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## DSM-IV-Defined Anorexia Nervosa Versus Subthreshold Anorexia Nervosa (EDNOS-AN)

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### Abstract

**Objectives**—Eating disorder not otherwise specified (EDNOS) is the most prevalent eating disorder, yet its heterogeneity begs less reliance on this broad diagnostic category. The purpose of this study was to compare women with anorexia nervosa (AN) and EDNOS, AN type (EDNOS-AN) from a multisite study on eating-related and general psychopathology measures.

**Methods**—One hundred eighteen participants ( $n = 59$  with DSM-IV AN,  $n = 59$  with EDNOS-AN) completed structured interviews, questionnaires and a physical examination at baseline. In addition, participants carried a handheld palm pilot computer for two weeks to provide ecological momentary assessment (EMA) information about mood and eating disorder behaviors.

**Results**—No significant differences between AN and EDNOS-AN were found on the self-report and interview measures, or on the EMA *mood* assessments. The only differences to emerge were that participants with AN reported higher rates of binge eating and purging on EMA compared to those with EDNOS-AN, while EDNOS-AN reported higher rates of checking thighs and joints on EMA compared to those with AN. For the physiological parameters, AN presented with lower white blood cell counts compared to EDNOS-AN.

**Conclusions**—Findings highlight the clinical significance of EDNOS-AN, and support a closer look at the definition of AN as proposed by DSM-5.

### Keywords

Anorexia nervosa; EDNOS; classification

The validity of current eating disorder diagnostic criteria as defined by the Diagnostic and Statistical Manual of Mental Disorders 4<sup>th</sup> Edition-Text Revision (DSM-IV-TR) (American Psychiatric Association, 2000) has been the subject of recent debate and empirical scrutiny (Eddy, Celio-Doyle, Hoste, Herzog & Le Grange, 2008; Helvcerskiv, Lying & Clausen, 2011; Keel, Brown, Holm-Denoma & Bodell, 2011; Thomas, Vartanian & Brownell, 2009). Of these diagnoses, the residual category Eating Disorder Not Otherwise Specified (EDNOS) is the most prevalent eating disorder among adolescent and adult clinical samples (Button, Benson, Nollett & Palmer, 2005; Crow, Agras, Kalmi, Mitchell & Kraemer, 2002; Fairburn, Cooper, Bohn, O'Connor, Doll & Palmer, 2007; Martin, Williamson & Thaw, 2000; Mitchell, Crosby, Wonderlich, Hill, Le Grange, Powers & Eddy, 2007; Ricca, Mannucci, Mezzani, Bernardo, Zucchi, Paionni, et al., 2001; Turner & Bryant-Waugh, 2004). EDNOS is a “catch all” classification that combines individuals who narrowly fall short of meeting full threshold criteria or present an atypical pattern of symptoms. This heterogeneity of EDNOS is problematic and limits the information conveyed with this classification. Complicating the issue further is the paucity of data on the clinical characteristics, psychiatric comorbidity, causal mechanisms, and treatment guidelines for EDNOS, all of which serve to highlight the nosological conundrum for DSM-5.

A considerable body of work to develop an evidence-based classification of eating disorders has been conducted (Striegel-Moore, Wonderlich, Walsh & Mitchell, 2011). While relatively few studies have attempted to disentangle EDNOS by making comparisons within or between anorexia nervosa (AN) and/or bulimia nervosa (BN) (Crow et al., 2002; Delleva, Thornton, Lichtenstein, Pedersen & Bulik, 2011; Helvcerskiv et al., 2011; McIntosh, Jordan & Carter, 2004), most found close resemblance on demographics, eating disorder symptoms, and general psychopathology between full syndrome cases and their subthreshold counterparts. For instance, McIntosh and her colleagues (2004) showed that 56 women meeting ‘strict’ versus ‘lenient’ criteria for AN were indistinguishable on all clinical variables except for the weight criterion. Helvcerskiv and colleagues (2011) compared AN and BN with EDNOS in a cross-sectional sample of 965 patients. Using definitions of EDNOS-AN and EDNOS-BN based on weight, menses, binge/purge frequency, and cognitions, few differences were found between AN or BN and the respective EDNOS subgroups. Crow and his colleagues (2002), in a study of 385 women with AN, BN and EDNOS enrolled for treatment at 3 centers, found that 45 women (11.7%) met criteria for AN, while 47 (12.2%) met criteria for partial AN. Taken together, these authors conclude that their results support broader definitions of AN and BN. Highlighting the contradictory findings across studies, Delleva and colleagues (2011) found that broader criteria for AN, e.g., higher weight, no criterion D, and less stringent body weight concerns, yield a more heterogeneous sample regarding eating disorder symptoms and psychiatric comorbidity than applying stricter criteria in 473 women from the Swedish Twin Registry.

The purpose of this current study was to compare women with AN and EDNOS-AN on a number of eating disorder-related, general psychopathological and physiological measures. In addition to a broad range of structured interviews, paper-and-pencil measures, and a physical examination, we also employed ecological momentary assessment (EMA) (Shiffman, Stone & Hufford, 2008). EMA is an innovative way to collect “real time” data in the natural environment, and has not been utilized before to investigate differences or

explore momentary variables for AN and EDNOS-AN. In light of the common features between AN and EDNOS-AN, we explored whether these two diagnostic groups are more alike as opposed to distinct from one another.

## Methods

### Participants

A total of 118 non-treatment seeking females, at least 18 years of age, who met DSM-IV-TR (APA, 2000) criteria for anorexia nervosa (BMI cut off 17.5) (AN; restricting or binge-eating/purging type) or subthreshold AN (EDNOS-AN) were included in this study. To be included with EDNOS-AN, participants had to meet DSM-IV criteria for AN with the following exceptions: (1) Criteria B-D, but BMI 17.6-18.5, (2) Criteria A-C, but no amenorrhea, or (3) Criteria A and D, but no body image disturbance and intense fear of becoming fat. A total of 601 potential participants were originally screened for eligibility by phone. Of those, 325 did not meet inclusion/exclusion criteria as determined by phone screen, 90 met all initial inclusion/exclusion criteria but failed to report for the screening visit, and 20 were not interested in completing the phone screen. One hundred sixty-six presented for in-person assessments. Of these, 121 participants met eligibility criteria, agreed to participate and were enrolled in the study. Three participants had EMA compliance rates of less than 50% and were excluded from analyses, resulting in a total of 118 participants.

### Procedures

Participants were recruited at three sites (Neuropsychiatric Research Institute, Fargo, ND, University of Minnesota, MN, and The University of Chicago, IL). Recruitment efforts targeted eating disorder treatment facilities, mailings to professionals who treat eating disorder patients, advertisements in community and campus newspapers, and flyers posted in clinical, community and campus settings. Recruitment efforts specified that this was an assessment *only* study for adult women with AN offering no treatment but up to \$250 for participation. The rationale to recruit women with AN not in treatment or treatment seeking was based on our concern for the EMA assessment to be relatively independent of any current or active treatment intervention or strategy. Study approval was obtained from the institutional review board at each site.

Potential participants were initially screened via phone. Eligible individuals attended an informational meeting where they received further information regarding the study and provided written informed consent. Participants were then scheduled for two assessment visits during which structured interviews were conducted, self-report questionnaires were completed, and a screening physical examination and laboratory tests were conducted to ensure medical stability.

Assessors were Masters or PhD level psychologists and were trained in the administration of structured interviews at the beginning of the study by one of the authors (CBP) via a training seminar which included didactic sessions that involved role-playing exercises and audiotape reviews. In addition, SCID-I/P training utilized training tapes developed by the authors of the SCID at the New York State Psychiatric Institute. Prior to administering the SCID and EDE, trainees observed more advanced assessors conduct interviews and scored observed interviews to ensure they were rating items accurately. Trainees then administered the interviews to other staff members in role plays. Prior to interviewing actual participants independently, trainees had audiotaped interviews reviewed by advanced assessors. To ensure consistency and prevent drift, assessors from all sites communicated quarterly using teleconferencing and e-mail to discuss ratings and scoring, as well as meeting in person at

least once each year for advanced training and audiotape reviews. All assessments were audiotaped and an independent assessor rated randomly selected interviews to establish inter-rater reliability, at each site and across sites.

Participants were trained on the use of the palmtop computers at the end of the first assessment. Briefly, participants carried the palmtop computer for 2 practice days, at which point they returned and provided the data recorded during their practice period (these data were not used for the analyses). This practice period was used both to ensure participants were familiar with the EMA assessments and to minimize reactivity to the recording procedures. Research personnel reviewed these data and participants were given feedback regarding their compliance rates. Participants were then given the palmtop computer to complete EMA recordings over the next 2 weeks. Attempts were made to schedule 2-3 visits for each participant during this two-week interval to obtain recorded data and to minimize the amount of data lost in the event of technical problems. Participants were given feedback at each visit with respect to their compliance rates. Participants completed study evaluations at the end of the two-week EMA period and were compensated \$200.00 for completing EMA assessments with an additional \$50.00 for adequate compliance. The EMA assessment schedule in the current study was identical to that used in our previous EMA study of BN (Smyth, Wonderlich & Heron, 2007). Briefly, a *signal-contingent* approach was utilized where participants were signaled at six semi-random times throughout the day to complete recordings of mood, stress and behaviors. Using an *event-contingent* schedule, participants were also asked to record the occurrence of eating episodes or AN behaviors (e.g., exercise, purging). Finally, using an *interval-contingent* schedule, participants were asked to complete ratings at the end of each day.

## Assessments

While participants approached the study previously diagnosed as AN, DSM-IV diagnosis for this study was evaluated primarily on the basis of the EDE and SCID, and verified by the respective site PI. The assessment process consisted of the following measures:

### Self-Report Questionnaires

Beck Depression Inventory (BDI) (Beck, Ward & Mendelson, 1961) is a 21-item self-report questionnaire to measure symptoms of depression. Dimensional Assessment of Personality Pathology (DAPP-BQ) (Livesley & Jackson, 2009) is a 290-item self-report that provides a dimensional assessment of personality traits thought to be associated with personality disorders. Frost Multidimensional Perfectionism Scale (F-MPS) (Frost, Marten, Lahart & Rosenblate, 1990) is a 35-item self-report questionnaire designed to assess major dimensions of perfectionism. Spielberger State-Trait Anxiety Inventory (STAI) (Spielberger, 1983) is a 40-item questionnaire that measures both transitory state and enduring trait anxiety. UPPS Impulsive Behavior Scale-Revised (UPPS) (Whiteside & Lynam, 2001) is a 45-item self-report questionnaire that assesses four different kinds of impulsivity. Temperament and Character Inventory (TCI) (Cloninger, Syrakic & Pryzbeck, 1993) is a 240-item self-report measure that assesses seven dimensions of personality including: novelty seeking, harm avoidance, reward dependence, persistence, self-directedness, cooperativeness, and self-transcendence.

### Semi-structured Interviews

Eating Disorder Examination (EDE) (Fairburn & Cooper, 1993) is an investigator-based interview and contains four subscales (restraint, eating concern, shape concern and weight concern) as well as frequency measures of binge eating and compensatory behaviors. Structured Clinical Interview for DSM-IV Axis I Disorders, Patient Edition (SCID-I/P) (First, Spitzer, Gibbon & Williams, 1995) is a semi-structured interview to assess Axis I

psychiatric disorders. Yale-Brown-Cornell Eating Disorder Scale (YBC-EDS) (Sunday, Halmi & Einhorn, 1995) is a semi-structured interview and assesses core obsessions and compulsions specific to eating disorders.

### EMA Assessments

The Positive and Negative Affect Schedule (PANAS) (Watson, Clark & Tellegen, 1998) was used to assess momentary positive and negative affect. Eight items from the tension/anxiety scale of the Profile of Mood States (POMS) (McNair, Lorr & Droppleman, 1981) were included to measure momentary tension and anxiety. Participants were asked to report any eating episodes and to indicate whether the episode was a snack, a meal, or an unusually large amount of food, and whether they felt out of control or driven to eat. Participants were asked to report specific AN behaviors including vomiting or laxative use for weight control, weighing self on scale, exercising, skipping a meal, drinking fluids to curb appetite, making sure thighs do not touch, and checking joints and bones for fat.

### Physiological Parameters

Participants completed a physical examination by a study physician, which included weight, height, vital signs, electrolytes, and a complete blood count.

### Statistical Analysis

Diagnostic groups (AN vs. EDNOS-AN) were compared on demographic characteristic, self-report questionnaires, semi-structured interviews, and laboratory assessments using two-tailed independent samples t-tests for continuously distributed measures and two-tailed Fisher's exact tests for dichotomous categorical measures. Diagnostic groups were compared on EMA mood assessments using mixed-effects models with a random intercept. Data were aggregated across repeated assessments within days so that scores reflected average daily mood level and variability nested within subjects.

Generalized linear models were conducted to evaluate group differences in the aggregated frequency of eating behaviors across days (i.e., binge eating, purging) and rituals (i.e., checking thighs, checking joints). Generalized estimating equations were used to compare the number of daily eating behaviors and rituals nested within individuals based upon a negative binomial distribution appropriate for count data.

## Results

### Participant Characteristics

Of the 118 participants, 59 met full DSM-IV criteria for AN and another 59 met criteria for EDNOS-AN. The ages of the participants ranged from 17 to 58 years (mean for AN = 25.9 years,  $SD = 9.1$ , mean for EDNOS-AN = 24.8 years,  $SD = 7.6$ ). Participants were predominantly Caucasian (96.6%) and single (75.4%) with at least some college experience (88.1%). By definition, mean weight was significantly lower for AN (99.73 pounds,  $SD = 10.09/45.28$  kgs,  $SD = 4.58$ ) than for EDNOS-AN (107.85 pounds,  $SD = 9.54/48.96$ ,  $SD = 4.29$ ,  $p < 0.001$ ). Mean BMI for AN was 16.6 ( $SD = 1.0$ ) compared to 17.7 ( $SD = 0.7$ ) for EDNOS-AN ( $p < .000$ ), while mean height for AN was 65.0 inches ( $SD = 2.6$ ) [165.07 cm,  $SD = 6.73$ ] versus 65.3 inches ( $SD = 2.6$ ) [165.56,  $SD = 8.13$ ] for EDNOS-AN (*NS*). There were no other significant differences in the demographic characteristics between the two groups.

### Self-Report and Interview Assessment

Mean scores for self-report and interview measures by diagnostic group are reported in Table 1. No significant differences were found on any measure.

### Ecological Momentary Assessment (EMA)

The 118 participants included in this study provided 15,107 separate EMA recordings representing 1767 separate participant days. These recordings included 9088 responses to signals, 3445 reports of eating episodes, 1006 reports of AN behaviors, and 1478 end-of-day recordings. Compliance rates to signals averaged 87% (range = 58-100%); 77% of all signals were responded to within 45 minutes. Compliance with end-of-day ratings averaged 89% (range = 24-100%). The compliance for end-of-day ratings is calculated excluding the last day of recordings for each participant, which is typically a partial day without end-of-day recording. Thus, a total of 1478 end-of-day ratings were completed out of 1649 possible ratings (89.6%).

EMA mood and behavior assessments for full and subthreshold AN are presented in Table 2. While the groups did not differ significantly in terms of mood, participants with full AN reported higher rates of binge eating and purging compared to those with EDNOS-AN. In contrast, EDNOS-AN reported higher rates of checking thighs and joints.

### Physiological Parameters

Participants with full AN had a significantly lower white blood cell (WBC) count, higher levels of calcium, as well as lower diastolic blood pressure and pulse (see Table 3).

### Discussion

Findings from the present study increase the limited knowledge of EDNOS-AN symptom expression. With few exceptions, and across multiple methods of assessment, AN and EDNOSAN were mostly indistinguishable. There were no differences on any demographic variables, self-report measures of mood, anxiety, perfectionism or other personality measures. Nor were there differences on interview measures of eating and general psychopathology. While the diagnostic groups also did not differ in terms of EMA mood, the only statistical differences to emerge were for EMA eating disordered behaviors. Participants with AN reported higher rates on two diagnostic items, i.e., binge eating and purging, compared to those with EDNOS-AN. The EDE did not show significant differences between the diagnostic groups on OBE, SBE or vomiting. In contrast, EDNOS-AN reported higher rates of checking behavior (thighs and joints), which is a non-diagnostic symptom. These EMA findings may indicate an important difference between current super- and sub-threshold pathology. In the case of what is currently considered super-threshold pathology, full AN subjects show more pathological eating behavior, whereas in the case of sub-threshold pathology, EDNOS-AN engage less in pathological eating behavior but show more preoccupation with body size. AN and EDNOS-AN were also similar in terms of all the physiological parameters except for WBC where the former evidenced lower levels. Taken together, our findings overwhelmingly point to the similarities between AN and EDNOS-AN as the latter was defined in this study. The many shared features between AN and EDNOS-AN highlight the clinical significance of EDNOS.

These results not only replicate findings from recent full and subthreshold AN comparisons (Dellava et al., 2011; Helvckerskiv et al., 2011; McIntosh et al., 2004; Thomas et al., 2009) but extend these to a clinical, but non-treatment seeking sample. In addition, this study was the first to utilize EMA in comparing AN and ED NOS. Our findings also dovetail with existing literature comparing full and subthreshold BN (Crow et al., 2002; Le Grange,

Binford, Peterson, Crow, Crosby, Klein M, et al., 2006). Consequently, these findings suggest re-evaluation of existing AN diagnostic boundaries (e.g., percent ideal body weight, amenorrhea).

Some limitations to our study should be acknowledged. Generalizability of these results is limited by the all-female, mid-western US, predominantly Caucasian sample. Because this is a cross-sectional comparative analysis, some degree of diagnostic fluidity over time cannot be ruled out. Especially, we were unable to verify lifetime histories of full AN for the EDNOS-AN group, nor could we establish lifetime history of BN in either of the groups. Although we set *a priori* diagnostic boundaries for EDNOS-AN ‘caseness’, and participants who met those boundaries did not much differ from AN, we cannot rule out that setting these boundaries more broadly might still further expand the group that looks equivalent to AN. Another important area of comparison is impairment in functioning, e.g. days of school /work missed or other measures of impaired functioning. This was not measured in our study and should be looked at in future investigations.

Several strengths to our study are worth mentioning. We compared a fairly large group of adult women across three eating disorder specialist centers in the US. These women participated in extensive assessments that included self-report measures, as well as several structured diagnostic interviews, EMA, and physiological parameters. In addition, research staff received expert training in all assessment measures with ongoing monitoring to prevent drift between sites.

There is little evidence that participants with EDNOS-AN were any different from those with AN. Therefore, our results confirm the now accepted notion that menstrual status is probably not a helpful diagnostic marker for AN (Attia, Robero & Steinglass, 2008) and also challenge the generally accepted cut point of 85% of ideal body weight (or BMI 17.5 kg/m<sup>2</sup>) for a diagnosis of AN. Overall, our study provides some support for us to consider a broader definition of AN, e.g., as proposed by the DSM-5.

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Table 1

Self Report and Structured Interviews for An vs. EDNOS-AN

Outcome measure	AN Diagnosis						t/F	df	p	Effect Size <sup>f</sup>	95% CI
	Full AN (N=59)		EDNOS-AN (N=59)		Mean (N)	SD (%)					
	Mean (N)	SD (%)	Mean (N)	SD (%)							
<b>Self Report</b>											
BDI											
Beck Depression Total	21.64	12.87	22.54	14.44			116	.722	-.07		-.43, .30
DAPP											
Affective Liability	54.59	9.58	54.59	10.33			114	>.999	.00		-.36, .36
Stimulus Seeking	48.74	9.19	46.92	13.06			104,3 <sup>e</sup>	.374	.16		-.20, .52
Self Harm	58.61	7.33	59.02	7.07			114	.764	-.06		-.42, .31
FROST											
Frost Perfectionism	120.90	23.77	121.93	22.75			116	.810	-.04		-.40, .32
STAI											
State Anxiety	47.69	13.60	50.44	13.56			116	.275	-.20		-.56, .16
Trait Anxiety	53.86	11.49	55.75	12.05			116	.387	-.16		-.52, .20
TCI											
Harm Avoidance Total	44.66	6.05	43.08	5.93			116	.156	.26		-.10, .62
Self Directedness Total	63.15	9.72	63.44	9.36			116	.870	-.03		-.39, .33
UPPSR											
Premeditation Score	1.91	.50	1.88	.48			80	.815	.06		-.37, .49
Urgency Score	2.47	.69	2.47	.60			80	.986	.00		-.43, .43
Sensation Seeking	2.54	.77	2.37	.62			80	.283	.25		-.19, .68
Perseverance Score	1.97	.63	2.11	.57			80	.308	-.23		-.67, .20
<b>Interview</b>											
EIDE											
Eating Concern	2.10	1.38	2.06	1.33			116	.860	.03		-.33, .39
Shape Concern	2.81	1.57	3.30	1.59			116	.092	-.31		-.67, .05
Weight Concern	3.01	1.55	3.16	1.69			116	.618	-.09		-.45, .27
Restraint	2.79	1.74	2.79	1.48			116	.991	.00		-.36, .36

Outcome measure	AN Diagnosis									
	Full AN (N=59)		EDNOS-AN (N=59)							
	Mean (N)	SD (%)	Mean (N)	SD (%)	t/F	df	P	Effect Size <sup>f</sup>	95% CI	
OBE Episodes	4.90	12.26	2.97	8.83	.978	115	.330	.18	-.18, .54	
SBE Episodes	6.54	12.92	3.12	4.71	1.912	73.13 <sup>e</sup>	.060	.35	-.01, .73	
Vomiting Episodes	20.25	101.60	10.64	23.33	.708	116	.480	.13	-.23, .49	
Laxative Use Episodes	1.44	5.83	.95	3.58	.552	116	.582	.11	-.25, .47	
Exercise Days	9.44	11.26	8.27	10.18	.592	116	.555	.01	-.35, .38	
EDE Total	2.68	1.28	2.83	1.31	-.625	116	.533	-.12	-.48, .25	
SCID <sup>a,d</sup>										
Mood Disorder PM	13	22.0	15	25.4	-	-	.829	1.21	.52, 2.82	
Mood Disorder LP	35	59.3	41	69.5	-	-	.336	1.56	.73, 3.34	
Anxiety Disorder PM	21	35.6	29	49.2	-	-	.192	1.75	.84, 3.66	
Anxiety Disorder LP	26	44.1	32	55.2	-	-	.357	1.50	.73, 3.11	
Substance Use PM	2	3.4	1	1.7	-	-	>.999	.49	.04, 5.57	
Substance Use LP	16	27.1	15	25.4	-	-	>.999	.92	.40, 2.08	
YBC										
Preoccupations Current	8.71	3.25	8.66	3.14	.086	116	.931	.02	-.35, .38	
Preoccupations Worst	12.22	3.00	12.17	3.03	.092	116	.927	.02	-.34, .38	
Rituals Current	7.74	3.27	7.81	3.77	-.099	115	.921	-.02	-.38, .34	
Rituals Worst	11.93	3.14	12.29	3.71	-.568	115	.571	-.10	-.47, .26	

Note:

<sup>b</sup>Estimated mean and standard deviation from linear mixed model

<sup>c</sup>Estimated mean and standard deviation from generalized linear model, and negative binomial distribution assumed

<sup>d</sup>P values reported from Fisher's Exact test

<sup>e</sup>Columns refer to N(%)

<sup>f</sup>Degree of freedom based on unequal variance assumption

<sup>g</sup>Effect size of the SCID measures, marriage status, education level and race is Odds Ratio, effect size of K, Cl, Co2, Cal and Mg in the Lab section is Phi, and effect size of the others is Cohen's d.

**Table 2**

Ecological Momentary Assessment for AN vs. EDNOS-AN

Outcome Measure	AN Diagnosis								
	Full AN (N=59)		EDNOS-AN (N=59)		t/F	df	p	Effect Size <sup>f</sup>	95%CI
	Mean (N)	SD (%)	Mean (N)	SD (%)					
<b>EMA Mood<sup>b</sup></b>									
Mood Mean Level									
PANAS Negative	18.91	7.49	17.96	7.49	.468	116.05	.495	.11	-.25, .47
PANAS Positive	18.63	5.13	17.86	5.13	.661	116.00	.418	.13	-.33, .49
POMS	20.37	6.31	19.79	6.31	.247	116.06	.620	.09	-.27, .45
Mood Variability									
PANAS Negative	3.25	1.52	3.40	1.52	.279	115.67	.599	-.12	-.48, .24
PANAS Positive	3.26	1.24	3.23	1.24	.014	115.74	.906	.02	-.34, .38
POMS	3.27	1.31	3.54	1.31	1.240	115.51	.268	-.21	-.57, .16
<b>EMA Behavior<sup>c</sup></b>									
Binge	.24	.05	.14	.04	147.86	1	<.001	2.36	1.87, 2.81
Purge	.38	.06	.30	.05	44.35	1	<.001	1.39	.98, 1.78
Check Thighs	.50	.08	.87	.12	400.36	1	<.001	-3.75	-4.35, -3.15
Check Joints	1.34	.15	1.55	.18	46.52	1	<.001	-1.27	-1.66, -.87

Note:

<sup>a</sup>p values reported from Fisher's Exact test

<sup>d</sup>Columns refer to N(%)

<sup>e</sup>Degree of freedom based on unequal variance assumption

<sup>b</sup>Estimated mean and standard deviation from linear mixed model

<sup>c</sup>Estimated mean and standard deviation from generalized linear model, and negative binomial distribution assumed

<sup>f</sup>Effect size of the SCID measures, marriage status, education level and race is Odds Ratio, effect size of K, Cl, Co2, Cal and Mg in the Lab section is Phi, and effect size of the others is Cohen's d.

Table 3

Physiological Measures for AN vs. EDNOS-AN

Outcome Measure	Full AN (N=59)		AN Diagnosis		EDNOS-AN (N=59)		t/F	df	p	Effect Size <sup>f</sup>	95% CI
	N	%	N	%	N	%					
<b>Laboratory Tests</b>											
WBC <sup>a,d</sup> : Above Normal	0	0	0	0	0	0	5.325	1	.027	-	-
Below Normal	5	8.9	0	0	0	0					
HGB <sup>a,d</sup> : Above Normal	0	0	0	0	0	0	-	-	.206	.185	.021, 1.642
Below Normal	5	8.9	1	1.8	0	0					
HCT <sup>a,d</sup> : Above Normal	0	0	0	0	0	0	-	-	.315	.573	.205, 1.604
Below Normal	11	19.6	7	12.3	0	0					
Na <sup>a,d</sup> : Above Normal	0	0	0	0	0	0	-	-	>.999	1.018	.138, 7.486
Below Normal	2	3.4	2	3.5	0	0					
K: Above Normal	1	1.7	0	0	0	0	1.695	2	.429	.120	-
Below Normal	4	6.8	2	3.4	0	0					
Cl: Above Normal	2	3.4	0	0	0	0	2.001	2	.368	.132	-
Below Normal	2	3.4	2	3.5	0	0					
CO2: Above Normal	8	14.0	6	10.5	0	0	.327	2	.849	.054	-
Below Normal	2	3.5	2	3.5	0	0					
Cal: Above Normal	1	1.7	0	0	0	0	.991	2	.609	.093	-
Below Normal	1	1.7	1	1.8	0	0					
Mg <sup>a,d</sup> : Above Normal	9	15.3	14	27.3	0	0	1.978	2	.372	.126	-
Below Normal	6	10.2	8	13.6	0	0					
Phos <sup>a,d</sup> : Above Normal	10	20.0	8	16.0	0	0	-	-	.795	.762	.273, 2.125
Below Normal	0	0	0	0	0	0					
Blood Pressure Systolic <sup>a,d</sup> >110	26	44.8	28	48.3	0	0	-	-	.852	1.149	.554, 2.384
Blood Pressure Diastolic <sup>a,d</sup> >70	25	43.1	36	62.1	0	0	-	-	.063	2.160	1.028, 4.539
Pulse <sup>a,d</sup> >50	53	91.4	55	98.2	0	0	-	-	.207	5.189	.587, 45.897

Note: WBC = white blood cell count, HGB = Hemoglobin, HCT = Hematocrit, Na = Sodium, K = Potassium, CL = Chloride, CO<sub>2</sub> = Carbon dioxide, Cal = Calcium, Mg = Magnesium, Phos = Phosphorus.

<sup>b</sup>Estimated mean and standard deviation from linear mixed model

<sup>c</sup>Estimated mean and standard deviation from generalized linear model, and negative binomial distribution assumed

<sup>e</sup>Degree of freedom based on unequal variance assumption

<sup>a</sup>P values reported from Fisher's Exact test

<sup>d</sup>Columns refer to N(%)

<sup>f</sup>Effect size of the SCID measures, marriage status, education level and race is Odds Ratio, effect size of K, Cl, Co<sub>2</sub>, Cal and Mg in the Lab section is Phi, and effect size of the others is Cohen's d