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Associations between Weight Suppression and Dimensions of Eating Disorder Psychopathology in a Multisite Sample

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Abstract

Evidence suggests that weight suppression, the difference between an individual's highest historical body weight and current body weight, may play a role in the etiology and/or maintenance of eating disorders (EDs), and may also impact ED treatment. However, there are limited findings regarding the association between weight suppression and dimensions of ED psychopathology, particularly in multi-diagnostic ED samples. Participants were 1748 adults (94% female) from five sites with a variety of DSM-IV ED diagnoses who completed the Eating Disorder Questionnaire, a self-report measure of various attitudinal, behavioral, and medical features of EDs. Four factor analytically derived dimensions of ED psychopathology were examined: (a) weight/shape concerns, (b) binge eating/vomiting, (c) exercise/restrictive eating behaviors, and (d) weight control medication use. Hierarchical regression analyses were conducted to examine the unique association of weight suppression with each dimension (controlling for ED

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Contributors

Drs. Lavender, Crosby, Lowe, and Mitchell and Ms. Shaw led the manuscript development. Drs. Lavender and Crosby, and Ms. Shaw and Ms. Feig contributed to the analyses. Drs. Mitchell, Crow, Hill, Le Grange, and Powers designed and/or implemented the study and data collection. All authors contributed to and approved the final manuscript.

Conflict of interest

The authors of this manuscript do not have any conflicts of interest.

diagnosis and BMI), as well as the independent unique associations of three interactions: (a) weight suppression × BMI, (b) weight suppression × ED diagnosis, and (c) BMI × ED diagnosis. Results revealed that weight suppression was uniquely associated with all of the ED psychopathology dimensions except binge eating/vomiting. The weight suppression × BMI interaction was significant only for weight/shape concerns, whereas the weight suppression × ED diagnosis was not significant for any of the dimensions. Significant BMI × ED diagnosis interactions were found for all dimensions except weight/shape concerns. Overall, the current results support the salience of weight suppression across multiple dimensions of ED psychopathology, with the exception of binge eating/vomiting.

Keywords

weight suppression; eating disorders; binge eating; compensatory behaviors; body image

Weight suppression, a variable reflecting the degree to which individuals' current weights are lower than their historical highest weights (i.e., highest lifetime weight minus current weight), has received increasing attention in the eating disorder (ED) literature. Findings from previous studies have shown that greater weight suppression (i.e., larger discrepancy between highest and current weight) is associated with: (a) maintenance and onset of BN symptoms over the long term in college men and women (Keel and Heatherton, 2010); (b) weight gain over the short term (i.e., during treatment) and long term in non-clinical (Stice et al., 2011) and ED samples (Herzog et al., 2010; Lowe, Annuunziato, et al., 2006; Lowe, Davis, et al., 2006Wildes and Marcus, 2012; Witt et al., 2014); (c) longer time to ED recovery (Lowe et al., 2011); and (d) maintenance of bulimic symptoms following bulimia nervosa (BN) treatment (Butryn et al., 2006) and anorexia nervosa (AN) treatment (Wildes and Marcus, 2012; Witt et al., 2014), However, not all studies have found weight suppression to be a significant predictor of ED symptoms and/or treatment outcome variables (e.g., Carter et al., 2008; Dawkins et al., 2013; Van Son et al., 2013; Zunker et al., 2011). More recently, research has begun to examine interactions between weight suppression and other relevant variables (e.g., body mass index [BMI]) in relation to various aspects of ED psychopathology and/or treatment outcome, with mixed support for such interactions (e.g., Berner et al., 2013; Butryn et al., 2011; Dawkins et al., 2013; Witt et al., 2014).

From a conceptual perspective, weight suppression has been theorized to be an important factor in ED psychopathology for several reasons. With regard to treatment, findings suggesting that greater weight suppression predicts weight gain during treatment of both AN and BN are of importance because of the potentially problematic reactions that patients who already have extensive weight/shape concerns may experience in response to weight gain. Further, from the perspective of ED maintenance or onset, the behaviors that are necessary to maintain a suppressed weight over time (e.g., dieting, exercise, etc.) could become increasingly extreme (i.e., compensatory behaviors), which may promote the development or maintenance of binge eating behaviors (Butryn et al., 2011). Binge eating in turn may promote more extensive restrictive behaviors, potentially leading to an escalating cycle of binge eating and compensatory behaviors.

There is thus both theoretical and empirical support for weight suppression as a potentially salient variable in the etiology, maintenance, and/or treatment of EDs. However, not all studies have found weight suppression to be a significant predictor variable, suggesting the possibility that other variables may interact with weight suppression in relation to various ED psychopathology dimensions. In particular, two variables of theoretical relevance are current BMI, a variable which is typically minimally associated with weight suppression (e.g., Berner et al., 2013; Butryn et al., 2011; Keel and Heatherton, 2010), and ED diagnosis, which is relevant in light of the expected differences in weight suppression given typical presentations characterizing EDs (i.e., underweight in AN, normal weight in BN, overweight in binge eating disorder [BED]). As such, examining the extent to which weight suppression may interact with these other variables in predicting important dimensions of ED psychopathology would be a useful addition to the existing literature.

To date, much of the research examining the role of weight suppression in EDs has been conducted in samples of individuals with BN, although more recently investigations have also examined weight suppression in other ED groups (Berner et al., 2013; Wildes and Marcus, 2012; Witt et al., 2014; Zunker et al., 2011). However, there remains limited research on the role of weight suppression across EDs, as well as potential interactions between weight suppression and other theoretically relevant variables. The primary purpose of the current study was to examine the association between weight suppression and dimensions of ED psychopathology in a multi-diagnostic ED sample. More specifically, the aims included (a) examining whether weight suppression accounts for significant variance in ED psychopathology dimensions when controlling for ED diagnosis and BMI, and (b) examining whether interactions among these variables (i.e., weight suppression and BMI, weight suppression and ED diagnosis, BMI and ED diagnosis) independently account for additional significant variance in the ED dimensions. From a comprehensive measure of ED psychopathology, four factor analytically derived dimensions were selected to reflect the broad range of symptoms characterizing ED psychopathology: weight/shape concerns, binge eating/vomiting, exercise/restrictive eating behaviors, and use of weight control medications. Given previous research described above, it was hypothesized that weight suppression would be uniquely associated with each of the ED psychopathology dimensions. Given the limited prior research on the interactions between these variables in relation to ED symptoms, testing of the interactions was considered exploratory and no specific hypotheses were made.

Method

Participants

Participants in this investigation were 1748 adults (94.3% female; 90.0% Caucasian; mean age = 28.8 ± 9.7 years) with a variety of ED presentations who completed surveys at five sites: the University of Minnesota (Minneapolis, MN; *n* = 1165), the Neuropsychiatric Research Institute (Fargo, ND; *n* = 221), the University of South Florida (Tampa, FL; *n* = 43), The Center for Balanced Living (Columbus, OH; *n* = 290), and the University of Chicago (Chicago, IL; *n* = 29). With regard to DSM-IV ED diagnoses, the breakdown of the

sample was as follows: AN = 276 (15.8%), BN = 758 (43.4%), BED = 185 (10.6%), Eating Disorder Not Otherwise Specified (EDNOS) = 529 (30.3%).

Procedure

Participants were recruited from ED research/treatment facilities (the five sites noted above) and completed a questionnaire assessing ED psychopathology and related demographic and clinical characteristics, which was typically offered in the weeks prior to or at the time of their initial evaluation. All participants provided informed consent prior to completing the measure. The measure was completed independently of other data collected as part of participants' clinical care (i.e., questionnaire data collected as part of this research was not linked to other clinical data). Each of sites at which data collection occurred had Institutional Review Board approval.

Measure

The Eating Disorders Questionnaire (EDQ; Mitchell et al., 1985) is a self-report questionnaire comprised of multiple modules assessing a variety of domains relevant to current and lifetime history of ED psychopathology. Although the EDQ was not designed as a diagnostic instrument, algorithms have been developed to approximate DSM-IV ED diagnoses using EDQ items. These algorithms were used in the current investigation to assign participants diagnoses of AN, BN, BED, or EDNOS. The EDQ has demonstrated reasonable concordance with ED diagnoses obtained via standard structured interviews (kappa = 0.64; Keel et al, 2002), as well as with several subscales of Fairburn and Beglin's (1994) Eating Disorder Examination-Questionnaire (kappas = 0.64 – 0.80; Eddy et al., 2009).

In the present study, data were drawn from modules assessing weight history and weight control behaviors. In the weight history module, participants were asked to report their current height and weight, as well as their highest adult (non-pregnancy) weight and highest adolescent weight. This information was then used to derive (a) the weight suppression variable, calculated as the difference between a participant's highest weight ever and current weight, and (b) the BMI variable, calculated based on the participant's self-reported current height and weight. Additional items from the weight history module assessed attitudes related to weight and shape (e.g., "How much do you fear gaining weight?"; "How important is your weight and shape in affecting how you feel about yourself as a person?"). Participants responded to these items on a Likert-type scale ranging from 1 (not at all) to 5 (extremely). The remaining items used in the current investigation were drawn from the weight control behavior module and assessed the frequency of ED behaviors during the past month on a Likert-type scale from 1 (never) to 8 (more than once a day). Behaviors assessed included binge eating, vomiting, exercise, use of weight control medications (e.g., laxatives, diuretics, diet pills), and restrictive eating behaviors (e.g., skipping meals, fasting, eating very small meals).

Statistical Analyses

Because items on the various EDQ modules do not form specific subscales, a series of exploratory factor analyses (EFAs) were conducted to develop dependent variables (DVs)

reflecting the broad range of symptoms characterizing ED psychopathology in a multi-diagnostic sample. The EFAs were conducted with principal components analysis extraction and promax oblique rotation (allowing factors to be correlated) using items from two modules of the EDQ: weight history and weight control behaviors. The decision was made to conduct two separate EFAs due to the conceptually distinct nature of the two separate modules from which items were selected for the analyses. The first EFA was conducted with three items from the weight history module reflecting core attitudes regarding weight and shape, and the second EFA was conducted on 16 items of the weight control behavior module reflecting frequencies of various ED behaviors during the previous month. Determination of factors was based on the scree plot and eigenvalues, and decisions regarding retention or exclusion of particular items were further guided by considerations of content and theoretical consistency. Internal consistency reliabilities (Cronbach's α) were subsequently calculated for each of the DVs. Of note, not all participants had data available for all four DVs. In order to make use of all available data, analyses were conducted in a pairwise fashion such that the sample size ranged from 1206 to 1748 across the four sets of regression analyses described below.

A series of hierarchical regression analyses were conducted using each of the four ED psychopathology dimensions (derived from the EFAs as described above) as separate DVs. In each analysis, ED diagnosis (a categorical variable comprised of AN, BN, BED, and EDNOS, with dummy codes using EDNOS as the reference category) and BMI were entered as covariates in Step 1. Weight Suppression was entered in Step 2. In order to examine the extent to which the three interaction terms (weight suppression × BMI, weight suppression × ED diagnosis, BMI × ED diagnosis) accounted for variance in the ED dimensions, a separate third step was added to the hierarchical regression analyses, in which each interaction term was tested. The decision was made to examine each interaction independently, rather than entering all interactions simultaneously, due to insufficient existing literature or theory to guide either a sequential or simultaneous entry of all interaction terms. All continuous variables included in interaction terms were centered prior to analysis, and simple slopes analyses were conducted to clarify the nature of interaction terms that were found to be significant. Variables that were found to be non-normally distributed were transformed where appropriate. In light of the number of tests conducted, an alpha value of .01 was set for determining significance in all analyses.

Results

Preliminary Analyses

The first EFA included three items from the weight history module of the EDQ assessing fear of weight gain, dissatisfaction with body shape, and importance of weight and shape. As expected given the number of items included in the EFA, the scree plot supported a one factor solution (Eigenvalue: 1.95). The mean of the standardized values of the three items comprising this factor was used as the first DV, termed Weight/Shape Concerns. The internal consistency of this scale was supported (α = .75). The second EFA included 16 items from the weight control behavior module of the EDQ assessing the frequency of a variety of ED behaviors during the past month. The scree plot supported a three-factor

solution (Eigenvalues: 1.4 – 3.0). Following the initial analysis, a total of four items were removed due to low factor loadings (i.e., < .40) or conceptual concerns (i.e., an item not being conceptually consistent with other items in the factor). Means of the standardized values of the items comprising each of the three factors were used as the remaining DVs: (a) Binge Eating/Vomiting (2 items; α = .70); (b) Exercise/Restrictive Eating Behaviors (6 items; α = .72); and (c) Weight Control Medication Use (4 items; α = .67).

Table 1 presents intercorrelations, means, and standard deviations for all continuous variables utilized in the analyses. Means and standard deviations are presented as the raw (untransformed) values for those variables that were transformed prior to analysis. The total *n* for each correlation and for each of the subsequent analyses varied depending upon the number of participants with data available for each variable.

Weight/Shape Concerns

Results for analyses with weight/shape concerns as the DV are presented in Table 2. In Step 1 covariates were entered, and results revealed that both BMI and ED diagnosis were uniquely associated with the DV. Specifically, BMI was positively associated with weight/shape concerns, as was a diagnosis of BN. In Step 2, weight suppression was also found to be uniquely positively associated with weight/shape concerns, controlling for the covariates. In Step 3a, the weight suppression × BMI interaction was found to be significantly associated with weight/shape concerns. An exploration of the interaction using a simple slopes analysis revealed that at the highest BMIs (+1SD), there was no association between weight suppression and weight/shape concerns ($t = 1.52$, $p = .13$), with weight/shape concerns being consistently high across the levels of weight suppression. However, at moderate (Mean; $t = 4.27$, $p <. 001$) and the lowest (-1SD; $t = 6.98$, $p < .001$) BMIs, weight suppression was found to be positively associated with weight/shape concerns. In the Step 3b, ED diagnosis was not found to significantly interact with weight suppression in relation to weight/shape concerns. Similarly, in Step 3c, the ED diagnosis × BMI interaction was not found to be significant.

Binge Eating/Vomiting

Results for analyses with binge eating/vomiting as the DV are presented in Table 3. In Step 1, covariates were entered. BMI was not found to be uniquely associated with binge eating/vomiting, whereas ED diagnosis was. Specifically, results suggested that binge eating/vomiting were elevated in AN, BN, and BED compared to EDNOS. Weight suppression was found to be nonsignificant when added to the model in Step 2. Additionally, none of the interaction terms tested were found to be significant at $p < .01$.

Exercise/Restrictive Eating Behaviors

Results for analyses with exercise/restrictive eating behaviors as the DV are presented in Table 4. Both BMI and ED diagnosis were found to be uniquely associated with the DV in Step 1. Specifically, BMI, AN diagnosis, and BED diagnosis were all negatively associated with exercise/restrictive behaviors. In Step 2, weight suppression was found to be uniquely positively associated with exercise/restrictive eating behaviors, controlling for the covariates. In examining the first two interaction terms, neither the weight suppression ×

BMI or weight suppression × ED diagnosis interactions was found to be significant. However, the ED diagnosis × BMI interaction was significant. More specifically, the association between BMI and exercise/restrictive eating behaviors was found to be higher in AN versus EDNOS.

Weight Control Medication Use

Results for analyses with weight control medication use as the DV are presented in Table 5. In Step 1, BMI was found to be positively associated with the DV. ED diagnosis also was found to be significant, with greater weight control medication use in BN versus EDNOS, and lower weight control medication use in BED versus EDNOS. In Step 2, weight suppression was found to be uniquely positively associated with weight control medication use. In examining the interactions, neither the weight suppression × ED diagnosis or weight suppression × BMI interaction was found to be significant. However, the BMI × ED diagnosis interaction was found to be significant. Specifically, the association between BMI and weight control medication use was found to be higher in BN versus EDNOS, and a similar pattern for AN approached significance ($p = .012$).

Discussion

The aim of the current study was to contribute to the literature examining associations between weight suppression and important symptom dimensions characterizing ED psychopathology. The large and multi-diagnostic sample utilized in the current investigation provided the ability to investigate these associations across EDs, and further allowed for the examination of interactions between weight suppression, BMI, and ED diagnosis in relation to ED psychopathology dimensions. Results revealed that, controlling for BMI and ED diagnosis, weight suppression was associated with weight/shape concerns, exercise/restrictive eating behaviors, and weight control medication use, although it was not uniquely associated with binge eating/vomiting. With regard to interactions, the interaction between weight suppression and BMI was significant only for weight/shape concerns. Further, none of the interactions between weight suppression and ED diagnosis were found to be significant, whereas several significant interactions were found between BMI and ED diagnosis.

Consistent with many findings in previous studies, the current results supported the unique association between weight suppression and multiple dimensions of ED psychopathology, including both cognitive (i.e., weight/shape concerns) and behavioral (i.e., exercise/restrictive behaviors, weight control medication use) symptoms. In contrast to some previous findings, results did not suggest that weight suppression was associated with binge eating/vomiting. However, this finding is consistent with other research (e.g., Van Son et al., 2013) reporting a lack of an association between weight suppression and binge eating but a positive association between weight suppression and restrictive behaviors. The lack of a unique association between weight suppression and binge eating/vomiting in the present study is likely due in part to the substantial proportion of variance accounted for by ED diagnosis (BN in particular). The pattern of significant findings was consistent across the three dimensions of ED psychopathology for which weight suppression was a significant

unique predictor. Specifically, greater weight suppression was consistently associated with greater ED symptoms. These results are consistent with the notion that a suppressed weight may be motivated by greater weight/shape concerns and potentially accomplished through various compensatory behaviors. Further, given that weight suppression appears to suppress metabolism and promote a predisposition toward weight gain (Rosenbaum et al., 2010; Stice et al., 2011), it could fuel weight/shape concerns, creating a vicious cycle.

With regard to the interactions examined in this study, results varied depending on the specific interaction and the dimension of ED psychopathology. One consistent finding was that weight suppression did not significantly interact with ED diagnosis to predict any of the ED dimensions, suggesting that, after controlling for the other variables included in the analysis, the association between weight suppression and ED psychopathology does not vary across diagnoses. This is consistent with emerging research that has produced findings regarding the impact of weight suppression on AN that are similar to those that have been found for BN (Berner et al., 2013; Wildes and Marcus, 2012; Witt et al., 2014). With regard to the interaction of weight suppression and BMI, this interaction was significant only for weight/shape concerns, suggesting a consistently positive association between weight suppression and weight/shape concerns that was strongest at lower BMIs. Finally, an exploration of the interaction between BMI and ED diagnosis revealed mixed findings. Specifically, there was a stronger positive association between BMI and both binge eating/vomiting and exercise/restrictive eating behaviors among those with AN versus EDNOS, as well as a stronger positive association between BMI and weight control medication use among those with BN versus EDNOS.

An important consideration in interpreting the current results, particularly with regard to diagnostic differences, was the use of EDNOS as the reference category for diagnostic comparisons. A primary benefit of using this category as the reference condition is that findings reflect potentially unique difference between a given disorder and the broader, more diffuse presentation characterizing EDNOS. Further, significant differences detected with the current approach are arguably more meaningful than if a non-ED comparison group had been used, given that the current results reflect differences above and beyond the mere presence of ED psychopathology. However, the ability to detect significant main effects for the ED diagnoses, as well as for interactions including the diagnoses, was likely limited by the use of a clinical comparison group, and the heterogeneous nature of the EDNOS group complicates the interpretation of certain counterintuitive findings (e.g., the lower exercise/restrictive eating behaviors in AN versus EDNOS).

The findings of the current study should be interpreted in light of certain limitations. First, the measure used to assess dimensions of ED psychopathology and to establish proxy ED diagnoses in the current investigation was a self-report questionnaire, and was thus limited by various biases associated with self-report (e.g., retrospective recall, social desirability, etc.). However, the greater anonymity provided by a questionnaire versus interview format may have allowed participants to feel more comfortable in reporting potentially sensitive or embarrassing ED behaviors (Keel et al., 2002; Lavender and Anderson, 2009). Relatedly, the BMI variable was calculated using self-reported height and weight, as objective measurements were unavailable. Further, although the size and multi-site nature of the

sample were strengths of this investigation, there was limited diversity in terms of participant gender and ethnicity, potentially limiting the generalizability of the results. We also did not have data regarding the number of participants who declined to participate in the research, thus we cannot evaluate the extent to which individuals that completed the questionnaire may differ from those who chose not to participate. Finally, the cross sectional nature of the current data precludes the possibility of determining causality with respect to the significant associations. Prospective studies will be needed to elaborate on the temporal nature of the associations between the variables investigated in this study.

In sum, the current findings build upon previous studies of weight suppression by providing evidence for the unique association between weight suppression and various attitudinal and behavioral dimensions of ED psychopathology. Of note, the multi-diagnostic nature of the current sample allowed for an investigation of weight suppression and theoretically relevant interactions across a range of ED diagnoses, which was a particular strength of this study. Overall, support was strong for a main effect of weight suppression on various ED psychopathology dimensions (with the exception of binge eating/vomiting), whereas there was little support found for interactions between weight suppression and the covariates (BMI and ED diagnosis). Additionally, given that findings differed across the dimensions of ED psychopathology examined here, future studies, particularly those with multi-diagnostic samples, may benefit from assessing the form, frequency, and severity of ED symptoms individually (e.g., binge eating, restrictive behaviors, purging behaviors) in addition to a measure of overall ED severity. Finally, the extent to which weight suppression is better conceptualized as a construct that is independent from (yet related to) ED psychopathology (e.g., as a distinct risk and/or maintenance factor) versus a core feature of certain ED psychopathology presentations (e.g., an inherent characteristic resulting from extreme weight control behaviors driven by body shape and weight related concerns) requires further empirical investigation.

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Highlights

- Weight suppression is the difference between highest past weight and current weight
- Weight suppression is associated with eating disorder psychopathology, with the exception of binge eating/vomiting
- A multi-diagnostic ED sample completed a measure of eating disorder symptoms
- Weight suppression was uniquely associated with weight/shape concerns, exercise/restrictive behaviors, and weight control medication use
- Weight suppression interacted with current body mass index in predicting weight/shape concerns

Table 1

Pearson Correlations between Continuous Variables (N = 1206–1748)

	1	2	3	4	5	6
1. Weight/Shape Concerns	-					
2. Binge Eating/Vomiting	**.18**	-				
3. Exercise/Restrictive Behaviors	**.21**	**.10**	-			
4. Weight Control Medication Use	**.26**	**.12**	**.30**	-		
5. Body Mass Index (kg/m^2)	**.25**	.04	**−.26**	.01	-	
6. Weight Suppression (lbs)	.06	−.04	**.13**	**.08**	**−.16**	-
Mean	3.93	4.57	3.78	1.77	23.35	26.38
SD	1.03	2.42	1.55	1.28	8.58	25.77

Note. For Weight/Shape Concerns, items were rated on a 1 (not at all) to 5 (extremely) scale. For Binge Eating/Vomiting, Exercise/Restrictive Behaviors, and Weight Control Medication Use, items were rated on a 1 (never) to 8 (more than once a day) scale. Bolded values are significant at $p < .001$.

Table 2

Main Effects and Interactions for Weight/Shape Concerns (N = 1206)

	R^2	t	β	p
Step 1	.084			
Diagnosis AN		0.27	.010	=.785
Diagnosis BN		4.25	.133	**<.001**
Diagnosis BED		−1.13	−.035	=.260
BMI		7.36	.266	**<.001**
Step 2	.094			
Diagnosis AN		−0.09	−.003	=.925
Diagnosis BN		4.11	.128	**<.001**
Diagnosis BED		−0.94	−.029	=.345
BMI		7.64	.276	**<.001**
WS		3.65	.103	**<.001**
Step 3a (WS × BMI)	.100			
Diagnosis AN		−0.75	−.028	=.451
Diagnosis BN		4.25	.132	**<.001**
Diagnosis BED		−1.15	−.036	=.249
BMI		7.59	.273	**<.001**
WS		4.56	.140	**<.001**
WS × BMI		−3.00	−.092	**=.003**
Step 3b (WS × Diagnosis)	.098			
Diagnosis AN		−0.64	−.026	=.520
Diagnosis BN		4.04	.126	**<.001**
Diagnosis BED		−1.25	−.039	=.211
BMI		7.50	.271	**<.001**
WS		2.19	.096	=.029
WS × AN Diagnosis		1.08	.038	=.282
WS × BN Diagnosis		0.91	.034	=.363
WS × BED Diagnosis		−1.47	−.050	=.141
Step 3c (BMI × Diagnosis)	.098			
Diagnosis AN		−0.04	−.003	=.969
Diagnosis BN		3.42	.110	**<.001**
Diagnosis BED		−0.63	−.028	=.532
BMI		4.55	.218	**<.001**
WS		3.48	.098	**<.001**
BMI × AN Diagnosis		0.38	.034	=.705
BMI × BN Diagnosis		2.30	.077	=.022
BMI × BED Diagnosis		0.34	.016	=.736

Note. The categorical diagnosis variable was dummy coded with EDNOS as the reference category. AN = Anorexia Nervosa; BN = Bulimia Nervosa; BED = Binge Eating Disorder; WS = Weight Suppression. Each interaction term was tested independently in distinct third steps of the regression model, indicated by 3a, 3b, and 3c. Bolded values indicate significance at $p < .01$.

Table 3

Main Effects and Interactions for Binge Eating/Vomiting Behaviors (N = 1728)

	R^2	t	β	p
Step 1	.574			
Diagnosis AN		3.87	.083	<**.001**
Diagnosis BN		44.61	.827	<**.001**
Diagnosis BED		10.16	.183	<**.001**
BMI		−0.60	−.012	=.550
Step 2	.574			
Diagnosis AN		3.83	.082	<**.001**
Diagnosis BN		44.60	.827	<**.001**
Diagnosis BED		10.15	.183	<**.001**
BMI		−0.59	−.012	=.556
WS		0.23	.004	=.816
Step 3a (WS × BMI)	.576			
Diagnosis AN		4.18	.091	<**.001**
Diagnosis BN		44.38	.824	<**.001**
Diagnosis BED		10.28	.185	<**.001**
BMI		−0.51	−.011	=.608
WS		−0.36	−.006	=.717
WS × BMI		2.24	.037	=.026
Step 3b (WS × Diagnosis)	.575			
Diagnosis AN		3.43	.078	<**.001**
Diagnosis BN		44.58	.827	<**.001**
Diagnosis BED		10.13	.186	<**.001**
BMI		−0.60	−.012	=.551
WS		−0.72	−.020	=.472
WS × AN Diagnosis		0.86	.017	=.388
WS × BN Diagnosis		0.73	.018	=.466
WS × BED Diagnosis		1.01	.020	=.315
Step 3c (BMI × Diagnosis)	.581			
Diagnosis AN		5.79	.294	<**.001**
Diagnosis BN		44.36	.830	<**.001**
Diagnosis BED		7.34	.179	<**.001**
BMI		−0.19	−.005	=.849
WS		0.67	.011	=.505
BMI × AN Diagnosis		4.21	.220	<**.001**
BMI × BN Diagnosis		−1.92	−.038	=.054
BMI × BED Diagnosis		0.17	.004	=.868

Note. The categorical diagnosis variable was dummy coded with EDNOS as the reference category. AN = Anorexia Nervosa; BN = Bulimia Nervosa; BED = Binge Eating Disorder; WS = Weight Suppression. Each interaction term was tested independently in distinct third steps of the regression model, indicated by 3a, 3b, and 3c. Bolded values indicate significance at $p < .01$.

Table 4

Main Effects and Interactions for Exercise/Restrictive Eating Behaviors (N = 1214)

	R^2	t	β	p
Step 1	.106			
Diagnosis AN		−4.44	−.159	<**.001**
Diagnosis BN		1.31	.040	=.192
Diagnosis BED		−3.56	−.109	<**.001**
BMI		−8.89	−.315	<**.001**
Step 2	.113			
Diagnosis AN		−4.76	−.170	<**.001**
Diagnosis BN		1.17	.036	=.242
Diagnosis BED		−3.40	−.104	<**.001**
BMI		−8.70	−.308	<**.001**
WS		3.16	.088	=**.002**
Step 3a (WS × BMI)	.113			
Diagnosis AN		−4.53	−.166	<**.001**
Diagnosis BN		1.15	.035	=.251
Diagnosis BED		−3.35	−.103	<**.001**
BMI		−8.69	−.308	<**.001**
WS		2.69	.081	=**.007**
WS × BMI		0.51	.016	=.607
Step 3b (WS × Diagnosis)	.114			
Diagnosis AN		−4.08	−.162	<**.001**
Diagnosis BN		1.17	.036	=.241
Diagnosis BED		−3.39	−.105	<**.001**
BMI		−8.64	−.307	<**.001**
WS		2.57	.112	=**.010**
WS × AN Diagnosis		−0.65	−.023	=.517
WS × BN Diagnosis		−0.60	−.022	=.548
WS × BED Diagnosis		−0.40	−.014	=.688
Step 3c (BMI × Diagnosis)	.124			
Diagnosis AN		1.22	.104	=.223
Diagnosis BN		0.78	.025	=.426
Diagnosis BED		−1.98	−.086	=.048
BMI		−7.60	−.357	<**.001**
WS		3.20	.089	=**.001**
BMI × AN Diagnosis		3.65	.319	<**.001**
BMI × BN Diagnosis		1.20	.039	=.232
BMI × BED Diagnosis		−0.17	−.008	=.869

Note. The categorical diagnosis variable was dummy coded with EDNOS as the reference category. AN = Anorexia Nervosa; BN = Bulimia Nervosa; BED = Binge Eating Disorder; WS = Weight Suppression. Each interaction term was tested independently in distinct third steps of the regression model, indicated by 3a, 3b, and 3c. Bolded values indicate significance at $p < .01$.

Table 5

Main Effects and Interactions for Weight Control Medication Use (N = 1692)

	R^2	t	β	p
Step 1	.063			
Diagnosis AN		1.62	.052	=.105
Diagnosis BN		5.79	.160	**<.001**
Diagnosis BED		−6.25	−.168	**<.001**
BMI		3.12	.097	**=.002**
Step 2	.069			
Diagnosis AN		1.31	.042	=.192
Diagnosis BN		5.88	.162	**<.001**
Diagnosis BED		−6.06	−.163	**<.001**
BMI		3.27	.101	**=.001**
WS		3.39	.081	**<.001**
Step 3a (WS × BMI)	.072			
Diagnosis AN		0.88	.029	=.378
Diagnosis BN		6.02	.166	**<.001**
Diagnosis BED		−6.19	−.167	**<.001**
BMI		3.19	.098	**=.001**
WS		3.85	.096	**<.001**
WS × BMI		−2.19	−.055	=.028
Step 3b (WS × Diagnosis)	.071			
Diagnosis AN		0.77	.026	=.440
Diagnosis BN		5.86	.162	**<.001**
Diagnosis BED		−6.25	−.171	**<.001**
BMI		3.27	.102	**=.001**
WS		2.35	.098	=.019
WS × AN Diagnosis		1.01	.030	=.313
WS × BN Diagnosis		−0.39	−.014	=.698
WS × BED Diagnosis		−1.38	−.040	=.169
Step 3c (BMI × Diagnosis)	.078			
Diagnosis AN		2.08	.157	=.038
Diagnosis BN		5.01	.140	**<.001**
Diagnosis BED		−4.44	−.161	**<.001**
BMI		−0.50	−.022	=.614
WS		3.10	.074	**=.002**
BMI × AN Diagnosis		2.51	.195	=.012
BMI × BN Diagnosis		4.49	.132	**<.001**
BMI × BED Diagnosis		0.95	.037	=.343

Note. The categorical diagnosis variable was dummy coded with EDNOS as the reference category. AN = Anorexia Nervosa; BN = Bulimia Nervosa; BED = Binge Eating Disorder; WS = Weight Suppression. Each interaction term was tested independently in distinct third steps of the regression model, indicated by 3a, 3b, and 3c. Bolded values indicate significance at $p < .01$.