSM-IV* in which specific criteria must be met in order for a diagnosis to be assigned. However, there is also evidence that clinicians may use a prototype approach to diagnosis by matching the clinical symptoms of a patient to a mental representation of the diagnostic category (Blashfield & Herkov, 1996; Garb, 2005; Whaley & Geller, 2007), and that a prototype approach may also contribute to diagnostic bias (Garb, 2005), including under-diagnosis of DPD. In the current study, these two approaches were simulated by asking half of the participants to rate the symptoms in the case before assigning a diagnosis (i.e., simulated *DSM-IV* approach) and half of the participants to assign a diagnosis before rating the symptoms in the case (i.e., simulated prototype approach).

The second hypothesis proposed that clinicians would be more likely to diagnose DPD when using a simulated *DSM-IV* approach versus a simulated prototype approach. This hypothesis was not supported in the overall sample or when examining the vignettes individually. Regardless of the diagnostic approach, clinicians demonstrated a tendency to under-diagnose DPD. Thus, use of a more structured approach to evaluate the symptoms in the cases did not result in a higher rate of identification of DPD. The explanations offered for the under-diagnosis of DPD in this study may also help explain this finding. For example, if participants lack training, experience, and familiarity with DPD and the dissociative disorders, evaluation of the symptoms in the case may not help them to diagnose DPD. Also, although the diagnostic approach was experimentally manipulated by asking participants to rate symptoms

before assigning a diagnosis (i.e., *DSM-IV* approach) or assign a diagnosis before rating symptoms (i.e., prototype approach), there was no way of knowing if participants used their preferred approach to diagnosis (i.e., mentally evaluated symptoms before assigning a diagnosis or matched the patient in the vignette to a prototype before rating the symptoms).

The third hypothesis was that participants who used a simulated *DSM-IV* approach would assign higher DPD representativeness ratings than participants who used a simulated prototype approach. This hypothesis was partially supported. When both vignettes were considered, there was a main effect for diagnostic condition consistent with the hypothesis. However, there was also a significant interaction with vignette; for Vignette 1, clinicians within the *DSM-IV* condition assigned higher DPD representativeness ratings than those within the simulated prototype condition, whereas there was no difference in DPD representativeness ratings between the two diagnostic approaches for Vignette 2. This discrepancy in the findings for the two vignettes may be due to differences in the symptom presentations between the two cases. Vignette 2 received significantly higher DPD representativeness ratings and DPD symptom ratings than Vignette 1, suggesting that Vignette 2 was a better example of DPD than Vignette 1. As such, the DPD symptomology may have been more easily recognized in the second vignette, regardless of the diagnostic approach taken by the clinician.

The difference between the results for the DPD ratings and those for the DPD diagnoses may be a function of type of measurement. Dimensional (quantitative) diagnosis is more sensitive because it can show differences of degree, whereas categorical diagnosis is essentially binary (i.e., either the diagnosis is assigned or it is not, as cited in Blashfield, 1984). With the dimensional approach, separate ratings were made for the representativeness of each diagnosis rather than forcing participants to choose one diagnosis when more than one diagnosis may

have seemed representative of the vignettes. Thus, the dimensional DPD ratings may be more sensitive than the categorical diagnosis in detecting subtle differences between the diagnostic approaches. In fact, more DPD diagnoses were assigned by participants using the simulated *DSM-IV* approach than the prototype approach, but the difference was not statistically significant.

Of note, for both vignettes, DD NOS was rated as more representative of the case than DPD, and this was true for both diagnostic conditions. Thus, although clinicians recognized the cases as dissociative in nature, they did not see the narrower diagnosis of DPD as fitting as well. As noted earlier for categorical diagnosis, DD NOS may have been seen as more relevant for the vignettes due to a lack of familiarity with the diagnostic criteria for DPD, the brevity of the cases, or even potentially inadequate diagnostic criteria for DPD within the *DSM-IV*.

The fourth hypothesis proposed that clinicians would under-diagnose DPD relative to their criterion diagnosis based on their own symptom ratings, such that they would fail to diagnose DPD despite having rated the *DSM-IV* criterion for depersonalization as present within the case. This was an additional measure of under-diagnosis, as it examined discrepancies between clinicians' assigned diagnosis (clinical diagnosis) and their ratings of the DSM-IV depersonalization criterion (criterion-based diagnosis). This hypothesis was supported. Overall, half of the participants under-diagnosed DPD relative to their criterion diagnosis. One explanation for this finding is clinicians' lack of familiarity with the diagnostic criteria for the disorder. Another explanation is that the *DSM-IV* criteria for DPD are inadequate because they consist of only one symptom, depersonalization, plus exclusionary criteria and the general criteria for a mental disorder. For both vignettes, nearly all participants rated the DPD criterion as present, yet less than half diagnosed DPD, suggesting that presence

of the criterion was not sufficient for the diagnosis to be assigned. On the other hand, almost none of the participants who diagnosed DPD rated the criterion as not present. Thus, the DSM-IV depersonalization criterion had high sensitivity but not adequate specificity for the diagnosis. In other words, it was necessary but not sufficient for the diagnosis of DPD.

The fifth hypothesis proposed that clinicians who used a simulated prototype approach would more frequently under-diagnose DPD relative to their criterion diagnosis than clinicians who used a simulated *DSM-IV* approach. This hypothesis was not supported; clinicians in the simulated prototype and *DSM-IV* conditions did not differ in the extent to which they under-diagnosed DPD. However, further analysis revealed that clinicians using the simulated *DSM-IV* approach were more accurate in diagnosing DPD than clinicians using a prototype approach, providing support for the idea that a careful evaluation of diagnostic criteria results in more accurate diagnosis. In other words, when clinicians used a structured approach and evaluated the symptoms before assigning a diagnosis, they were more likely to both recognize the presence of the *DSM-IV* criterion for depersonalization and assign a diagnosis of DPD. This difference was not found when examining the vignettes individually, which is likely a function of smaller sample size. However, the results across vignettes suggest that a simulated *DSM-IV* approach improves diagnostic accuracy of DPD.

It has also been suggested that under-diagnosis of DPD may be partly attributed to inadequate diagnostic criteria in the *DSM-IV,* as it lists only four criteria and only one specifically addresses the phenomenon of depersonalization. Given this, several groups of researchers (Blanco-Campal, 2006; Jacobs & Bovasso, 1992; Sierra & Berrios, 2001; Torch, 1987) have proposed more comprehensive and in-depth conceptualizations of DPD to facilitate accurate diagnosis. The final hypothesis was that the symptoms and dimensions of DPD and

depersonalization proposed by researchers would have better predictive value for a diagnosis of DPD and DPD representativeness ratings than the current *DSM-IV* criteria. This hypothesis was supported for the DPD representativeness ratings but not for a diagnosis of DPD.

An examination of the predictive value of the mean for the *DSM-IV* and for each of the researchers' proposed set of symptoms and dimensions revealed that only the *DSM-IV* made a significant contribution to the prediction of a diagnosis of DPD, although it was not a strong predictor. The lack of predictive significance for the researchers' symptoms and dimensions of DPD and depersonalization may be partly explained by the limitations of the categorical approach and the requirement that participants select only one diagnosis. Nearly half of those who did not diagnose DPD diagnosed DD NOS. Indeed, *post-hoc* analyses (one-way ANOVA) indicated that there were no significant differences between the mean ratings of the researchers' symptoms and dimensions for cases diagnosed as DPD versus those diagnosed as DD NOS. Thus, a substantial number of clinicians rated the proposed symptoms and dimensions of DPD and depersonalization as present within the case, but diagnosed DD NOS instead of DPD. Again, this may point to the lack of familiarity with DPD and relative inexperience with treating DPD that participants reported, or the brevity of the case vignettes and need for more information.

The hypothesis was supported, however, for the DPD representativeness ratings, with the mean rating of each of the researchers' sets of symptoms and dimensions being significant predictors of DPD representativeness ratings. In comparison, the *DSM-IV* depersonalization criterion was not found to be a significant predictor of DPD representativeness ratings. These results stand in contrast with the results found for DPD diagnosis. As noted previously, dimensional (quantitative) approaches are more sensitive than categorical (qualitative)

approaches and can show subtle differences of degree. Also, the *DSM-IV* definition of DPD was assessed by a single symptom which was rated as present by nearly all of the participants, thereby limiting its variance and its predictive ability.

Overall, the presence of the *DSM-IV* criterion of depersonalization was weakly predictive of a clinical diagnosis of DPD, but was not predictive of the DPD representativeness ratings. The sets of symptoms and dimensions proposed by researchers may better capture the breadth of symptoms seen as representative of the construct of DPD by these participants. Among the proposals, Torch's (1987) dimensions of depersonalization were rated highest within both cases. These symptoms include 'a feeling of change throughout,' 'a feeling of unreality,' and 'emotional numbing,' and address derealization which is not included in the *DSM-IV* definition. It is also worth noting that the *ICD-10* criteria, which include both depersonalization and derealization, were rated highly for Vignette 2, and were also found to be significant predictors of DPD representativeness ratings.

Limitations

There are a number of limitations to the current study. Although a vignette methodology is widely used within clinical research and has a number of advantages (Gutkind et al., 2001; Heverly, Fitt, & Newman, 1984; Skånér, Bring, & Strender, 2004), the primary limitation of this method is generalizability to real clinical cases and clinical practice (Garb, 2005). In particular, the cases were brief, which may have contributed to the assignment of diagnoses of DD NOS. In addition, the results are dependent upon the representativeness of the vignettes chosen for the study. Although the vignettes used in this study were presented in the literature as representative cases of DPD, only two cases were chosen. As such, they portray a limited spectrum of symptoms and clinical presentations of DPD, and the results may reflect the

characteristics of these two cases. In addition, the predictive value of the *DSM-IV* criteria and the researchers' symptoms and dimensions of DPD and depersonalization for both DPD diagnoses and representativeness ratings is dependent upon the clinical presentation of DPD within the cases. Thus, the utility of the researchers' sets of criteria can only be known in this study with regard to the two presentations of DPD that were chosen as representative of the diagnosis. As noted previously, depersonalization is a heterogeneous construct with multiple dimensions and/or symptoms (Blanco-Campal, 2006; Jacobs & Bovasso, 1992, 1996; Sierra & Berrios, 2001; Torch, 1987). Depersonalization as a distinct psychological phenomenon consists of an array of symptoms that vary in the extent and severity to which they are present in depersonalized individuals (Blanco-Campal, 2006). If the cases were presented as good examples of DPD as defined in the *DSM-IV*, they likely presented a limited view of the many ways in which an individual may present with DPD.

Further, as noted earlier, although the diagnostic approach was experimentally manipulated by asking participants to rate symptoms before assigning a diagnosis (i.e., *DSM-IV* approach) or assign a diagnosis before rating symptoms (i.e., prototype approach), there was no way of knowing if participants used their preferred approach to diagnosis (i.e., mentally evaluated symptoms before assigning a diagnosis or matched the patient in the vignette to a prototype before rating the symptoms). Thus, assumptions regarding the diagnostic approach utilized by clinicians cannot be verified.

The results of the study may be influenced by self-selection factors. As with any study utilizing self-selection, it is possible that the results reflect the biases of the individuals who chose to participate. Further, approximately twenty participants failed to provide demographic information so that the personal and professional information for this portion of the sample is

unknown. With the exception of 'years of clinical experience,' the sample did not appear to differ significantly on demographic variables when comparing participants across diagnostic conditions or vignettes. However, as noted previously, additional analyses indicated no significant effects of years experience on the dependent variables. Although the rate of participation was quite low (approximately 13%), it was consistent with the return rate found in previous studies utilizing online survey methodologies (e.g., Crosby & Sprock, 2004). Lastly, the final sample size (N = 231) fell somewhat short of the desired number of participants (N = 264) based on the power analysis, which may have reduced the ability to detect significant results. Although 332 psychologists responded to the survey, a number of participants were deleted from the sample due to excessive amounts of missing data.

Implications and Future Directions

This study is the first to provide empirical support for the proposal that DPD is under-diagnosed by clinicians. Although DPD is estimated to be present in up to 2% of the general population (Simeon & Abugel, 1991), the psychologists reported only moderate familiarity with DPD and very little experience treating DPD, which points to the need for additional training and clinical experience with DPD to improve accuracy of diagnosis. However, the fact that nearly 70% of clinicians recognized that the case was within the spectrum of dissociative disorders is encouraging. The study's results also suggest that it may behoove clinicians to adopt a more structured approach to diagnosis. Although clinicians who evaluated the symptoms in the case before assigning a diagnosis were no more likely to diagnose DPD than those utilizing a less structured approach, they demonstrated greater diagnostic accuracy (i.e., recognizing the *DSM-IV* depersonalization symptom as present and diagnosing DPD) and also assigned higher DPD representativeness ratings for the cases.

Another concern noted by researchers is the inadequacy of the *DSM-IV* diagnostic criteria for DPD. Specifically, the literature suggests that depersonalization is a heterogeneous construct with multiple dimensions and/or symptoms. As such, the *DSM-IV*, with its single descriptive criterion for depersonalization, presents a limited and potentially insufficient set of diagnostic criteria for DPD. Although the *DSM-IV* criterion for depersonalization was rated the highest of any of the sets of diagnostic criteria and proposed symptoms and dimensions, and was the only significant predictor of a diagnosis of DPD, it was only weakly associated with the diagnosis. Also, most clinicians endorsed the *DSM-IV* depersonalization criterion, but the majority of clinicians failed to assign the diagnosis of DPD, suggesting that the criterion has good sensitivity but low specificity for the diagnosis (i.e., it is necessary but not sufficient for the diagnosis). In contrast, DPD representativeness ratings were better predicted by the researchers' proposed symptoms and dimensions of DPD and depersonalization than the *DSM-IV* criterion. This suggests that clinicians' conceptualization of DPD as a construct may be broader than the *DSM-IV* definition and provides support for researchers' claims that the diagnostic criteria for DPD are insufficient and may be too limited. Thus, the criteria for DPD in the *DSM-IV* may need to be revised to describe more comprehensive symptomology for DPD. According to the recently released draft of the *DSM-5* posted on the APA's website (2010), the committee on dissociative disorders has proposed derealization as an additional criterion for the diagnosis of DPD. Derealization is defined as persistent or recurrent experiences of unreality of surroundings (e.g., world around the person is experienced as unreal, dreamlike, distant, or distorted). This change would be consistent with the European conceptualization of DPD (i.e., Depersonalization-Derealization Disorder) as represented in the *ICD-10*. The results from this study support such a change, as the *ICD-10* criteria were rated

second highest for one of the vignettes and the *ICD-10* criteria were significant predictors of DPD representativeness ratings. This change in the diagnostic criteria for DPD is also supported by the present study's findings regarding Torch's (1987) dimension of 'a feeling of unreality.' Indeed, among the proposed symptoms and dimensions, the set of dimensions for depersonalization proposed by Torch (1987) was rated highest for both cases. As such, the inclusion of Torch's other dimensions ('a feeling of change throughout,' 'emotional numbing') could also be helpful in guiding future revisions to the diagnostic criteria for DPD.

Future research may be directed towards examining differential diagnosis of DPD in clinical samples, as the literature indicates that DPD is under-researched (Lambert et al., 2000; Simeon, 2004; Sprock & Herrmann, 2000). Further research studying the more comprehensive descriptions of DPD in the literature can be conducted in clinical and community samples. Future research may also utilize other methods for examining the diagnosis of DPD. For example, it may be useful to develop clinician-derived composite descriptions of DPD, which would provide a more complete set of criteria and symptoms than the current criteria (i.e., Bradley, Shedler, & Westen, 2006; Huprich & Bornstein, 2007; Shedler & Westen, 2003; Westen & Weinberger, 2004). Indeed, the *DSM-5* draft includes prototype descriptions for five personality disorder types for possible incorporation in the *DSM-5*. Finally, comparisons of primary and secondary DPD, diagnostic nomenclature utilized by European clinicians but not addressed in the *DSM-IV* or the *DSM-5* draft, as well as research on possible subtypes of DPD, are also needed.

References

Aberdibigbe, Y. A., Bloch, R. M., & Waler, W. R. (2001). Prevalence of depersonalization and derealization experiences in a rural population. *Social Psychiatry: Psychiatric Epidemiology, 36,* 63-69.

American Psychological Association. (n.d.). *Table 1: Demographic Characteristics of APA Membership by Membership Status, 2007*. Retrieved April 16, 2008, from http://research.apa.org/profile2007t1.pdf

American Psychiatric Association. (1994). *DSM-IV casebook: A learning companion to the diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.

American Psychiatric Association. (2000). *Diagnostic and statistical manual of mental disorders: DSM-IV-TR* (4th ed.). Washington, DC: Author.

American Psychiatric Association. (2010). *DSM-5 Development: Depersonalization Disorder.* Retrieved June 1, 2010, from http://www.dsm5.org/ProposedRevisions/Pages/proposedrevision.aspx?rid=58

American Psychiatric Association. (2010). *DSM-5 Development: Personality Disorders.* Retrieved June 1, 2010, from http://www.dsm5.org/ProposedRevisions/Pages/PersonalityandPersonalityDisorders.aspx

Baker, D., Hunter, E. C. M., Lawrence, E., & David, A. S. (2007). *Overcoming depersonalisation and feelings of unreality: A self-help guide using cognitive behavioral techniques*. London, England: Constable Robinson.

Baker, D., Hunter, E., Lawrence, E., Medford, N., Patel, M., Senior, C., Sierra, M., Lambert, M., Phillips, M. L., & David, A. S. (2003). Depersonalisation disorder: Clinical features of 204 cases. *British Journal of Psychiatry, 182,* 428-433.

Bebbington, P., Hurry, J., Tennant, C., Sturt, E., & Wing, J. K. (1981). Epidemiology of mental disorders in Camberwell. *Psychological Medicine, 11,* 561-579.

Bebbington, P., Marsden, L., & Brewin, C. R. (1997). The need for psychiatric treatment in the general population: The Camberwell needs for care survey, *Psychological Medicine, 27,* 821-834.

Bernstein, E. M., & Putnam, F. W. (1986). Development, reliability, and validity of a dissociation scale. *Journal of Nervous and Mental Disease, 174,* 727-735.

Blanco-Campal, A. (2006). Depersonalization disorder. In A. Carr & M. McNulty (Eds.), *The handbook of adult clinical psychology: An evidence-based approach.* New York, NY: Routledge/Taylor & Francis Group.

Blanco-Campal, A., Carton, S., & Delargy, M. (2003). Organic depersonalisation unaccompanied by depersonalisation after severe traumatic brain injury: A single case study. *Brain Injury, 17,* 152-153.

Blashfield, R. K. (1984). *The classification of psychopathology*. New York, NY: Plenum Press.

Blashfield, R. K., & Herkov, M. J. (1996). Investigating clinician adherence to diagnosis by criteria: A replication of Morey and Ochoa 1989. *Journal of Personality Disorders, 10,* 219-228.

Bradley, R., Shedler, J., & Westen, D. (2006). Is the appendix a useful appendage? An empirical examination of depressive, passive-aggressive (negativistic), sadistic, and self-defeating personality disorders. *Journal of Personality Disorders, 20*, 524-540.

Brauer, R., Harrow, M., & Tucker, G. J. (1970). Depersonalization phenomena in psychiatric patients. *British Journal of Psychiatry, 117,* 509-515.

Bremner, J. D., Krystal, J. H., Putnam, F. W., Southwick, S., Marmar, C., Charney, D. S., & Mazure, C. (1998). Measurement of dissociative states with the clinician-administered dissociative scale (CADSS). *Journal of Traumatic Stress, 11,* 135-146.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*, 155-159.

Cox, B. J., Swinson, R. P., Endler, N. S., & Norton, G. R. (1994). The symptom structure of panic attacks. *Comprehensive Psychiatry, 31,* 162-170.

Crosby, J. P., & Sprock, J. (2004). Effect of patient sex, clinician sex, and sex role on the diagnosis of antisocial personality disorder: Models of underpathologizing and overpathologizing biases. *Journal of Clinical Psychology, 60*(6), 1-22.

Davison, J. R., Kudler, H. S., Saunders, W. B., & Smith, R. D. (1990). Symptoms and comorbidity patterns in World War II and Vietnam veterans with posttraumatic stress disorder. *Comprehensive Psychiatry, 31,* 162-170.

Detmer, D. E., Fryback, D. G., & Gassner, K. (1978). Heuristics and biases in medical decision-making. *Journal of Medical Education, 53,* 682-683.

Devinsky, O., Feldmann, O., Burrowes, K., & Bromfield, E. (1989). Autoscopy phenomena with seizures. *Archives of Neurology, 46,* 1080-1088.

Dixon, J. C. (1963). Depersonalization phenomena in a sample population of college students. *British Journal of Psychiatry, 109*, 371-375.

Dorahy, M. J., Lewis, C. A., & Mulholland, C. (2005). The detection of dissociative identity disorder by Northern Irish clinical psychologists and psychiatrists: A clinical vignettes study. *Journal of Trauma and Dissociation, 6(4),* 39-50.

Elstein, A. S., & Schwarz, A. (2002). Clinical problem-solving and diagnostic decision making: Selective review of the cognitive literature. *British Medical Journal, 324,* 729-732.

Fewtrell, W. D. (2000). *Fewtrell depersonalisation scale (FDS).* Leicester, England: APT Press.

Freidl, M. C., Draijer, N., & de Jonge, P. (2000). Prevalence of dissociative disorders in psychiatric inpatients: The impact of study characteristics. *Acta Psychiatrica Scandinavia, 102,* 423-428.

Garb, H. N. (2005). Clinical judgment and decision making. *Annual Review of Clinical Psychology, 1,* 67-89.

Gutkind, D., Ventura, J., Barr, C., Shaner, A., Green, M., & Mintz, J. (2001). Factors affecting reliability and confidence of DSM-III-R psychosis-related diagnosis. *Psychiatry Research, 101,* 269-275.

Hall, K. H. (2002). Reviewing intuitive decision-making and uncertainty: the implications for medical education. *Medical Education, 36,* 216-224.

Hare-Mustin, R. T., & Marecek, J. (1997). Abnormal and clinical psychology: The politics of madness. In D. Fox & I. Prilleltensky (Eds.), *Critical Psychology: An Introduction.* Thousand Oaks, CA: Sage.

Heverly, M. A., Fitt, D. X., & Newman, F. L. (1984). Constructing case vignettes for evaluating clinical judgment: An empirical model. *Evaluation and Program Planning, 7(1),* 45-55.

Holmes, E. A., Brown, R. J., Mansell, W. Fearon, R. P., Hunter, E. C. M., Frasquilho, F., & Oakley, D. A. (2005). Are there two qualitatively distinct forms of dissociation? A review and some implications. *Clinical Psychology Review, 25,* 1-23.

Hunter, E. C. M., Baker, D., Phillips, M. L., Sierra, M., & David, A. S. (2005). Cognitive-behaviour therapy for depersonalisation disorder: An open study. *Behaviour and Research Therapy, 43,* 1121-1130.

Hunter, E. C. M., Sierra, M., & David, A. S. (2004). The epidemiology of depersonalisation and derealisation: A systematic review. *Social Psychiatry and Psychiatric Epidemiology, 39*(1), 9-18.

Huprich, S. K., & Bornstein, R. F. (2007). An overview of issues related to categorical and dimensional models of personality disorders assessment. *Journal of Personality Assessment, 89(1), Special issue: Dimensional versus categorical personality disorder diagnosis: Implications from and for psychological assessment,* 3-15.

Jackson, D. N., & Messick, S. (1972). *Differential personality inventory.* Cleveland, OH: Psychological Corporation.

Jacobs, J. R., & Bovasso, G. (1992). Toward a clarification of the construct of depersonalization and its association with affective and cognitive dysfunctions. *Journal of Personality Assessment, 59,* 352-365.

Jacobs, J. R., & Bovasso, G. (1996). A profile analysis of psychopathology in clusters of depersonalization types. *Dissociation: The official journal of the International Society for the Study of Multiple Personality and Dissociation, 9,* 169-175.

Kihlstrom, J. F. (2005). Dissociative disorders. *Annual Review of Clinical Psychology, 1,* 227-253.

Kim, N. S., & Ahn, W. (2002). Clinical psychologists' theory-based representations of mental disorders predict their diagnostic reasoning and memory. *Journal of Experimental Psychology, 131,* 451-476.

Lambert, M. V., Sierra, M., Phillips, M. L., & David, A. S. (2000). Depersonalisation in cyberspace. *The Journal of Nervous and Mental Disease, 188,* 764-771.

Lambert, M. V., Senior, C., Fewtrell, W. D., Phillips, M. L., & David, A. S. (2001). Primary and secondary depersonalisation disorder: A psychometric study. *Journal of Affective Disorders, 63,* 249-256.

Lilja, A., & Salford, L. G. (1997). Early mental changes in patients with astrocytomas with special reference to anxiety and epilepsy. *Psychopathology, 30,* 316-323.

Lochner, C., Seedat, S., Hemmings, S., Kinnear, C., Corfield, V. Niehaus, D., Moolman-Smook, J., & Stein, D. (2004). Dissociative experiences in obsessive-compulsive disorder and trichotillomania: Clinical and genetic findings. *Comprehensive Psychiatry, 45,* 384-391.

Lynam, D. R., & Widiger, T. A. (2001). Using the five-factor model to represent the DSM-IV personality disorders: An expert consensus approach. *Journal of Abnormal Psychology, 110(3),* 401-412.

Mayou, R., Bryant, R., & Ehlers, A. (2001). Prediction of psychological outcomes one year after a motor vehicle accident. *American Journal of Psychiatry, 165,* 391-395.

Meyer, C., & Waller, G. (1998). Dissociation and eating psychopathology: Gender differences in a nonclinical population. *International Journal of Eating Disorders, 23,* 217-221.

Morey, L. C., & Ochoa, E. S. (1989). An investigation of adherence to diagnostic criteria: Clinical diagnosis of the DSM-III personality disorders. *Journal of Personality Disorders, 3,* 180-192.

Morioka, H., Nagatomo, I., Horikiri, T., Kita, K., Ueyama, K., & Takigawa, M. (1997). A case of pontine infarction with depersonalisation. *International Medical Journal, 4,* 133-134.

Noyes, R., Hoenk, P. R., Kuperman, S., & Slymen, D. J. (1977). Depersonalisation in accident victims and psychiatric patients. *Journal of Nervous and Mental Disease, 164,* 401-407.

Phillips, M. L., & Sierra, M. (2003). Depersonalization Disorder: A functional neuroanatomical perspective. *The International Journal on the Biology of Stress, 6(3),* 157-165.

Pias, R. (1991). Depersonalization's many faces. *The Psychiatric Times: Medicine and Behavior.*

Roberts, W. W. (1960). Normal and abnormal depersonalization. *Journal of Mental Science, 106,* 478-493.

Ross, C. A., Joshi, S., & Currie, R. (1991). Dissociative experiences in the general population: A factor analysis. *Hospital and Community Psychiatry, 42,* 297-301.

Russell, J. A. (1991). In defense of a prototype approach to emotion concepts. *Journal of Personality and Social Psychology, 60(1),* 37-47.

Salovey, P., & Turk, D. C. (1991). Clinical judgment and decision-making. In C. R. Snyder & D. R. Forsyth (Eds.), *Handbook of Social and Clinical Psychology*. New York: Pergamon Press.

Sedman, G., & Kenna, J. C. (1963). Depersonalization and mood changes in schizophrenia. *The British Journal of Psychiatry, 109,* 669-673.

Sedman, G., & Reed, G. F. (1963). Depersonalisation phenomena in obsessional personalities and in depression. *British Journal of Psychiatry, 109,* 376-379.

Shedler, D., & Westen, J. (2003). Personality diagnoses in adolescence: *DSM-IV* Axis II diagnoses and an empirically-derived alternative. *American Journal of Psychiatry, 160,* 952-966.

Sierra, M., & Berrios, G. E. (1997). Depersonalization: A conceptual history. *History of Psychiatry, 8,* 213-229.

Sierra, M., & Berrios, G. E. (2001). The phenomenological stability of depersonalization: Comparing the old with the new. *The Journal of Nervous and Mental Disease, 189,* 629-636.

Simeon, D. (2004). Depersonalisation disorder: A contemporary overview. *CNS Drugs, 18,* 343-354.

Simeon, D., & Abugel, J. (2006). *Feeling unreal: Depersonalization disorder and the loss of the self.* New York, NY: Oxford University Press.

Simeon, D., Gross, G., Guralnik, O., Stein, D. J., Schmeidler, J., & Hollander, E. (1997). Feeling unreal: 30 cases of DSM-III-R depersonalization disorder. *American Journal of Psychiatry, 154,* 1107-1113.

Simeon, D., Guralnik, O., Knutelska, M., & Nelson, D. (2004). Dissection of schizotypy and dissociation in depersonalisation disorder. *Journal of Trauma and Dissociation, 5(4),* 111-119.

Simeon, D., Guralnik, O., Schmeidler, J., Sirof, B., & Knutelska, M. (2001). The role of childhood interpersonal trauma in depersonalization disorder. *The American Journal of Psychiatry, 158,* 1027-1033.

Simeon, D., Knutelska, M., Nelson, D., & Guralnik, O. (2003). Feeling unreal: A depersonalization disorder update of 117 cases. *Journal of Clinical Psychiatry, 64,* 990-997.

Skånér, Y., Bring, J., & Strender, L. (2004). Selecting representative case vignettes for clinical judgment studies: Examples from two heart failure studies. *Quality and Quantity: International Journal of Methodology, 38,* 621-635.

Sprock, J. (2002). A comparative study of the dimensions and facets of the five-factor model in the diagnosis of cases of personality disorder. *Journal of Personality Disorders, 16,* 402-423.

Sprock, J. (2003). Dimensional versus categorical classification of prototypic and nonprototypic cases of personality disorder. *Journal of Clinical Psychology, 59,* 992-1014.

Sprock, J., & Herrmann, D. (2000). Relative size of the literatures for psychopathological disorders: Number of articles pertaining to *DSM-IV* Diagnostic Categories. *Journal of Clinical Psychology, 56(4),* 1-14.

Steinberg, M., Cicchetti, D. V., Buchanan, J., Hall, P. E., & Rounsaville, B. J. (1993). Clinical assessment of dissociative symptoms and disorders: The structured clinical interview for *DSM-IV* Dissociative Disorders (SCID-D). *Dissociation, 6(1),* 3-15.

Strickland, P. L., Deakin, J. F. W., Percival, C., Dixon, J., Gater, R. A., & Goldberg, D. P. (2002). Bio-social origins of depression in the community – interactions between social adversity, cortisol and serotonin neurotransmission. *British Journal of Psychiatry, 180,* 168-173.

Tabachnick, B.G., & Fidell, L.S. (2001). *Using multivariate statistics, Fourth Edition*. Needham Heights, MA: Allyn & Bacon.

Torch, E. M. (1978). Review of the relationship between obsession and depersonalisation. *Acta Psychiatrica Scandianvica, 58,* 191-198.

Torch, E. M. (1987). The psychotherapeutic treatment of Depersonalization Disorder. *Hillside Journal of Clinical Psychiatry, 9*(2), 133-143.

Tversky, A., & Kahneman, D. (1973). Availability: A heuristic for judging frequency and probability. *Cognitive Psychology, 5,* 207-232.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. *Science, 185,* 1124-1131.

Tversky, A., Kahneman, D., Gentner, D., Collins, A., Fischhoff, B., Hoch, S. J., & Loewenstein, G. F. (1992). Heuristics and biases: Selected errors in clinical reasoning. In T. O. Nelson (Ed.), *Metacognition: Core Readings* (pp. 377-436). Needham Heights, MA: Allyn & Bacon.

Westen, D., & Shedler, J. (2000). A prototype matching approach to diagnosing personality disorders: Toward *DSM-V*. *Journal of Personality Disorders, 14(2),* 109-126.

Westen, D., Shedler, J., & Bradley, R. (2006). A prototype approach to personality disorder diagnosis. *American Journal of Psychiatry, 163,* 846-856.

Westen, D., & Weinberger, J. (2004). When clinical description becomes statistical prediction. *American Psychologist, 59,* 595-613.

Whaley, A. L., & Geller, P. A. (2007). Toward a clinical process model of ethnic/racial biases in clinical judgment. *Review of General Psychology, 11(1),* 75-96.

Widiger, T. A. (1982). Prototypic typology and borderline diagnoses. *Clinical Psychology Review, 2(2),* 115-135.

Wood, J. M., Garb, H. N., Lillienfeld, S. O., Nezworski, M. T. (2002). Clinical assessment. *Annual Review of Psychology, 53*, 519-543.

World Health Organization (1992). *Tenth revision of the international classification of diseases and related health problems* (ICD-10). Geneva, Switzerland: Author.

APPENDIX A: *DSM-IV-TR* CRITERIA FOR DEPERSONALIZATION DISORDER

1. Persistent or recurrent feelings of being detached from one's mental processes or body; as if an observer of one's mental processes or body (e.g., feeling like one is in a dream)
2. During the depersonalization experience, reality testing remains intact
3. Depersonalization causes significant distress or impairment in social, occupational, or other important areas of functioning
4. Depersonalization experience does not occur exclusively during the course of another mental disorder, and is not due to the direct physiological effects of a substance or general medical condition. (APA, 2000; p. 532)

APPENDIX B: *ICD-10* CRITERIA FOR DEPERSONALIZATION-DEREALIZATION SYNDROME

The individual must be either or both of (a) and (b), plus (c) and (d):

(a) depersonalization symptoms, (i.e., the individual feels that his or her own feelings and/or experiences are detached, distant, not his or her own, lost, etc.);

(b) derealization symptoms, (i.e., objects, people, and/or surroundings seem unreal, distant, artificial, colorless, lifeless, etc);

(c) an acceptance that this is a subjective and spontaneous change, not imposed by outside forces or other people (i.e., insight);

(d) a clear sensorium and absence of toxic confusional state or epilepsy (World Health Organization, 1992; pp. 171-173)

APPENDIX C: INTRODUCTION TO SURVEY

Thank you for your interest in this study. If you agree to participate, you will be Asked to provide the password (verification code) included in the email and then read the brief case vignette, answer the questions that follow the case, and provide some background demographic and professional information about yourself. I recognize that the case is very brief (to keep time demands to a minimum) and you would need considerably more information to develop a complete case formulation. However, use your best clinical judgment and try not to leave any questions blank.

This study has been approved by the Institutional Review Board (IRB) at Indiana State University. Submission of your responses on the web page will constitute your consent to participate. All reasonable precautions have been taken to preserve participants' anonymity. You have the right to skip any items you choose not to answer and/or withdraw from the study at any time. If you have any questions about your rights as a research participant, you may contact the Indiana State University IRB at (812) 237-8217 or irb@indstate.edu. Refer to IRB study number 10-022.

If you have any questions about the study or would like a summary of the results, please contact me by email at mryan1@indstate.edu. Again, thank you for your time and effort. I genuinely appreciate your willingness to share your clinical insights and expertise by participating in this research.

APPENDIX D: VIGNETTE 1

A 20-year-old male college student sought psychiatric consultation because he was worried that he might be going insane. For the past two years he had experienced increasingly frequent episodes of feeling "outside" of himself. These episodes were accompanied by a sense of deadness in his body. In addition, during these periods he was uncertain of his balance and frequently stumbled into furniture; this was more apt to occur in public, especially if he was somewhat anxious. During these episodes he felt a lack of easy, natural control of his body and his thoughts seem "foggy" as well, in a way that reminded him of having received intravenous anesthetic agents for an appendectomy some 5 years previously.

The patient's subjective sense of lack of control was especially troublesome, and he would fight it by shaking his head and saying "stop" to himself. This would momentarily clear his mind and restore his sense of autonomy, but only temporarily, as the feelings of deadness and of being outside himself would return. Gradually, over a period of several hours, the unpleasant experiences would fade. The patient was anxious, however, about their return, as he found them increasing in both frequency and duration.

At the time the patient came for treatment, he was experiencing symptoms about twice a week, and each incident lasted from 3 to 4 hours. On several occasions the episodes had occurred while he was driving his car and was alone; worried that he might have an accident, he had stopped driving unless someone accompanied him. Increasingly he had begun to discuss this problem with his girlfriend; eventually she had become less affectionate toward him, complaining that he had lost his sense of humor and was totally self-preoccupied. She threatened to break off with him unless he changed, and she began to date other men.

The patient's college grades remained unimpaired; they had, in fact, improved over the past 6 months, as he was spending more time studying than had previously been the case. Although discouraged by his symptoms, he slept well at night, had noted no change in appetite, and had experienced no impairment in concentration. He was neither fatigued nor physically "edgy" because of his worry.

Because a cousin had been hospitalized for many years with severe mental illness, the patient had begun to wonder if a similar fate might befall him, and sought direct reassurance on the matter.

APPENDIX E: VIGNETTE 2

A 29-year-old female sought psychiatric consultation because she was worried that something was wrong with her. She described having had a "normal" childhood, having done well at school, and having built a good career in management. She also indicated that her relationships with her family, friends, and boyfriend had always been an important part of her life. She reported that everything was going well until, when aged 27, her mother developed a terminal illness. The patient moved back home to help her father cope and nursed her mother until she died. As planned, the patient then married and moved to the other side of town. She and her husband reportedly spent the next couple of years renovating a house and setting up a business together.

The patient reported that "out of the blue" she began to notice a strange feeling when in the company of others. She stated that it was like being an observer on the outside and looking in. During these episodes she felt in no way connected to any of the people, including her husband. She then began to have doubts about whether or not people that she knew actually liked her, or whether they felt sorry for her and only liked her because of her husband. She began to dwell on her childhood and how lonely and isolated she had felt. She also began to avoid social gatherings and stopped activity with favorite hobbies.

The patient became aware that on some days the strange feelings she experienced when others were present began to happen when she was alone. She reported feeling detached from herself and said that she no longer knew who she was. At times, she felt as if she would 'disappear' and would pinch herself because the pain made her feel more real. Familiar places and locations took on an unreal quality. For instance, when driving she felt as if she was experiencing the world through a sheet of muslin – she felt cut off from the outside world. She felt that she had no control over her actions and that she had become almost robotic. Her voice did not sound like her own and her hands sometimes appeared to distort in size and image. She believed that she had gone completely crazy. But, then the next day the sensations would pass, or she would not be aware of them, and things would feel better. (Baker, Hunter, Lawrence, & David, 2007; pp. 20-21)

APPENDIX F: DIAGNOSTIC AND SYMPTOM RATING SCALE

Please choose the *one* diagnosis most representative of the above case.

○ Schizophrenia	○ Generalized Anxiety Disorder	○ Dissociative Disorder NOS
○ Schizoaffective Disorder	○ Acute Stress Disorder	○ Depersonalization Disorder
○ Psychotic Disorder NOS	○ Obsessive-Compulsive Disorder	○ Schizoid Personality Disorder
○ Major Depressive Disorder	○ Social Phobia	○ Schizotypal Personality Disorder
○ Dysthymic Disorder	○ Specific Phobia	○ Borderline Personality Disorder
○ Mood Disorder NOS	○ Posttraumatic Stress Disorder	○ Avoidant Personality Disorder
○ Panic Disorder	○ Somatization Disorder	○ Obsessive-Compulsive Personality Disorder

	1 - Not at all representative	2	3	4	5	6	7 - Highly representative
Schizophrenia	○	○	○	○	○	○	○
Schizoaffective Disorder	○	○	○	○	○	○	○
Psychotic Disorder NOS	○	○	○	○	○	○	○
Major Depressive Disorder	○	○	○	○	○	○	○
Dysthymic Disorder	○	○	○	○	○	○	○
Mood Disorder NOS	○	○	○	○	○	○	○
Panic Disorder	○	○	○	○	○	○	○
Generalized Anxiety Disorder	○	○	○	○	○	○	○

	1 - Not at all representative	2	3	4	5	6	7 - Highly representative
Acute Stress Disorder	○	○	○	○	○	○	○
Obsessive-Compulsive Disorder	○	○	○	○	○	○	○
Social Phobia	○	○	○	○	○	○	○
Specific Phobia	○	○	○	○	○	○	○
Posttraumatic Stress Disorder	○	○	○	○	○	○	○
Somatization Disorder	○	○	○	○	○	○	○
Depersonalization Disorder	○	○	○	○	○	○	○
Dissociative Disorder NOS	○	○	○	○	○	○	○
Schizoid Personality Disorder	○	○	○	○	○	○	○
Schizotypal Personality Disorder	○	○	○	○	○	○	○

	1 - Not at all representative	2	3	4	5	6	7 - Highly representative
Borderline Personality Disorder	○	○	○	○	○	○	○
Avoidant Personality Disorder	○	○	○	○	○	○	○
Obsessive-Compulsive Personality Disorder	○	○	○	○	○	○	○

Please rate each of the following symptoms in terms of their presence in the vignette.

	1 - Definitely Absent	2	3 - Possibly Present	4	5 - Definitely Present
excessive anxiety and worry	○	○	○	○	○
difficult for person to control worry	○	○	○	○	○
marked or persistent fear that is excessive or unreasonable and cued by the presence or anticipation of a specific object or situation	○	○	○	○	○
pervasive pattern of social and interpersonal deficits marked by acute discomfort with close relationships and by cognitive or perceptual distortions or eccentricities of behavior	○	○	○	○	○

	1 - Definitely Absent	2	3 - Possibly Present	4	5 - Definitely Present
excessive social anxiety that does not diminish with familiarity and is associated with paranoid fears rather than negative judgments about the self	○	○	○	○	○

	1 - Definitely Absent	2	3 - Possibly Present	4	5 - Definitely Present
inhibited in new interpersonal situations because of feelings of inadequacy	○	○	○	○	○
views self as socially inept, personally unappealing, or inferior to others	○	○	○	○	○
lack of close friends or confidants other than first-degree relatives	○	○	○	○	○
exposure to a feared social situation or stimulus invariably provokes anxiety	○	○	○	○	○
almost always chooses solitary activities	○	○	○	○	○
fear of dying	○	○	○	○	○
feelings of restlessness, being keyed up, or on edge	○	○	○	○	○
hypervigilance	○	○	○	○	○
ideas of reference	○	○	○	○	○
suspiciousness or paranoid ideation transient, stress-related paranoid ideation or severe dissociative symptoms	○	○	○	○	○
	○	○	○	○	○
behaviors or mental acts that are aimed at preventing or reducing	○	○	○	○	○

	1 - Definitely Absent	2	3 - Possibly Present	4	5 - Definitely Present
distress or preventing some dreaded event or situation					
behavior or appearance that is odd, eccentric, or peculiar					
chronic feelings of emptiness					
negative symptoms, i.e., affective flattening, alogia, avolition					
absence of emotional responsiveness					
emotional numbing					
inappropriate or constricted affect					
takes pleasure in few, if any, activities					
shows emotional coldness, detachment, or flattened affectivity					
identity disturbance and markedly and persistently unstable self-image or sense of self					
self-negation (reluctance to acknowledge a situation, emotion, or cognition)					
self-objectification (disorientation and the experience of being					

	1 - Definitely Absent	2	3 - Possibly Present	4	5 - Definitely Present
numb, dead, or inanimate)					
persistent or recurrent experiences of feeling detached from, and as if one is an outside observer of, one's mental processes or body (as if in a dream)					
a feeling of change throughout, involving estrangement from the self and/or a subjective change in one's perception of the environment					
inauthenticity (loss of a sense of genuineness about one's behavior)					
heightened self-observation (state of increased self-awareness; feeling of being a disembodied observer contemplating one's actions and mental activity)					
fear of losing control or going crazy					
loss of feelings of agency (feeling that one is not in charge of one's movements or					

	1 - Definitely Absent	2	3 - Possibly Present	4	5 - Definitely Present
mental activity)					
depressed mood most of the day, nearly every day, as indicated by either subjective report or others' observations					
low self-esteem					
markedly diminished interest or pleasure in all, or almost all, activities most of the day, nearly every day					
insomnia or hypersomnia nearly every day					
diminished ability to think or concentrate, or indecisiveness, nearly every day					
difficulty concentrating or mind going blank					
poor concentration					
recurrent and persistent thoughts, impulses, or images that are experienced as intrusive and inappropriate and that cause marked anxiety or distress					
thoughts, impulses, or images that are not simply excessive worries about real-life problems					

	1 - Definitely Absent	2	3 - Possibly Present	4	5 - Definitely Present
changes in the subjective experience of memory (the subjective feeling of not being able to recall things or having the feeling that the person was not part of the episode)	○	○	○	○	○
reduction in awareness of surroundings	○	○	○	○	○
feelings of thought emptiness	○	○	○	○	○
subjective feeling of inability to evoke images	○	○	○	○	○
distortions in the experiencing of time	○	○	○	○	○
unusual perceptual experience including bodily illusions	○	○	○	○	○
hallucinations	○	○	○	○	○
changes in visual, auditory, tactile, gustatory, and/or olfactory experience	○	○	○	○	○
delusions	○	○	○	○	○
odd beliefs or magical thinking that influences behavior and is inconsistent with subcultural norms	○	○	○	○	○
odd thinking and speech	○	○	○	○	○

	1 - Definitely Absent	2	3 - Possibly Present	4	5 - Definitely Present
a distinct, non-delusional and ego-dystonic feeling of unreality	○	○	○	○	○
objects, people, and/or surroundings seem unreal, distant, aritifical, colorless, or lifeless	○	○	○	○	○
derealization (loss of familiarity with friends or surroundings)	○	○	○	○	○
parasthesias (numbness or tingling sensations)	○	○	○	○	○
changes in body experience (subjective feeling of change in size of parts of the body, feeling weightless, or feeling parts of the body don't belong to self)	○	○	○	○	○
body detachment (perceptions of the body as distorted or detached)	○	○	○	○	○
marked or persistent fear of social or performance situations in which the person is exposed to unfamiliar people or to possible scrutiny and fears embarrassment	○	○	○	○	○

APPENDIX G: DEMOGRAPHIC AND PROFESSIONAL INFORMATION QUESTIONNAIRE

Finally, please answer the following questions about yourself.

Please indicate your age.

Please indicate your gender.

- Male
- Female

Please indicate your ethnicity.

- Asian / Pacific Islander
- African American / Black
- Hispanic / Latino
- Non-Hispanic Caucasian / White
- Native American
- Other

Please indicate your highest degree.

- Ph.D.
- Psy.D.
- Ed.D.
- Other

Please indicate the year you received your doctoral degree.

Please indicate the number of years of clinical experience you have since receiving your doctoral degree.

Please indicate your theoretical orientation.

- Cognitive-Behavioral
- Cognitive
- Behavioral
- Psychodynamic
- Humanistic
- Integrative or Eclectic
- Other

Please indicate your primary work setting.

- Community Mental Health Center
- University Medical School
- VA Medical Center
- General Medical Hospital
- State Psychiatric Facility
- Private Psychiatric Facility
- Correctional Facility
- University Academic Department
- Private Practice
- Other

If applicable, please indicate your secondary and tertiary work settings.

- Community Mental Health Center
- University Medical School
- VA Medical Center
- General Medical Hospital
- State Psychiatric Facility
- Private Psychiatric Facility

- [ ] Correctional Facility
- [ ] University Academic Center
- [ ] Private Practice
- [ ] Other

Please indicate the percentage of time you spend in each of the following activities (total should equal 100%).
Clinical Services:
0
Research:
0
Supervision:
0
Administration:
0
Teaching:
0
Other:
0
Total
0

Please indicate the percentage of your patient population that is inpatient.

Please indicate the percentage of your patient population that is outpatient.

Please indicate the type of disorders that you commonly encounter in your clinical practice (check all that apply).

- [ ] Disorders usually first diagnosed in infancy, childhood, or adolescence
- [ ] Cognitive disorders
- [ ] Substance use disorders
- [ ] Schizophrenia and other psychotic disorders
- [ ] Mood disorders
- [ ] Anxiety disorders
- [ ] Dissociative disorders

- [ ] Somatoform disorders
- [ ] Factitious disorders
- [ ] Impulse Control disorders
- [ ] Eating disorders
- [ ] Sleep disorders
- [ ] Adjustment disorders
- [ ] Personality disorders

Please indicate the percentage of your clinical work with the following groups (total should equal 100%).

Children (12 and under):
0

Adolescents (ages 13 to 17):
0

Young Adults (ages 18 to 29):
0

Adults (ages 30 to 45):
0

Middle Aged (ages 46 to 64):
0

Older Adults (ages 65 and over):
0

Total
0

Please rate the following items:

	1 - Very Low	2	3	4	5	6	7 - Very High
frequency of use of the DSM-IV:	○	○	○	○	○	○	○
familiarity with the DSM-IV:	○	○	○	○	○	○	○
familiarity with Depersonalization Disorder:	○	○	○	○	○	○	○
frequency of treating individuals with Depersonalization Disorder:	○	○	○	○	○	○	○

APPENDIX H: RATINGS[a] FOR SYMPTOMS AND DIMENSIONS OF DPD AND DEPERSONALIZATION BY VIGNETTE AND FOR THE OVERALL SAMPLE

Variable	Vignette 1 (n = 104) M (SD)	Vignette 2 (n = 111) M (SD)	Total Participants (n = 215) M (SD)
DSM-IV	4.48 (0.81)	4.76 (0.62)	4.62 (0.73)
ICD-10	3.27 (1.11)	4.24 (0.94)	3.77 (1.13)
objects/people seem unreal	3.29 (0.89)	4.24 (0.87)	3.78 (0.99)
derealization[b]	3.25 (1.33)	4.24 (1.01)	3.76 (1.27)
Torch	3.69 (0.69)	4.06 (0.61)	3.88 (0.67)
feeling of change throughout	4.13 (1.03)	4.59 (0.71)	4.37 (0.90)
feeling of unreality	4.03 (0.98)	4.28 (0.98)	4.16 (0.99)
emotional numbing[c]	2.90 (1.25)	3.32 (1.15)	3.12 (1.21)
Jacobs & Bovasso	3.20 (0.72)	3.70 (0.64)	3.46 (0.72)
self-objectification	4.36 (1.00)	4.14 (1.05)	4.24 (1.03)
body detachment	3.78 (1.11)	4.00 (1.17)	3.89 (1.14)
derealization[b]	3.25 (1.33)	4.24 (1.01)	3.76 (1.27)
inauthenticity	2.90 (1.23)	3.91 (1.03)	3.43 (1.24)
self-negation	1.74 (0.87)	2.22 (1.12)	1.99 (1.04)
Sierra & Berrios	3.31 (0.69)	3.61 (0.74)	3.47 (0.73)
feelings of loss of agency[d]	4.20 (0.90)	3.89 (11.05)	4.04 (0.99)
altered body experience[e]	3.62 (1.19)	4.00 (1.27)	3.81 (1.24)
emotional numbing[b]	2.90 (1.25)	3.32 (1.15)	3.12 (1.21)
visual unreality	2.49 (1.25)	3.21 (1.39)	2.86 (1.37)
Blanco-Campal	3.18 (0.64)	3.56 (0.62)	3.38 (0.66)
heightened self-observation	4.11 (0.93)	4.48 (0.72)	4.30 (0.85)
loss of feelings of agency[d]	4.20 (0.90)	3.89 (1.05)	4.04 (0.99)
desomatization[e]	3.62 (1.19)	4.00 (1.27)	3.81 (1.24)
derealization[b]	3.25 (1.33)	4.24 (1.01)	3.76 (1.27)
de-affectualization[c]	2.90 (1.25)	3.32 (1.15)	3.12 (1.21)
thought emptiness	2.57 (1.28)	2.81 (1.22)	2.69 (1.26)
changes in memory experience	2.32 (1.21)	2.87 (1.21)	2.61 (1.24)
distortion in time	2.35 (1.04)	2.80 (1.20)	2.58 (1.14)

[a] Ratings using a scale of 1 (Definitely Absent) to 5 (Definitely Present).
[b] 'derealization' variables use the same data
[c] 'emotional numbing' and 'de-affectualization' are coded as the same variable in the data
[d] 'loss of feelings of agency' and 'feelings of agency' are coded as the same variable in the data
[e] 'altered body experience' and 'desomatization' are coded as the same variable in the data

APPENDIX I: HIGHEST RATED SYMPTOMS FOR VIGNETTE 1 AND VIGNETTE 2:

RESULTS OF ONE-WAY MANOVA

Variable	Vignette 1 (n = 104) *M* (*SD*)	Vignette 2 (n = 110) *M* (*SD*)	*df*	*F*	*p*
persistently feels detached[b]	4.48 (1.00)	4.76 (0.62)	1, 212	7.70	.006
fear of losing control[c]	4.62 (0.61)	4.06 (1.02)	1, 212	23.47	.000
feeling of change throughout[d]	4,13 (1,93)	4.59 (0.71)	1, 212	15.29	.000
heightened self-observation[e]	4.11 (0.93)	4.48 (0.72)	1, 212	10.36	.001
self-objectification[f]	4.36 (1.00)	4.14 (1.05)	1, 212	2.45	.119
feeling of unreality[d]	4.03 (0.89)	4.28 (0.98)	1, 212	3.29	.071
objects/surroundings seem unreal[g]	3.29 (0.89)	4.24 (0.87)	1, 212	47.68	.000
derealization[e, f]	3.25 (1.33)	4.24 (1.01)	1, 212	37.59	.000
loss of feelings of agency[e, h]	4.20 (0.90)	3.89 (1.05)	1, 212	5.74	.017
body detachment[f]	3.78 (1.11)	4.00 (1.17)	1, 212	1.85	.175
changes in body experience[e, h]	3.62 (1.19)	4.00 (1.27)	1, 212	4.97	.027

[a] Ratings using a scale of 1 (Definitely Absent) to 5 (Definitely Present).
[b] *DSM-IV* DPD
[c] *DSM-IV* panic attack
[d] Torch (1987): Dimensions of depersonalization
[e] Blanco-Campal (2006): DPD symptoms
[f] Jacobs and Bovasso (1992; 1996): Dimensions of depersonalization
[g] *ICD-10* DPD
[h] Sierra and Berrios (2001): Dimensions of DPD

APPENDIX J: AVERAGE SYMPTOM RATINGS[a] FOR PROPOSED SYMPTOMS AND DIMENSIONS OF DEPERSONALIZATION DISORDER AND DEPERSONALIZATION FOR VIGNETTES 1 AND 2: RESULTS OF ONE-WAY MANOVA (n = 207)

Variable	Vignette 1 (n = 99) M (SD)	Vignette 2 (n = 108) M (SD)	df	F	p	partial η^2
DSM-IV	4.48 (0.81)	4.76 (0.62)	1, 205	9.78	.008	.046
ICD-10	3.27 (1.11)	4.24 (0.94)	1, 205	49.94	.000	.186
Torch	3.69 (0.69)	4.06 (0.61)	1, 205	29.26	.000	.125
Jacobs & Bovasso	3.20 (0.72)	3.70 (0.64)	1, 205	9.78	.008	.081
Sierra & Berrios	3.31 (0.69)	3.61 (0.74)	1, 205	9.78	.008	.039
Blanco-Campal	3.18 (0.64)	3.56 (0.62)	1, 205	9.78	.008	.081

[a]Ratings using a scale of 1 (Definitely Absent) to 5 (Definitely Present)

APPENDIX K: INTERCORRELATIONS BETWEEN AVERAGE RATINGS[a] FOR THE DPD CRITERIA SETS AND THE PROPOSED DPD AND DEPERSONALIZATION SYMPTOMS AND DIMENSIONS

Variable	1	2	3	4	5	6
DSM-IV		.40**	.58**	.52**	.41**	.46**
ICD-10			.55*	.58**	.40**	.53**
Torch				.62**	.57**	.62**
JB					.60**	.77**
SB						.72**
BC						

[a]Ratings using a scale of 1 (Definitely Absent) to 5 (Definitely Present)
Note. JB = Jacobs & Bovasso; SB = Sierra & Berrios; BC = Blanco-Campal.