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Interpersonal problems across restrictive and binge-purge samples:

Data from a community-based eating disorders clinic

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Accepted Manuscript

Eating Behaviors

Word count: 1997

Tables: 2

Figures: 0

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Abstract

Contemporary models of eating disorders suggest that interpersonal problems contribute to the maintenance of eating disorders. This study examined whether baseline interpersonal problems differed across eating disorder diagnoses and across eating disorder subtypes (“restrictors” vs. “binge-purge” patients) in a large clinical sample. Patients with a primary eating disorder diagnosis ($N = 406$) completed measures of interpersonal problems, eating disorder symptoms, and mood prior to treatment at a specialist eating disorders clinic. Across the sample, more severe eating disorder psychopathology was associated with significantly greater difficulty socializing. Anorexia Nervosa (AN)/restrictor patients reported significantly greater difficulty socializing than Bulimia Nervosa (BN)/binge-purge patients. AN patients reported significantly greater difficulty on a measure of competitiveness/assertiveness compared to BN and Eating Disorder Not Otherwise Specified patients. All findings were significant after controlling for comorbid depression and anxiety symptoms. Interpersonal problems appear to be unique risk factors for eating disorders. Specific interpersonal mechanisms include difficulties socializing and being assertive, which were most pronounced in AN patients. These findings provide potential avenues for enhancing interventions, such as adjunctive assertiveness training for AN.

Keywords: eating disorders; interpersonal problems; inventory of interpersonal problems; anorexia nervosa; bulimia nervosa

1.0 Introduction

Interpersonal maintenance models of eating disorders have recently emerged (Arcelus, Haslam, Farrow, & Meyer, 2013; Rieger et al., 2010), and empirical evidence is needed to test whether such conceptualizations reflect the interpersonal difficulties that eating disorder patients present with in routine clinical settings. Interpersonal problems refer to difficulties in relating to or communicating with others, and encompass both the type of interpersonal interactions that a person might find difficult and the degree to which the individual is distressed by these difficulties (Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988).

Interpersonal difficulties implicated in the maintenance of eating disorders include low assertiveness, high aggressiveness, social anxiety, and social skills deficits (Arcelus et al., 2013). However, Arcelus et al.'s systematic review identified inadequacies of the existing literature, notably the small sample sizes in clinical studies and the pervasive failure to control for comorbid psychopathology. Based on the available evidence, Arcelus et al. proposed a preliminary interpersonal maintenance model that implicated poor emotional support and social anxiety in general, but proposes that interpersonal difficulties differ across eating disorder subtypes. Specifically, AN/restrictive eating disorders are purportedly associated with avoidance of emotional expression to others, whereas BN/binge-purge disorders are associated with distrust and conflict with others.

The present study aimed to test the key assumption of the Arcelus et al. (2013) model, that interpersonal difficulties would differ across eating disorder diagnoses (AN, BN, EDNOS) and/or symptom presentations (restrictors vs. binge-purge patients). Consistent with this model, it was hypothesized that (1) AN/restrictor patients would score significantly higher than BN/binge-purge patients on Problems with Socializing, (2) BN/binge-purge patients would score significantly lower than AN/restrictor patients on Problems with Competition, and (3) BN/binge-purge patients would score higher than AN/restrictor patients on Problems with Independence.

No specific hypotheses were made for EDNOS patients given the limited research available from which to draw clear hypotheses.

2.0 Method

2.1 Participants

Participants (N=406, 16+ years old, 97% female) had a principal eating disorder diagnosis (American Psychiatric Association, 2000) and were referred by their primary care physician or psychiatrist to a specialist eating disorder service. Diagnoses were assessed using the Eating Disorder Examination (EDE Version 12, Fairburn & Wilson, 1993), and the Mini International Neuropsychiatric Interview (MINI, Lecrubier et al., 1997). Mean age was 25.3 years (SD=8.7, range 16-71 years). Principal eating disorders were AN (19.6%), BN (40.1%), and EDNOS (40.3%) with a mean chronicity of 7.9 years (SD=7.5 years).

2.2 Measures

2.2.1 Inventory of Interpersonal Problems-32 (IIP-32, Barkham, Hardy, & Startup, 1996). The IIP-32 is a 32-item self-report measure that assesses difficulties people might experience in interpersonal relationships. Respondents rate how distressed they have been by each problem on a 5-point Likert scale ranging from 0 (“not at all”) to 4 (“extremely”). Six of the 8 subscales were used in the current study (Hard to be Sociable, Assertive, Involved; Too Open, Aggressive, and Dependent). The scale has good internal consistency and validity with eating disorder patients (McEvoy, Burgess, & Nathan, 2013). All IIP-32 subscale scores were ipsatized and three bipolar scores were computed (Barkham et al., 1996)¹. A positive score indicates that the interpersonal skill is “hard to” do whereas a negative score indicates something the patient does “too much”. Internal consistencies were adequate for Problems with Competition and Socializing ($\alpha=.74-.85$), and fair for Independence ($\alpha=.62$).

2.2.2 Eating Disorder Examination Questionnaire (EDE-Q, Fairburn & Beglin, 1994). The EDE-Q Global scale measured severity of eating disorder psychopathology. The EDE-Q has

acceptable reliability and validity and compares favorably with the clinician-rated version (Agras et al., 2000). Internal reliability was high ($\alpha=.87$).

2.2.3 Depression Anxiety Stress Scales (DASS, Lovibond & Lovibond, 1995). The depression (DASS-D) and anxiety (DASS-A) subscales assessed the presence of depressive and anxious symptomatology. The DASS is a 42-item self-report measure with acceptable reliability and validity. Internal reliabilities were high ($\alpha=.90-.95$).

2.3 Procedure

Patients completed the IIP-32, EDE-Q, and DASS prior to their initial assessment. Assessment was conducted with a Clinical Psychologist specializing in eating disorders treatment and included administration of the EDE and MINI interviews. All participants provided written informed consent.

2.4 Data Analysis

There was no evidence of severe skewness, kurtosis, or extreme outliers on any variable. Pearson bivariate correlations were used to examine associations between EDE-Q Global and IIP-32 dimensions. Analysis of Variance (ANOVA) was used to compare diagnostic groups (AN, BN, EDNOS) and symptom presentations (restrictor vs. binge-purge) on IIP-32 dimensions. Main effects were followed up with post-hoc univariate ANOVAs. Patients were grouped according to whether they engaged only in restricted eating or in binge-purge behavior for the 28 days prior to assessment based on the EDE interview. Restrictors included patients with a diagnosis of “AN–restricting subtype” and EDNOS patients who had engaged in severe dietary restriction without any episodes of objective binge-eating. Severe dietary restriction was assessed by endorsement of “extreme restriction outside objective bulimic episodes” (i.e., <1,200 kcal)” or “no eating outside objective bulimic episodes” on the “Dietary Restriction outside bulimic episodes” item of the EDE. Binge-purge patients included patients with BN, a diagnosis of “AN-binge/purge subtype,” and EDNOS who reported objective binge eating episodes. Nineteen patients were excluded due to missing data on binge-purge episodes.

ANOVA was used to compare restrictor and binge-purge patients within the EDNOS and AN groups. DASS-D and DASS-A were entered as covariates.

3.0 Results

3.1 Associations between IIP-32 and Eating Disorder Symptoms

EDE-Q Global was significantly associated with Problems with Socializing ($r=.31$, $p<.001$; $N=406$), with more severe psychopathology associated with greater difficulties socializing. No other significant associations emerged.

3.2 Comparison of Diagnostic Groups (BN, AN, EDNOS) on IIP-32

ANOVAs with Diagnostic Group as the independent variable (AN, BN, EDNOS), the three IIP-32 dimensions as dependent variables, and DASS-D and DASS-A as covariates yielded a significant main effect of Diagnostic Group on Problems with Socializing, $F(2,401)=3.05$, $p<.05$, and Problems with Competition, $F(2,401)=3.40$, $p<.05$. Consistent with Hypothesis 1, AN patients had significantly more difficulty socializing than BN patients, $F(1,239)=6.55$, $p<.02$. EDNOS patients did not differ significantly from AN or BN patients. Consistent with Hypothesis 2, on Problems with Competition BN patients had significantly less difficulty than AN patients, $F(1,239)=5.69$, $p<.02$. EDNOS patients did not differ significantly from either AN or BN patients. Inconsistent with Hypothesis 3, the main effect of Diagnostic Group was not significant for Problems with Independence. Adjusted means (SE) are presented in Table 1. DASS-D significantly predicted scores only on Problems with Socializing, $F(1,401)=47.51$, $p<.001$, Partial $\eta^2=.11$. DASS-A did not significantly predict scores on any dimension (Range Partial $\eta^2=<.001$ to $.008$, all $ps>.05$).

3.3 Comparison of Symptom Groups on IIP-32

Consistent with Hypothesis 1, ANOVA yielded a significant main effect of Symptom Group (restrictors vs. binge-purge patients) on Problems with Socializing, $F(1,383)=5.95$, $p<.02$, with restrictors scoring higher than binge-purge patients. Inconsistent with Hypotheses 2 and 3,

there was no significant main effect on the other IIP dimensions (see Table 2). DASS-D significantly predicted scores on Problems with Socializing, $F(1,383)=50.10$, $p<.001$, Partial $\eta^2=.12$, but did not predict any other dimension. DASS-A did not significantly predict any dimension (Range Partial $\eta^2=<.001$ to $.01$, all $ps>.05$).

3.4 Comparison of Symptom Groups within the EDNOS and AN

For EDNOS patients, ANOVA yielded a significant main effect of Symptom Group on Problems with Socializing, $F(1,140)=6.191$, $p=.014$, with restrictors ($n=102$) scoring higher than binge-purge ($n=42$) patients. The main effect of Symptom Group was not significant on any other dimension (Range Partial $\eta^2=<.001$ to $.014$, all $ps>.05$). For AN patients, ANOVA yielded no significant main effect of Symptom Group (AN restricting, $n=53$, vs. AN binge-purge, $n=26$) on any dimension (Range of non-significant Partial $\eta^2=<.001$ to $.011$, all $ps>.05$).

4.0 Discussion

This study examined whether interpersonal difficulties differed across diagnoses (AN, BN, EDNOS) and/or across symptom presentations (restrictors vs. binge-purge patients) in a large sample of eating disorder patients. The first hypothesis was supported with AN patients reporting significantly greater difficulty socializing than BN patients. EDNOS patients did not significantly differ from AN or BN patients, but within the EDNOS group restrictors had more difficulty socializing than binge-purge patients. Within the AN group, restrictors and binge-purge patients did not significantly differ on this dimension. Thus, diagnosis was a stronger predictor of socializing difficulties for those with AN or BN, whereas the presence of severe dietary restriction predicted socializing difficulties for those with EDNOS. These findings are consistent with previous research (McEvoy et al., 2013) and with Arcelus et al.'s (2013) proposition that AN/restrictors are more avoidant of expressing emotions to others than BN/binge-purge patients. This study together with lifetime prevalence studies (e.g., Brewerton et al.,

1995; Halmi et al., 1991) suggest that social anxiety is more problematic for AN/restrictors than for BN/binge-purgers, although social anxiety disorder is elevated in BN patients compared to the general population (McEvoy, Grove, & Slade, 2011).

The second hypothesis, that BN/binge-purge patients would score lower (i.e., more aggressive) on the Problems with Competition dimension than AN/restrictor patients, was supported with respect to diagnosis with BN patients scoring lower than AN patients. Notably, on average BN patients scored positively on this dimension, which suggested that although they were relatively more aggressive than their AN counterparts, they did not present as being aggressive. This contrasts with the Arcelus et al. (2013) model, in which BN patients are purported to have difficulties with aggression and hostility. The second hypothesis was not supported with respect to symptom presentation, with no difference found between restrictor and binge-purge patients across the whole sample or within AN or EDNOS subgroups. Fairburn (2008) identified the potential utility of assertiveness training for eating disorder patients and our findings suggest that it could be a useful adjunct in CBT-E for AN patients in particular.

The third hypothesis was not supported, with no significant differences observed on the Problems with Independence dimension across diagnoses or symptom presentations. Although Lampard, Byrne, and McLean (2011) observed an association between binge-purge severity and scores on the Too Dependent subscale of the IIP-32, this discrepancy may be attributable to their use of a non-clinical sample, unipolar IIP-32 scales, and failure to control for comorbidity. Overall, this study underscores the important role of interpersonal difficulties in eating disorders, independent of depression and anxiety symptoms.

Limitations of this study include reliance on self-reported interpersonal problems, which might be vulnerable to biases (e.g., social desirability) and the cross-sectional design. It is likely that the association between eating disorder presentations and interpersonal difficulties is dynamic with patients moving between diagnoses over time (Braun, Sunday, & Halmi, 1994; Bulik, Sullivan, Fear, & Pickering, 1997), thus a future research direction is to monitor

interpersonal problems and their relationship with symptom presentation longitudinally. This study tested some but not all aspects of the Arcelus et al. (2013) model. Further research is required to test if other components of the model (e.g., fear of negative evaluation) distinguish AN/restrictors from BN/binge-purge patients.

The present study cannot determine whether interpersonal difficulties are a cause or a consequence of the eating disorder. The pursuit of extreme dietary restriction may cause more negative social consequences for AN/restrictor patients, such as avoiding social situations involving eating, greater difficulty engaging socially due to malnutrition, or greater peer rejection as a result of being severely underweight. The psychopathology of BN patients is arguably better disguised and therefore may have fewer direct negative social consequences. Alternatively, AN/restrictor patients may have personality traits that causally contribute to both extreme dietary restriction and interpersonal difficulties. For example, obsessive-compulsive and perfectionistic personality traits are reliably associated with the maintenance of AN but not BN (Jacobi, Hayward, de Zwaan, Kraemer, & Stewart, 2004; Stice, 2002).

Strengths of the present study include the use of bipolar ipsatized scores on the IIP-32, a large clinical sample, and controlling for comorbid depression and anxiety. Overall, difficulties socializing were associated with more severe eating disorder psychopathology and were significantly more prevalent in AN/restrictor groups compared to BN/binge-purge groups. AN patients reported greater difficulty being assertive than BN and EDNOS patients. Findings highlight the important role of interpersonal difficulties as unique risk factors for eating disorders and provide potential avenues for enhancing interventions.

Footnote

¹Bipolar ipsatized scales were calculated from the following scale scores: Problems with Socializing (Hard to be sociable-Too open), Problems with Competition (Hard to be assertive – Too aggressive), Problems with Independence (Hard to be involved – Too dependent)

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Table 1. *Adjusted means (and SE) for AN, BN, and EDNOS groups on ipsatized IIP-32 factors at baseline, controlling for comorbid DASS-D and DASS-A*

IIP-32 subscale	AN (<i>N</i> = 79) M (SE)	BN (<i>N</i> = 164) M (SE)	EDNOS (<i>N</i> = 163) M (SE)	<i>F</i>	<i>p</i>	Partial η^2
Problems w Socializing	.49 (.17)	-.01 (.12)	.10 (.12)	3.05	<.05	.02
Problems w Competition	.78 (.17)	.28 (.12)	.59 (.12)	3.40	<.05	.02
Problems w Independence	-.35 (.14)	-.60 (.10)	-.73 (.10)	2.52	.08	.01

Table 2. *Adjusted means (and SE) for restrictor and binge-purge groups on ipsatized IIP-32 factors at baseline, controlling for comorbid DASS-D and DASS-A*

IIP-32 subscale	Restrictors (<i>N</i> = 155) M (SE)	Binge-purge (<i>N</i> = 232) M (SE)	<i>F</i>	<i>p</i>	Partial η^2
Problems w Socializing	.39 (.12)	.01 (.10)	5.95	<.05	.02
Problems w Competition	.60 (.12)	.40 (.10)	1.72	.19	<.01
Problems w Independence	-.62 (.10)	-.59 (.08)	.04	.85	<.01