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Characterizing eating disorders in a personality disorders sample

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ABSTRACT

The presence of a comorbid eating disorder (ED) and personality disorder (PD) is associated with greater problems and poorer functioning than having an ED alone or PD alone. This pattern is also found for non-ED axis I disorders and PDs. This study aims to examine if an ED, compared to other non-ED axis I disorders, in a PD sample confers greater risks for: number and type of non-ED axis I and axis II disorders, suicide attempts and non-suicidal self-injury, and poorer psychosocial functioning. Standardized interviews were conducted on 166 females and 166 males with PDs. In females with PDs, EDs, as compared to other axis I disorders, were associated with more non-ED axis I and II disorders (particularly borderline and avoidant PD) and poorer global functioning, but not with suicide attempts or non-suicidal self-injury. In males with PDs, EDs were associated with more axis II disorders, particularly borderline PD. Given the small group of males with EDs, these results require replication. Males and females with PDs and EDs may have multiple comorbid disorders, particularly borderline PD and for females, avoidant PD that may warrant targeting in treatment.

1. Introduction

Although there are important findings about the longitudinal course of eating disorders (EDs) among individuals with personality disorders (PDs) (Grilo et al., 2003; Zanarini et al., 2010), we understand little about what features characterize individuals with both EDs and PDs. For instance, it is unknown whether individuals with EDs and PDs differ from individuals with PDs without EDs with regards to rates of non-suicidal self-injury or suicidal behavior, co-occurrence of axis I or II disorders, or their degree of psychosocial impairment. A study examining these variables in a group with both an ED and PD compared to a group with PDs and without EDs would improve understanding of these individuals, and inform the assessment and treatment of this comorbid group.

There is some evidence that the presence of an ED in the context of borderline PD compared to borderline PD without EDs confers greater risk for co-occurrence of other axis I and II disorders. In a treatment-seeking sample of 135 females with borderline PD, presence of an ED compared to absence of an ED was associated with a greater rate of co-occurring non-ED axis I disorders (Chen et al., 2009). Similarly, greater axis I disorder comorbidity was found in treatment-seeking females with bulimia nervosa and borderline PD compared to other PD or no PD groups ($N = 134$; Rowe et al., 2008).

In addition, there are some empirical findings which suggest that an ED in the context of a PD may be particularly associated with suicidal behavior or non-suicidal self-injury. For instance, a study by Chen et al. (2009) found that anorexia nervosa in a sample of females with borderline PD conferred a significantly greater risk of recurrent suicide attempts while bulimia nervosa conferred a significantly greater risk of recurrent non-suicidal self-injury. These findings are similar to those reported by Dulit et al. (1994). This study found that individuals with bulimia nervosa were 4 times as likely to engage in frequent self-injury (≥5 lifetime acts of non-suicidal self-injury) compared to no self-injury in a group of 124 male and female inpatients with borderline PD (21% male). Frequent self-injurers were also found to be more likely to have current anorexia nervosa, but this finding failed to reach statistical significance.

The findings are mixed with regards to global assessment of functioning among individuals with an ED and a PD as compared to those with a PD alone. In a study of 200 male (44% of the sample) and female inpatients and outpatients with PDs, Skodol et al. (1993) found that an ED was associated with poorer global assessment of functioning on axis V of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-III-R; American Psychiatric Association, 1987), a finding replicated by Rowe et al. (2008). These findings were not replicated in the studies by Chen et al. (2009) or Dulit et al. (1994), although both of these studies utilized similar methodology (interviews or questionnaires).

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The finding that an axis I disorder, such as an ED, in the context of a PD, confers greater risk for problems does not appear to be specific to ED diagnoses. For instance, diagnoses of major depression and substance use disorder, rather than an ED in a PD sample, predicted suicide attempts (Yen et al., 2003). Meanwhile, Zlotnick et al. (1999) found that individuals with PDs and non-ED axis I disorders reported more suicidal behavior and non-suicidal self-injury as compared to general psychiatric patients. Individuals with PDs and comorbid axis I disorders other than EDs (mood disorders, disruptive behavior and substance use disorders) appear to have significantly poorer psychiatric prognosis long-term than individuals who only have axis I disorders alone or axis II disorders alone. For instance, individuals with co-occurring axes I and II disorders had a significantly increased risk for other axis I and axis II disorders (e.g., major depression, bipolar disorder, substance use disorder, psychosis and schizophrenia spectrum personality disorder) over 20 years compared to an axis I only group and axis II only group (an average 9-fold increased risk compared to a 2-fold increase and 1.7-fold increase, respectively) (Crawford et al., 2008). Finally, individuals with non-ED axis I disorders with PDs report poorer global assessment of functioning than individuals with PDs alone, for example in the study by Crawford et al. (2008) and in a group with substance use disorder and PDs (Skodol et al., 1999).

Given that EDs may be no different from other axis I disorders in conferring additional risks to meeting criteria for a PD alone, this study adds to the literature by asking: is there something especially different in individuals with both an ED and PD compared to individuals with other axis I disorders and PDs? The current study sought to answer this question with regards to the risk of co-occurrence of other axis I and II disorders, suicidal and non-suicidal self-injury, and global psychosocial functioning. Understanding individuals with PDs who also have EDs as compared to those with other non-ED axis I disorders has important treatment implications for understanding, for instance, what to assess for and to target in treatment. This may be important, as individuals with an ED and PD may have poorer treatment outcome than those with PDs alone. For instance, a study by Zanarini et al. (2004) in a borderline PD and other PD sample found that absence of an ED improves the odds of borderline PD remission. Harned et al. (2009) also found that although borderline PD can improve in treatment, co-occurring EDs in this sample may not. Additionally, as many studies examining individuals with EDs and PDs utilize female samples (Cassin and von Ranson, 2005) and there are gender differences in axis I disorder presentation in axis II samples (e.g., Johnson et al., 2003; Paris, 2004), we hope to add to the literature by including males in our analysis as well.

Based upon previous research (Chen et al., 2009; Dulit et al., 1994; Rowe et al., 2008), we hypothesized that presence of an ED compared to the presence of other non-ED axis I disorders in a PD sample, would confer additional risk for the co-occurrence of other axes I and II disorders. We also predicted that the presence of an ED in a PD sample would lead to a greater risk of suicide attempts and non-suicidal self-injury compared to presence of non-ED axis I disorders (Chen et al., 2009; Dulit et al., 1994). Additionally, we hypothesized that in a PD sample, a co-occurring ED would be associated with worse psychosocial functioning than other non-ED axis I disorders (Rowe et al., 2008; Skodol et al., 1993). Given the possible differences between females and males with regards to EDs and PDs and their correlates, the sample was analyzed separately for each gender.

2. Method

2.1. Participants

Participants consisted of 178 males and 174 females ($N=352$) aged 18–65 years ($M=35.90$; S.D. = 9.80) with DSM-IV PDs who were recruited from advertisements as part of ongoing research studies on personality dysfunction and assessed consecutively from January 2001 to May 2006. The study sample has been used in previous studies (Coccaro et al., 2007), $n=31$; (Lee et al., 2009), $n=40$; (McCloskey et al., 2006) ($n=78$); (McCloskey et al., 2009), $n=205$). Participants were excluded if they had a lifetime diagnosis of psychosis or bipolar disorder, organic brain syndrome, mental retardation, a current diagnosis of substance dependence or current use of psychotropic medication. In our sample, participants were predominately Caucasian ($n=182$, 52%) and African-American ($n=113$, 32%). The majority reported some college education, ($n=283$, 80%) and reported never being married ($n=189$, 54%). The University of Chicago Institutional Review Board approved the protocol and all participants provided written informed consent prior to enrollment in the study.

Individuals with (1) PDs and EDs (35/352, 9.9%) were compared with individuals with (2) PDs and non-ED axis I disorders (297/352, 84.4%), excluding 16/352 (4.5%) individuals with PDs only (5/16 females and 11/16 males). This latter group was too small to allow for group comparisons. Of the 332 individuals examined, 10.5% (35/332) had a current or lifetime ED. Of the 166 females in the group, 29 (17.5%) had a current or lifetime ED and of the 166 males, 6 (3.6%) had a current or lifetime ED. Of the females with EDs, most met criteria for EDs otherwise not specified (16/166, 9.6%), followed by binge-eating disorder (8/166, 4.8%), anorexia nervosa (3/166, 1.8%) and bulimia nervosa (2/166, 1.2%). Of the males with EDs, most met criteria for binge-eating disorder (3/166, 1.8%), followed by anorexia nervosa (2/166, 1.2%) and EDs not otherwise specified (1/166, 0.6%). Although it would have been interesting to compare the different ED diagnostic categories in this PD sample, we had to collapse these diagnoses given the small size of the ED group.

2.2. Measures

2.2.1. The Structured Clinical Interview for the DSM-IV

The Structured Clinical Interview for the DSM-IV (First et al., 1995) is a semi-structured clinical interview that is used to diagnose DSM-IV axis-I disorders including lifetime EDs. This interview has shown adequate inter-rater reliability with kappa's ranging between 0.70 and 1.00.

2.2.2. The Structured Interview for DSM-IV Personality

The Structured Interview for DSM-IV Personality (Pfohl et al., 1995), which has adequate inter-rater reliability, was used to assess DSM IV axis II disorders.

2.2.3. The Suicidal Behavior History Form

The Suicidal Behavior History Form (Endicott and Spitzer, 1978) is a semi-structured interview that was used to determine history of past suicide attempts. This interview is derived from the Schedule for Affective Disorders and Schizophrenia-Lifetime Version (Endicott and Spitzer, 1978), a commonly used structured interview with high inter-rater reliability (Coccaro et al., 1996).

2.2.4. The Self-injurious Behavior History Form

The Self-injurious Behavior History Form (Coccaro et al., 1996) is a semi-structured interview that was used to assess the number of past non-suicidal self-injuries, which is defined as "a physically self-damaging act with the conscious intent to hurt one's self, but not to end one's life."

2.2.5. Global Assessment of Functioning (DSM-IV)

Global Assessment of Functioning (DSM-IV); APA, 2000) is a 0–100 score assessing the extent to which social and occupational functioning is affected by psychological problems, with lower scores reflecting greater psychosocial impairment.

2.3. Procedure

Participants completed a clinical interview conducted by trained doctoral-level diagnosticians. Axis I and axis II disorders were assessed using DSM-IV criteria via the Structured Clinical Interview for the DSM-IV and Structured Interview for DSM Personality, respectively. History of suicidal and self-injurious behavior was assessed using the Suicidal Behavior History Form and the Self-injurious Behavior History Form. Psychosocial impairment was estimated using a Global Assessment of Functioning score. Diagnoses, suicidal behavior and non-suicidal self-injury history, and level of psychosocial impairment were confirmed using a "best estimate procedure" in which the written diagnostic report and raw interview data were reviewed by a multidisciplinary committee of psychiatrists, psychologists, and diagnosticians who were blind to the study hypotheses (Klein et al., 1994).

2.4. Data analysis

Analyses were conducted on females and males separately to account for the gender differences seen in axes I and II disorders, which are also seen in PD samples (Johnson et al., 2003; Paris, 2004). *T*-tests and chi-square tests were conducted comparing individuals with PDs and EDs and those with other non-ED axis I disorders on demographics, number and type of non-ED axis I and axis II disorders, suicide attempts and non-suicidal self-injury, and global assessment of functioning. Where differences on these variables between the PD with ED or PD with non-ED axis I groups were found, hierarchical regressions were conducted. For females, in comparing the PD with ED group and PD with other axis I disorder group, minority race was less frequently found in the former group and this result had a trend to significance ($p=0.052$). Given this and the fact that there is some evidence that EDs in females may