Title

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Journal

International Journal of Eating Disorders, 56(2)

ISSN

0276-3478

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Publication Date

2023-02-01

DOI

10.1002/eat.23867

Peer reviewed

HHS Public Access

Author manuscript

Int J Eat Disord. Author manuscript; available in PMC 2024 February 01.

Published in final edited form as:

Int J Eat Disord. 2023 February ; 56(2): 384–393. doi:10.1002/eat.23867.

Predictors of family-based treatment for adolescent eating disorders: Do family or diagnostic factors matter?

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Abstract

OBJECTIVE: Misconceptions around which patients will and will not benefit from family-based treatment (FBT) for adolescent eating disorders limit referrals and access to this treatment modality. The present study explored whether common demographic and clinical factors that may prevent referral to FBT predict treatment outcomes in adolescent anorexia nervosa (AN) and bulimia nervosa (BN).

METHOD: The following predictors of treatment outcomes were assessed: baseline family and diagnostic factors (socio-economic status, comorbidity, illness duration, parent feelings of self-efficacy, family status, prior treatment, sex and prior hospitalizations) in a combined sample of adolescents receiving FBT compared to those randomized to other treatment conditions, across six clinical trials in US and Canada (total n=724, ages 12-18, 90% female across both diagnoses). AN and BN samples were examined separately.

RESULTS: Any prior eating disorder treatment emerged as the only predictor of outcome in AN and BN, such that having no prior treatment predicted better outcomes in FBT for AN, and in both FBT and other treatment modalities for BN. No other sociodemographic or clinical variables predicted outcomes for AN or BN in FBT or in other evidence-based treatment modalities.

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The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

CONCLUSIONS: The findings of this exploratory analysis suggest that commonly assumed factors do not predict outcome in FBT. Specifically socioeconomic and demographic factors or clinical variability in families seeking treatment do *not* predict treatment outcomes in FBT, or other evidence-based treatment modalities, with the exception of prior treatment. Providers should consider referring to FBT even when these factors are present.

Keywords

Predictors; Family-Based Treatment; Adolescent; Anorexia Nervosa; Bulimia Nervosa

Introduction

Adoption and implementation of evidence-based treatments in clinical settings is often challenging, in part due to therapists' attitudes and beliefs about matching therapies to specific patient needs [1]. Family-based treatment (FBT) is an effective treatment for both adolescent anorexia nervosa (AN) and bulimia nervosa (BN) [2, 3] and is suggested as the first-line intervention for adolescent AN and BN by several US and international treatment guidelines [4-6].

Despite the growing body of evidence suggesting FBT is effective in treating youth with eating disorders (EDs) (with rates of recovery at 40-50%), clinicians in the community often use varied treatment approaches for adolescent EDs not aligned with evidence-based treatment practice guidelines [7-10]. There is a significant challenge of having enough adequately trained providers who can supply evidence-based treatments, including FBT [11, 12]. Other reasons for not using FBT appear to be therapist driven – with existing studies and experience showing that ED clinicians have been hesitant to adopt FBT due to concerns about the applicability, safety, and appropriateness of FBT for certain groups of patients based on clinical and demographic features, including parental marital status and family dynamics [11]. As a result, some clinicians conduct or recommend another treatment or suggest higher levels of care (e.g., hospitalization, residential treatment, day programs) instead of FBT [1]. Unfortunately, systematic evidence using randomized clinical trials supporting these treatment recommendations are not yet available.

Thus, the purpose of the current report is to empirically examine which, if any, of these patient or family variables are risk factors for poorer outcome in FBT. Specifically, this manuscript explores assumptions about who will respond to FBT and who will not. For AN, this is defined as who meets remission criteria (achieving >95% estimated body weight percentage (EBW) and having an EDE Global Score within 1 SD of population norms (1.59) [13]), and for BN, this is defined as who achieves cessation of bingeing and compensatory behaviors for the past month [14]. Findings stand to inform ED clinicians about treatment options and family/patient acceptability, encouraging referrals and recommendations to evidence-based therapies in cases where it may have previously been dismissed.

Using a combined data set of randomized controlled trials (RCTs) for adolescent AN and BN, the following variables were examined as predictors of outcome in FBT: family socio-economic status, illness duration, parent feelings of self-efficacy around re-nourishing their child, family marital status, prior treatment for an ED, psychiatric comorbidity,

sex, and prior medical stability for ED hospitalizations. These variables were selected based on a combination of clinical experience regarding reasons providers may hesitate in referring to FBT and partially supported by therapist perspectives from two relevant articles in the literature [1, 15]. While the original RCTs with these data have explored some moderators of treatment outcomes individually (illness, comorbidity, intact family, hospitalization, family environment, obsessive compulsive features, parental self-efficacy, sex, and family income), these have not been well-powered for tests of equivalence [16] and have not comprehensively assessed the variables of interest above. We hypothesize that these variables will not affect treatment outcome (remission criteria) in this large, aggregated sample. The combined sample allows for a powered analysis to investigate these predicted tests of equivalence, which would support the implementation of an evidence-based treatment across demographic groups.

Methods

Data from six RCTs (clinical trial numbers: NCT03097874; NCT00183586; NCT00601822; NCT00610753; NCT02054364) and one feasibility trial (clinical trial number: NCT01579682) of adolescents (total n=724, ages 12 to 18, 90% female, across both diagnoses) who met *DSM-IV* criteria for AN (exclusive of amenorrhea criteria), and one multi-site RCT of adolescents (clinical trial number: NCT02054364) (ages 12 to 18) who met *DSM-IV* criteria for BN or partial BN (binge eating/purging once or more per week for six months) were aggregated for this secondary analysis (Table 1). A range of 4-25.9% of the participants in this pooled dataset were study completers, meaning, they did not complete treatment but provided follow-up data. Specifics of these separate RCTs can be found in the published outcome reports [17-23]. None of the participants previously received FBT. Data were split into two groups within each diagnosis: For AN, this was (1) those who received FBT or FBT in combination with an adjunctive treatment such as cognitive remediation therapy, art therapy (both of which were provided for 30 minutes prior to standard FBT sessions) or intensive parental coaching (two extra sessions) (n=432), and (2) those who received a different evidence-based treatment, which included Adolescent Focused Therapy (AFT) (n=59) or Systemic Family Therapy (SyFT) (n=82). For BN this was (1) those who received FBT (n=52) or (2) those who received either Cognitive Behavioral Therapy for Adolescents (CBT-A) (n=58) or Supportive Psychotherapy (SPT) (n=20). AN and BN trial data were analyzed separately due to differences in remission criteria for AN and BN, as described above. The trials included in this study were approved by Institutional Review Boards and written informed consent or assent was obtained from parents and adolescents.

Measures.

Demographic & Clinical Variables.—Adolescents and their caregivers self-reported demographic and clinical information (Table 1). Some demographic and clinical metrics were used as continuous and binary moderators in analyses, such as income, family status (intact versus not), illness duration, sex, prior treatment, and medical hospitalization.

Anthropomorphic data.—Adolescent height and body weight were collected at baseline (pretreatment) and end-of-treatment (EOT). Expected body weight percent (%EBW) was analyzed based on the 50th body mass index percentile, taking into account the participant's age, weight, height, and sex assigned at birth [24]. %EBW was calculated using the same formula across all RCTs.

Psychiatric Comorbidity [25].—Comorbidities were evaluated using the Schedule for Affective Disorders and Schizophrenia for School-Age Children – Present and Lifetime version (K-SADS-PL). Bachelors- or master-level trained assessors administrated the K-SADS-PL. The K-SADS-PL has proven to be a reliable and valid tool within adolescent samples [25, 26].

Eating Disorder Symptoms [27].—Adolescent ED symptoms were assessed at baseline and EOT using the Eating Disorder Examination (EDE), a semi-structured interview. The measure populates four separate subscales (Restraint [5 items], Eating Concern [5 items], Shape Concern [8 items], and Weight Concern [5 items]) and a global scale. In this study, each clinical trial used the current version of the EDE at the time of the trial (versions 12 thru 16). Internal consistency of the EDE ranged from acceptable to excellent (α's = .75 to .93) in the current study.

Parental Self-Efficacy [28].—Parental self-efficacy, or parents' confidence in their capacity to re-nourish their child from AN, was assessed using the Parents Versus Anorexia scale (PVAN). The PVAN is a seven-item self-report measure; each item is ranked on a 5-point Likert scale from "strongly disagree" to "strongly agree," with higher total scores denoting greater parental self-efficacy. The PVAN has shown adequate internal consistency (α = 0.78) in the validation study [28]. In the current sample, internal consistency for the PVAN was low, (α = 0.41), possibly reflecting heterogeneity within the scale.

Statistical Analysis

All analyses were completed using SPSS version 27. For AN main outcomes included global EDE scores and %EBW at EOT continuously and combined (whether participants were >95% EBW and had an EDE Global Score within 1 SD of population norms (1.59) to reflect overall remission [13]).

Univariate linear regressions were used to assess whether binary moderators (comorbidity, intact family, prior treatment, sex and prior hospitalization) and continuous predictors (income, illness duration, and PVAN scores) predicted continuous outcomes in AN (e.g., EDE global scores and %EBW). Logistic regressions and Chi-Square analyses were used to probe binary outcomes: whether participants met full remission criteria. Baseline EDE global and %EBW were entered as covariates in these analyses.

For adolescents with BN, the main outcome was binary (whether or not participants met remission criteria: absence of binge eating and compensatory behaviors in the last month). Logistic regression and Chi-Square analyses were used to assess whether the aforementioned variables predicted remission.

All AN and BN analyses were completed twice: once for participants receiving FBT, and once for participants receiving other treatments. These were conducted separately because randomization was at the trial level and the non-FBT treatments across both diagnoses were variable in their approach and content [29].

Four post-hoc power analyses were conducted by diagnosis, treatment, and analysis type to validate our interpretation of null findings within this large, aggregated dataset using G*Power 3.1. Given that our hypothesis was of equivalence (hypothesizing the null), multiple corrections were not applied after analyses, as this would reduce the p-value and increase our likelihood of accepting the null.

Little's Missing Completely at Random Test (MCAR) was used to assess the nature of missing data. For all variables of interest (outcome variables, binary and continuous moderators, and demographic variables), data were missing completely at random, and were not imputed.

Results

Anorexia Nervosa

Logistic regressions and Chi-Square tests were used to assess whether income, illness duration, sex and parental self-efficacy at baseline predicted overall remission (defined as ≥95% EBW and EDE global scores within 1 SD of population norms). For FBT, sex predicted overall remission for $X^2(1, N=312)=11.32$, $p=.001$, C=.18), where males were more likely to remit at EOT. There were no other significant association between remission and any of the predictors of interest (Table 2b & 2c, Table 3b & 3c).

Next, outcomes were separated into EOT EDE scores, or EOT %EBW. The following continuous predictors (income, illness duration, and parental self-efficacy) did not explain a significant amount of the variance in %EBW or EDE global scores at EOT in adolescents receiving FBT nor in adolescents receiving another treatment (SyFT or AFT).

Prior treatment of any kind significantly predicted EDE global scores at EOT in FBT, but not in other treatments, $F(3, 312)=57.06$, $p=.001$, $R^2_{adjusted}=.02$ (Table 2, Figure 1). Specifically, adolescents who received treatment before beginning FBT had higher EDE global scores at EOT (n=247; M=1.10, SD=1.27) than those who were treatment-naïve ($n=72$; M=.43, SD=.60), controlling for baseline EDE and %EBW. This difference in EDE global scores at EOT was not significant in adolescents who received other treatments. Specifically, the mean EOT EDE global score of adolescents with prior treatment ($n=87$) was 1.21 ± 1.32, and mean EOT EDE global score of treatment-naïve adolescents ($n=25$) was 1.19 ± 1.62. These means are depicted in Figure 1.

Sex also predicted EDE global scores and EBW% at EOT in FBT, but not in other treatments: For EDE: F(3, 312)= 39.49, p=.004, $R^2_{adjusted}=.02$ and for EBW%: F(3, 312)= 14.83, p=.02, $R^2_{adjusted}=.014$; where males had lower EDE scores at EOT and higher %EBW (Tables 2a). These were accompanied by small effect sizes.

For logistic regression analyses, post-hoc power for AN participants receiving FBT (n=432) was 1-β = 1.00. For AN participants receiving other treatments (n=141), 1-β = .80.

For linear regression analyses, post-hoc power for AN participants receiving FBT was 1-β = 1.00. For AN participants receiving other treatments, 1-β = .99.

Bulimia Nervosa.

No continuous predictors (income or illness duration) explained a significant amount of the variance in EOT remission in adolescents with BN who received FBT (Table 4a-b) or another treatment (CBT-A or SPT) (Table 5a-b).

A Chi-Square test of independence was performed to examine the relation between binary moderators of interest (comorbidity, intact family, prior treatment, and prior hospitalization) and remission in adolescents with BN receiving FBT or another treatment (CBT-A or SPT). The relationship between prior treatment and remission was significant for adolescents with BN who received CBT-A or SPT, $X^2(1, N=61)=4.43$, $p=.04$, C=.26), where adolescents with BN receiving prior treatment were less likely to remit at EOT (Figure 2). This difference followed a similar trend in the FBT group, and had similar effect sizes ($p=.06$, C=.27).

Post-hoc power analyses showed that the power for analyses within BN participants receiving FBT (n=52) was 1-β = .45. For BN participants receiving other treatments (n=78), 1-β = .62.

Discussion

The current study investigated the effects of clinical variables commonly thought by therapists, medical professionals, and other patient advocates to contraindicate FBT by empirically testing them as predictors of outcomes in a large, aggregated dataset of adolescents with AN and BN who received FBT compared to adolescents who received other treatments [1, 15].

For AN, results generally refuted these misconceptions, showing no differences between those who achieved full remission at EOT as a function of sociodemographic and clinical characteristics. For AN, prior treatment predicted greater EOT EDE global scores (ED cognitions), within the FBT group (Figure 1) compared to those who had not received prior treatment, however the effect was small. This may reflect that treatment benefits may be greater for ‘first time’ treatment recipients and may be attenuated for those who have previously received treatment: findings reflect that those who did *not* have more treatment had lower eating disorder cognitions at EOT. Sex also predicted remission and outcomes in individuals with AN receiving FBT; while these are driven by a small n, the % of males in our sample is representative of general prevalence rates [30]. These data suggest males do not do more poorly in FBT, and in fact, may do better.

For BN, the results were similar to AN for overall remission: those with no prior treatment had higher remission rates (Figure 2). However, for adolescents with BN, this difference was present across both groups (FBT and CBT-A or SPT), with FBT approaching significance and equivalent small-medium effect sizes. In AN, this difference was exclusive to the FBT

group. This may be attributed to the “other treatment” category in AN being larger and comprised of two evidence-based modalities while in BN, the “other treatment” category was more homogenous, and largely comprised of CBT-A (74% of the participants received CBT-A versus SPT).

Study findings should be considered in light of several limitations. While analyses utilize a large, robust sample to conduct secondary data analyses in an aggregated dataset of several treatment trials of FBT versus other treatment modalities, the original trials were not designed with this study mind. Thus, the selection of variables was limited for this exploratory study. Treatments that used FBT and FBT adjunctive treatments were combined into one FBT category, and all other forms of treatment into a second category. Pooling a range of intervention types reduces the ability to shed light on treatment effects individually [29]. However, the purposes of this exploratory study were to investigate baseline predictors of outcomes using a well-powered sample, rather than examine individual treatment effects. Further, the treatments were grouped based on their core use of FBT versus other treatment types and included adolescents within the same age range. The current study used remission and inclusion criteria for both AN and BN following the guidelines of the clinical trials these data were derived from [13, 22, 31]. Thus, results may not be generalizable to patients who did not meet inclusion criteria for these trials. However, other, multidimensional remission definitions such as those defined by Tomba and colleagues might identify different predictors [32]. The RCTs included in this manuscript were conducted in academic medical settings, potentially biasing the sample. It is possible these findings may look different in community settings, where referral frequency may hinge on worries about whether or not families will follow through on a family treatment modality. Lastly, there was limited racial/ethnic and gender diversity across the RCTs, thereby limiting generalizability of results.

This study also has several strengths. No studies have systematically investigated the predictive role of baseline sociodemographic and clinical variables on FBT outcomes with adequate power. While the RCT’s from which the data are reported in this manuscript conducted preliminary non-specific tests of moderators and predictors, there are challenges of such tests due to limitations in sample size [16]. Aggregation across data sets allows for well-powered analyses of similar variables, which we were able to do for our AN sample.

The data presented here are the first to suggest the utility of offering FBT as a first-line treatment and begin to dispel the notion that factors such as income, comorbidities, or length of illness impact how an adolescent with an ED may respond to FBT. The post-hoc power analysis in conjunction with the small effect sizes reported in tables for the null findings for the AN data suggest that the data are well-powered for this type of analysis and interpretation.

These results have implications for referring providers and clinicians providing treatments for adolescent AN and BN. Couturier and colleagues previously investigated therapist perspectives on evidence-based practices in EDs broadly, with an emphasis on FBT [1]. They found that barriers to FBT referral and implementation included inadequate attention to comorbid symptoms, parental motivation for change, systemic and illness factors, amongst others. The exploratory findings in this manuscript begin to shed light

on these barriers, demonstrating that factors such as comorbidity, baseline parent feelings of empowerment or self-efficacy, family composition, or duration of illness do not predict treatment outcomes. Future studies may consider exploration of a greater range of variables that may impact referral frequencies to evidence-based treatments, such as the impact of siblings or parental comorbidities.

In summary, findings suggest that these baseline demographic and clinical features do not predict outcome in EDs transdiagnostically in FBT. This is important to consider when therapists are treating patients or recommending treatments to families with varying ED presentations, suggesting that evidence-based treatment efficacy may not be dependent on varying baseline sociodemographic features or clinical variability. In other words, the results of this manuscript outline data cautioning clinicians from pre-emptively excluding families from FBT. In other words, it does not appear that FBT outcomes are influenced solely by the sociodemographic and clinical variables explored in this paper.

Acknowledgements and Conflicts of Interest

This work was supported, in part, by the National Institute of Mental Health (R01MH110538, R01MH070621, R34MH101281, R34MH093493, K08MH001457 to JL; R01MH070620, R01MH079979 and R34MH093768 to DLG; U01 MH076290 to W. Stewart Agras; K23MH126201 to SG and Stanford Maternal and Child Health Research Institute to ND.

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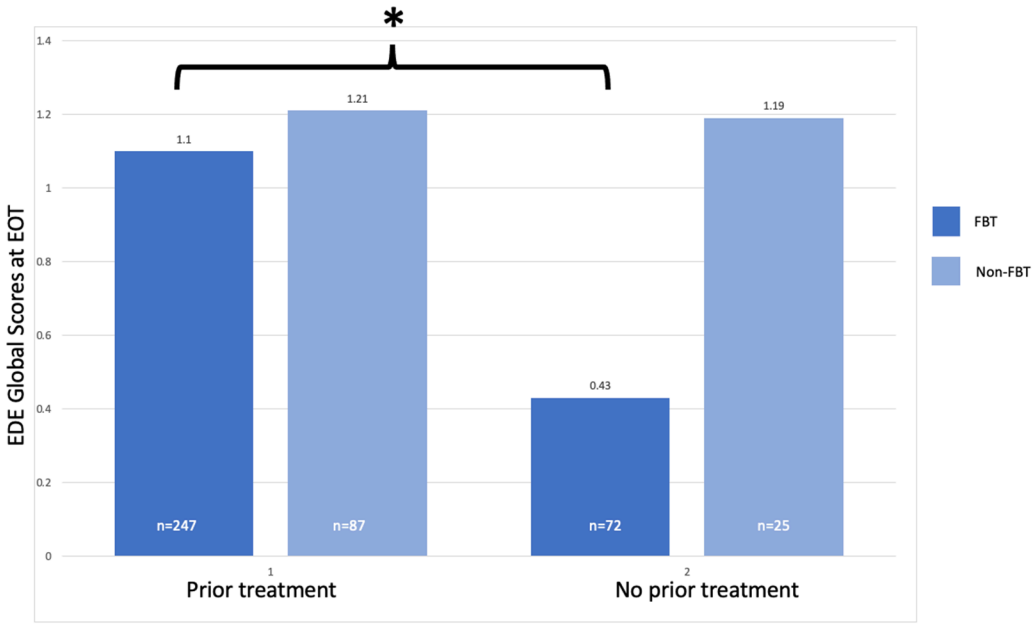

Figure 1.
AN EDE Global Scores at EOT by Prior Treatment

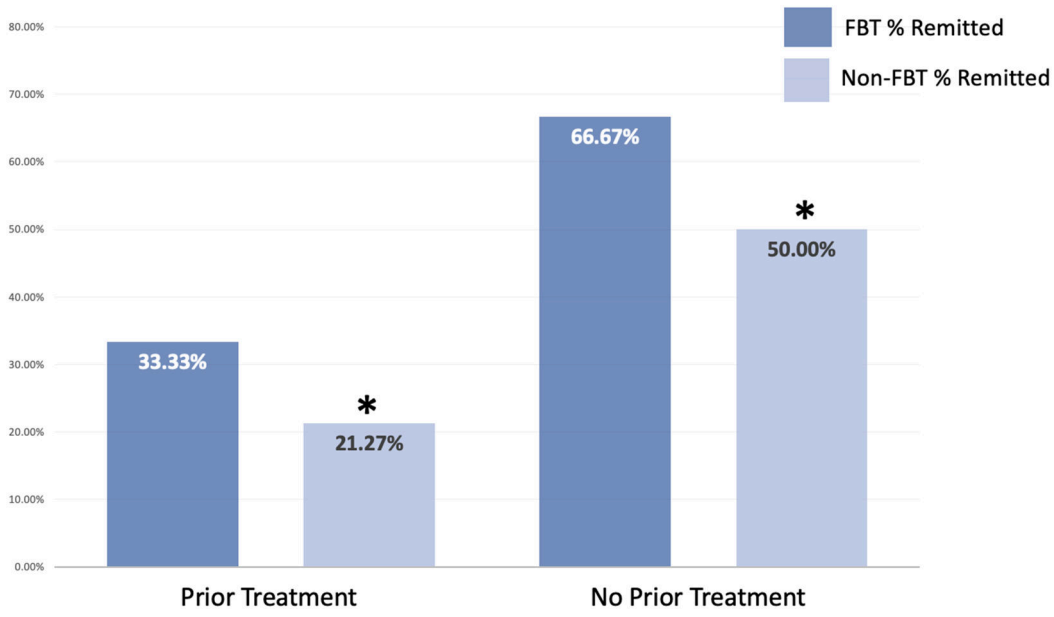

Figure 2.
BN Remission Count by Prior Treatment

Table 1.

Sample Demographic and Clinical Characteristics

Characteristic	FBT Mean (SD) or *n* (%)	Non-FBT Mean (SD) or *n* (%)
Child age (in years)	14.82 (1.65)	15.02 (1.68)
Child sex	*n*= 484[c]	*n*= 240[c]
Female	435 (89.88%)	217 (91.18%)
Male	49 (10.12%)	21 (8.82%)
Child race[a]	*n*= 464[c]	*n*= 180[c]
Caucasian	319 (68.75%)	139 (77.22%)
African American/Black	10 (2.15%)	7 (3.89%)
Asian	52 (11.21%)	12 (6.67%)
American Indian/Alaska Native	1 (0.22%)	0 (0%)
Native Hawaiian/Pacific Islander	42 (9.05%)	10 (5.55%)
Multi-racial	40 (8.62%)	12 (6.67%)
Child ethnicity[a]	*n*= 408[c]	*n*= 187[c]
Hispanic/Latinx	61 (14.95%)	39 (20.86%)
Non-Hispanic/Non-Latinx	347 (85.05%)	148 (79.14%)
Family income	*n*= 461[c]	*n*= 224[c]
<$50,000 USD	63 (13.67%)	44 (19.64%)
$50,000 to 80,000 USD	52 (11.28%)	35 (15.63%)
$81,000 to 100,000 USD	66 (14.32%)	24 (10.71%)
$101,000 to 150,000 USD	99 (21.47%)	40 (17.86%)
>$150,000 USD	181 (39.26%)	81 (36.16%)
Illness duration (in months)	11.49(11.50)	14.94 (14.58)
Primary Diagnosis (AN vs BN)	*n*= 484[c]	*n*= 240[c]
Anorexia Nervosa	432 (89.26%)	141 (67.50%)
Bulimia Nervosa	52 (10.74%)	78 (32.50%)
Psychiatric Comorbidities[b]		
Major Depressive Disorder	90	31
Depression NOS	41	27
Obsessive Compulsive Disorder	24	13
Attention-Deficit/Hyperactivity Disorder	7	7
Generalized Anxiety Disorder	64	21
Dysthymia	7	4
Other	50	28
None	169	13

Notes. %EBW is the percent expected body weight based on normative data for age, sex, height, and current weight; EDE = Eating Disorder Examination; NOS = Not otherwise specified; USD = United States dollars.

[a]Certain participant demographics are missing due to changes in National Institute of Health race and ethnicity reporting standards over time.

[b]Total percentage of psychiatric comorbidities exceeds 100% because some participants reported two or more psychiatric comorbidities.

[c]Total N varies due to missing and unreported data

Table 2a.

Linear Regressions in FBT for AN

Predictors	Cont. DV	F	R^2 Change	P	B	95%CI
Income	EBW EOT	18.80	.003	.28	.37	−.30-1.05
	EDE EOT	51.50	.004	.21	−.05	−.13-.03
Illness duration	EBW EOT	19.75	.007	.10	−.09	−.19-.02
	EDE EOT	52.31	.004	.20	.01	−.004-.02
PVAN scores BL†	EBW EOT	11.17	.000	.77	.05	−.26-.36
	EDE EOT	23.36	.009	.17	.03	−.01-.07
Comorbidity	EBW EOT	18.25	.002	.34	−.97	−2.95-1.01
	EDE EOT	47.22	.000	.76	.04	−.22-.30
Intact Family	EBW EOT	14.34	.007	.13	1.74	−.53-4.00
	EDE EOT	48.18	.000	.80	−.04	−.32-.25
Prior Treatment	EBW EOT	18.22	.002	.40	−.99	−3.28-1.30
	EDE EOT	57.06	.02	.001*	.44	.17-.72
Prior Hospitalization	EBW EOT	18.10	.000	.86	.17	−1.72-2.06
	EDE EOT	50.61	.003	.25	.14	−.09-.40
Sex	EBW EOT	14.83	.014	.02*	.12	.67-6.58
	EDE EOT	39.49	.02	.004*	−.14	−.85- −.16

*Statistically significant difference below p=.05; analyses controlled for baseline %EBW and EDE scores depending on the dependent variable being probed.

†PVAN: Parents versus anorexia nervosa

Table 2b.

Logistic Regressions in FBT for AN

Predictors	Binary DV	B	SE	Wald	p	Exp (B)	95%CI
Income	Remission	−.004	.09	.002	.96	1.00	.84-1.20
Illness duration	Remission	−.02	.01	2.36	.13	.98	.95-1.01
PVAN scores BL	Remission	−.05	.05	1.17	.28	.95	.86-1.04

Note: Definition of remission as >95% EBW and +/− 1 SD around EDE population norms (1.59).

Table 2c.

Chi-Square in FBT for AN

Predictors (yes/no)		Yes Remitted (n)	Not Remitted (n)	X^2	C	P
Comorbidity	≥1 comorbidity	45	88	1.19	.06	.28
	No comorbidities	71	107			
Intact Family	Yes Intact	89	123	2.47	.10	.12
	Not Intact	16	37			
Prior treatment	Yes Prior	95	150	4.48	.12	.05
	No Prior	38	34			
Prior Hosp	Yes Prior Hosp.	67	97	.17	.02	.73
	No Prior Hosp.	66	87			
Sex	Male	26	12	11.32	.18	.001
	Female	118	179			

[t]Effect size: Contingency Coefficient where .1=small, .3=medium, .5=large

Table 3a.

Linear Regressions in non-FBT treatment modalities for AN

Predictors	Cont. DV	F	R^2 Change	p	B	95%CI
Income	EBW EOT	3.26	.000	.89	−.001	−.02-.02
	EDE EOT	27.96	.005	.37	−.001	−.003-.001
Illness duration	EBW EOT	4.86	.02	.10	−.10	−.22-.01
	EDE EOT	27.67	.002	.61	.004	−.01-.02
PVAN scores BL	EBW EOT	4.49	.01	.28	−.33	−.92-.27
	EDE EOT	5.48	.001	.78	−.01	−.10-.07
Comorbidity (yes/no)	EBW EOT	4.02	.000	.81	.40	−2.97-3.77
	EDE EOT	30.20	.01	.12	.39	−.10-.87
Intact Family	EBW EOT	4.04	.001	.77	.53	−3.10-4.15
	EDE EOT	30.19	.01	.12	.38	−.10-.84
Prior Treatment	EBW EOT	4.63	.01	.17	2.47	−1.05-5.99
	EDE EOT	27.56	.000	.80	−.07	−.58-.45
Prior Hospitalization	EBW EOT	3.64	.000	.82	.40	−2.90-3.60
	EDE EOT	28.42	.007	.27	−.24	−.67-.19
Sex	EBW EOT	3.96	.004	.45	.06	−3.5-7.89
	EDE EOT	19.25	.007	.30	−.08	−1.26-.39

Note: EDE: Eating Disorders Examination, EOT: End of Treatment, EBW: Expected Body Weight, FBT: Family based treatment

Table 3b.

Logistic Regressions in non-FBT treatment modalities for AN

Predictors	Binary DV	B	SE	Wald	p	Exp (B)	95%CI
Income	Remission	−.003	.01	.08	.77	1.00	.98-1.02
Illness duration	Remission	−.05	.03	3.52	.06	.95	.90-1.00
PVAN scores BL	Remission	−.02	.07	.06	.81	.98	.85-1.14

Note: Remission is defined as >95% EBW and ± 1 SD around EDE population norms (1.59).

Table 3c.

Chi-Square in non-FBT treatment modalities for AN

Predictors (yes/no)		Yes Remitted	Not Remitted	X^2	C	p
Comorbidity	≥1 comorbidity	8	29	.93	.09	.38
	No comorbidities	23	53			
Intact Family	Yes Intact	21	61	.50	.07	.49
	Not Intact	10	21			
Prior treatment	Yes Prior	26	61	.95	.09	.45
	No Prior	5	20			
Prior Hosp	Yes Prior Hosp.	16	33	1.10	.09	.40
	No Prior Hosp.	15	48			
Sex	Male	4	4	2.20	.14	.21
	Female	27	78			

[t]Effect size: Contingency Coefficient where .1=small, .3=medium, .5=large

Table 4a.

Logistic Regressions in FBT for BN

Cont. Predictors(s)	Binary DV	B	SE	Wald	p	Exp (B)	95%CI
Income	Remission	.15	.22	.45	.50	1.16	.76-1.77
Illness duration	Remission	.03	.02	1.66	.20	1.03	.99-1.07

Note: Remission=cessation of bingeing and compensatory behaviors for past month.

Table 4b.

Chi Square in FBT for BN

Binary Predictors (yes/no)		Yes Remitted	Not Remitted	X^2	C[t]	p
Comorbidity	≥1 comorbidity	12	18	.18	.06	.67
	No comorbidities	7	8			
Intact Family	Yes Intact	14	15	.90	.14	.34
	Not Intact	5	10			
Prior treatment	Yes Prior	11	23	3.51	.27	.06
	No Prior	6	3			
Prior Hosp	Yes Prior Hosp.	3	10	2.43	.23	.12
	No Prior Hosp.	15	16			
Sex	Male	3	1	1.93	.20	.29
	Female	16	25			

[t]Effect size: Contingency Coefficient where .1=small, .3=medium, .5=large

Table 5a.

Logistic Regressions in non-FBT treatment modalities (CBT-A) for BN

Cont. Predictors(s)	Binary DV	B	SE	Wald	p	Exp (B)	95%CI
Income	Remission	−.13	.18	.52	.47	.88	.62-1.25
Illness duration	Remission	−.02	.02	.60	.44	.99	.95-1.02

Note: Remission=cessation of bingeing and compensatory behaviors for past month.

Table 5b.

Chi Square non-FBT treatment modalities (CBT-A) for BN

Binary Predictors (yes/no)		Yes Remitted	Not Remitted	X^2	C	p
Comorbidity	≥1 comorbidity	13	28	.72	.12	.40
	No comorbidities	5	18			
Intact Family	Yes Intact	9	26	.57	.10	.45
	Not Intact	9	17			
Prior treatment	Yes Prior	10	37	4.43	.26	.04[t]
	No Prior	7	7			
Prior Hosp	Yes Prior Hosp.	6	12	.51	.09	.48
	No Prior Hosp.	10	31			
Sex	Male	3	2	2.73	.20	.13
	Female	15	44			

[t]Statistically significant difference below p=.05