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Family-based Treatment of Eating Disorders:

A Narrative Review

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Eating disorders (EDs) are pernicious illnesses that are associated with significant psychiatric and medical morbidity and mortality,¹ considerable distress and impairment,² marked caregiver burden,³ and high treatment costs.⁴ Because EDs commonly onset in adolescence and young adulthood,² and with consistent evidence that early intervention results in the most promising treatment outcomes,⁵ an increasing amount of research has been devoted to the treatment of adolescent EDs. Although still less researched than adult presentation of EDs, the historical record of adolescent ED treatment over the last half-century principally supports family therapy.^{6,7} Current published clinical guidelines recommend an ED-specific family therapy as the first-line treatment of adolescents with anorexia nervosa (AN) and as a recommended treatment of adolescents with bulimia nervosa (BN).⁸ The number of treatment trials for adolescent AN has slowly grown over the last few decades⁹ and, more recently, family interventions include protocols extending to new populations and diagnoses, including BN.^{10–12} This narrative review summarizes existing family-based approaches to the treatment of adolescent EDs, integrating recent research findings. This article also includes discussion of methods, both current and proposed, that expand and adapt current family-based approaches in efforts to improve the breadth and scope of ED treatment in adolescence and young adulthood.

FAMILY ROLE AND ENGAGEMENT IN EATING DISORDER TREATMENT

Historically, AN treatment excluded parental involvement in both diagnosis and intervention because parents were erroneously conceptualized as a causal factor in the pathogenesis of

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the ED.^{13,14} A philosophic and evidence-based shift away from an emphasis on family responsibility in the cause of ED has allowed parents to be actively involved in the course of treatment^{13,15} and to be viewed as a vital resource in aiding the young persons in the process of recovery.¹⁶ Further, a broader understanding of family dynamics that develop in the context of an ED includes not only the ways in which the disorder negatively affects the patient and family but also how the ED may be partially maintained within the family's structural system.¹⁷ At present, families are usually incorporated into the treatment of adolescents with AN,⁹ and such involvement has been shown to significantly reduce psychological and medical morbidity, as well as decrease treatment attrition rates.¹⁴ As such, and despite the paucity of family-based intervention trials for adolescent BN,¹⁰ it is likely that treatment of transdiagnostic EDs in adolescence, beyond AN, may benefit from consistent family involvement.

The first randomized clinical trial (RCT) for AN that involved parents showed that family therapy was superior to individual psychotherapy at posthospitalization for adolescents with fewer than 3 years' duration of illness.¹⁸ In the years since, family therapy for adolescent AN (treatment manual available at www.national.slam.nhs.uk/wp-content/uploads/2011/11/Maudsley-Service-Manual-for-Child-and-Adolescent-Eating-Disorders-July-2016.pdf) and family-based treatment (FBT), with treatment manuals corresponding to adolescent AN¹⁹ and BN,²⁰ have emerged as the most promising treatments for medically stable adolescent ED presentations. This article, as a reflection of the larger body of research available on tested treatment protocols, focuses primarily on FBT.

FBT is characterized by an agnostic stance toward the cause and pathogenesis of the ED, along with the overarching tenet that parents are the most influential resource in their offspring's recovery. In initial stages of treatment, FBT mobilizes parental resources in weight restoration, as well as in disrupting the cycle of ED behaviors. FBT therapists serve as expert consultants to the families, supporting parents to assume ultimate responsibility for guiding their child through recovery. FBT engages parents by directing their parental capacities and instincts toward the ED target, positively shaping parents' effectiveness, and releasing them from worry that their efforts will erode family relationships or exacerbate the illness. As weight restoration and behavioral symptom resolution are facilitated, less parental authority is typically required and parents may gradually restore autonomy over eating to the adolescent. As the child returns to age-appropriate functioning, therapeutic focus can shift to typical adolescent developmental issues that were interrupted by the onset and course of the ED.

FAMILY-BASED TREATMENT OF ANOREXIA NERVOSA

FBT has been systematically studied in 8 RCTs, 6 of which have focused on AN, and this has provided a strong evidence base supporting the use of manualized FBT for adolescents with this illness. In the first RCT to use the FBT-AN manual, 121 adolescents with AN were randomized to either FBT or individual adolescent-focused therapy (AFT).²¹ The primary outcome variable in this study was full remission, defined as reaching greater than or equal to 95% of expected body weight (%EBW), and achieving an eating disorder examination (EDE)²² global score within 1 standard deviation (SD) of community norms. The

investigators found no differences between the two groups at end of treatment, but significantly more patients receiving FBT had achieved full remission at 6-month (FBT 40% vs AFT 18%) and 12-month (FBT 49% vs AFT 23%) follow-up.

To delineate more precisely how the family, and parents specifically, may function within FBT, a multisite trial with 164 adolescents was conducted comparing FBT with systemic family therapy (SFT).²³ In SFT, difficulties such as AN are not thought to arise in individuals themselves but, instead, to develop within the relationships, interactions, and language in a given family system. Thus with this approach, the focus of treatment is on the family system, and normalization of eating and weight is not a specific focus of treatment unless raised by the family. Findings did not indicate significant differences between treatment groups in weight at end of treatment or 1-year follow-up. However, those receiving FBT gained weight significantly faster than those receiving SFT, and significantly fewer participants in FBT were hospitalized.

To evaluate differential effects of shorter-term versus longer-term FBT, in a study of 86 adolescents diagnosed with AN, participants were randomly assigned to either a 6-month (10 sessions) or a 12-month (20 sessions) duration of treatment and evaluated at the end of 1 year using the EDE.²⁴ Main outcomes in this study were between-group comparisons of EDE scores, and change in body mass index (BMI). Results indicated that a short-term course of FBT seems to be as effective as a long-term course for adolescents with AN. However, post hoc analyses suggest that individuals with more severe eating-related obsessive cognitions, or from nonintact or single-parent families, might benefit from longer treatment.

A trial investigating the impact of early weight gain on treatment outcomes enrolled 82 adolescents with AN who received either brief hospitalization for medical stabilization versus longer hospitalization for weight restoration to 90% EBW.²⁵ Following discharge, both groups received 20 sessions of FBT. Results indicated that weight gain greater than 1.8 kg at session 4 of FBT predicted greater %EBW as well as remission status at end of FBT and at 12-month follow-up. Notably, this early weight gain indicator predicted remission, whereas treatment arm randomization did not add significantly to the model. These findings underscore the importance of early weight gain, and also indicate that longer hospitalization is not required to enhance the effectiveness of FBT treatment of AN.

Taken together, these trials support the use of FBT for AN, over and above other forms of therapy, but also suggest that study of FBT-AN should include adaptations to specifically address predictors (eg, early weight gain) that may affect treatment outcomes. Other trials comparing standard conjoint FBT with a separate version of this treatment, called parent-focused therapy (PFT),²⁶ as well as with an adaptive/augmented format of FBT,²⁷ are discussed in depth later in this article in relation to specific treatment moderators.

FAMILY-BASED TREATMENT OF BULIMIA NERVOSA

Although prevalence estimates for adolescent BN are consistently higher than adolescent AN,² there is a limited amount of research evaluating treatment outcomes in this population.

²⁸ To date, there have been 3 randomized controlled trials specifically evaluating treatment efficacy of FBT for BN. In a trial comparing an adaptation of family therapy for AN for use with individuals with BN, 85 adolescents with BN or eating disorder not otherwise specified were randomized to FT or to self-guided cognitive behavior therapy (CBT).²⁹ Considered a first line of treatment of adults with BN,³⁰ CBT in this trial was self-guided and supported by a health care professional. Primary outcomes were abstinence from binge eating and vomiting following 6 months of treatment, and at 12-month follow-up; secondary outcomes included attitudinal bulimic symptoms, and treatment cost. Results indicated that patients receiving self-guided CBT had significant reductions in binge eating at 6 months but these differences disappeared at follow-up. Further, there were no differences between groups in purging behavior or attitudinal symptoms. Direct cost of care was reduced in CBT, but groups did not differ across other cost categories. Findings suggest that self-guided CBT might be superior in achieving abstinence from binge eating more quickly compared with a family therapy approach, but these effects are not lasting.

With a manualized approach to family treatment of BN, a trial comparing FBT-BN with supportive psychotherapy (SPT) in 80 participants (aged 12–19 years) with a Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV) diagnosis of BN or partial BN (ie, those who endorsed binge and purge episodes averaging once per week over 6 months) were randomized to 1 of these 2 treatments, each for 20 sessions over 6 months.³¹ SPT is a nondirective treatment that does not involve specific active therapeutic elements, and as a general treatment was considered comparable with what would be received in the community. Based on FBT-AN, FBT-BN also takes an agnostic stance about the cause of the ED, externalizes the illness, and empowers parents to disrupt maladaptive eating and compensatory behavior. However, compared with this treatment's AN format, FBT-BN takes the stance that this disorder is perhaps experienced as more ego-dystonic than is AN, and that most adolescents with BN are developmentally more on track than their AN counterparts. Therefore, FBT-BN allows for greater adolescent participation in the treatment process than is typically the case for AN. Results of this trial indicated that FBT-BN had significantly higher rates of abstinence from binge eating and purging episodes (39% vs 18%) at end of treatment; across both groups, the rate of abstinence declined when assessed at 12-month follow-up (29% and 10%, respectively).

In another trial, CBT was adapted for adolescents with BN (CBT-A) and compared with FBT-BN.³² In this study, 109 adolescents (aged 12–18 years) with a DSM-IV diagnosis of BN or partial BN (as defined previously) were randomized to 1 of these 2 treatments, each for 18 sessions over 6 months. CBT-A is primarily an individual therapy that focuses on reducing dieting and changing distorted behaviors and cognitions related to shape and weight. Adaptations to CBT that were unique to CBT-A included exploration of developmental challenges, and parent collateral sessions that included psychoeducation for caregivers about BN. FBT-BN was delivered with the approach described earlier. Findings indicated that abstinence from binge eating and purging episodes at the end of treatment was significantly higher for FBT-BN than CBT-A (39.4% vs 19.7%). At 6-month follow-up, abstinence rates for both groups continued to improve but remained significantly different in favor of FBT (44% and 25.4% respectively); abstinence rates between the two groups did not differ statistically at 12-month follow-up (49% vs 32%).

Taken together, these trials provide provisional, but strikingly robust, support for the use of FBTs in the treatment of adolescent BN. In particular, the 2 trials described here comparing the efficacy of a manualized FBT-BN with another distinct and active treatment (SPT and CBT-A, respectively) increase the efficiency within the study design in determining the superiority of this intervention relative to other established standard-of-care treatments.³³ This outcome is notable in contrast with the increased number of RCTs that have evaluated the efficacy of FBT in adolescents with AN, with only 1 having compared FBT-AN with an active treatment.²⁷ Therefore, it might be concluded that, although much research remains to be conducted in adolescent treatment of BN, the robust nature of current evidence rivals, and may even supersede, the efficacy established for FBT-AN.

EXPANSION OF FAMILY-BASED TREATMENT

In the years following that initial trial, FBT-AN has been considerably expanded to address new populations, developmental stages, and diagnoses. In addition, it has been modified to improve its dissemination ease and reach. Although much of this work is nascent, what is described here shows notable expansion efforts, including in telehealth, which may greatly improve accessibility to specialty treatment. Other ways in which FBT may be improved are in changes to format specific to engaging with multiple families simultaneously, and in application transdiagnostically across EDs and beyond the traditional adolescent age group.

Telehealth Format

The concentration of FBT-trained therapists in primarily urban centers suggests that the use of telehealth in the delivery of FBT has the capacity to vastly increase access to this therapy for many patient populations. Recent work has investigated the feasibility and preliminary effect size of FBT for adolescents with AN delivered via a telehealth platform.^{34,35} Treatment outcome was determined using percentage median BMI (mBMI), and the EDE. Findings indicate that mBMI significantly improved from baseline to end of treatment, and that this improvement was retained at 6-month follow-up. Similar results were achieved for the EDE global score, providing preliminary evidence that FBT via telehealth yields satisfactory clinical outcomes and warrants further investigation. Future confirmation of the success of this particular format in a larger treatment trial may ultimately allow more families to secure access to greatly needed specialty treatment.

Intensive Single-family and Multifamily Format

A short-term intensive family therapy (IFT), molded from FBT, has been tested across sites.^{36,37} In IFT, families engage in a 5-day, 8-h/d treatment week; this intensive format may be a particularly helpful alternative for families who cannot regularly access specialty ED care, and may also serve as an option for treatment-resistant cases.³⁸ A multifamily therapy approach to ED treatment was developed with the hypothesis that it would hold some benefits compared with the single-family format.³⁹ Specifically, a multiple-family format is predicated on the supposition that, when bringing families together as groups, family resources and support for one another are amplified, which may then lead to improved outcomes.⁴⁰ Prospective study of IFT in both single-family IFT (S-IFT) and multifamily IFT (M-IFT) formats was conducted with 74 adolescents.³⁶ Full remission was defined as

normal weight (95% of expected for sex, age, and height), EDE Questionnaire (EDE-Q) global scores within 1 SD of norms, and absence of binge-purge behaviors. Partial remission was defined as weight greater than or equal to 85% of expected or greater than or equal to 95% but with increased EDE-Q global score and presence of binge-purging symptoms (<1 per week). Over a mean follow-up of 30 months, results showed that 87.8% of participants achieved full (60.8%) or partial remission (27%), whereas 12.2% reported a poor outcome. Notably, findings indicated that both formats had comparable outcomes in achieving full or partial remission. Taken together, preliminary evidence suggests that short-term, intensive treatments, in both S-IFT and M-IFT formats, may confer overall positive treatment outcomes. These findings confirm that a multiple-family treatment format is no less effective, and may serve to improve accessibility, increase use of mutual family support, and provide a higher level of care that is less disruptive.

Family-based Treatment of Transition-aged Youth

Most of the extant FBT literature has focused on adolescents between the ages of 12 and 18 years. However, the definition of adolescence is mutable, and, particularly in Western societies, adolescence frequently extends into young adulthood. Transition-aged youth (TAY) (17–25 years old) are distinct from both adolescents and older adults because many continue to reside with family from whom they may receive substantial financial and emotional support, suggesting that adapting FBT for this patient population may be propitious.⁴¹ In the context of EDs, previous research indicates that FBT might be less effective for older than for younger adolescents with AN,⁴⁰ but a recent feasibility and acceptability study for young adults found that FBT, with appropriate modifications, was able to achieve weight restoration in this patient population.⁴² A manualized FBT-TAY builds on the model of FBT for adolescents with AN and BN, and incorporates adaptations that are appropriate for the developmental needs of older teenagers and young adults. These modifications include asking the young adults to describe what kind of support they need from family during mealtimes, thereby allowing them a say in how their treatment is delivered. Other modifications include considering developmentally appropriate situations (eg, eating on campus) and how recovery may include age-appropriate transition issues (eg, return to work, living with a partner or friends). In a recent small trial of FBT-TAY with 26 participants, findings indicated significant improvement in EDE-Q global scores at end of treatment and 3 months posttreatment.^{43,44} Participants also achieved and maintained weight restoration at end of treatment and 3 months posttreatment compared with baseline, suggesting that FBT-TAY is a promising adaptation of FBT for which a larger clinical trial is warranted.

Family-based Treatment of Other Eating and Weight Disorders

To date, clinical trials in ED diagnoses other than AN and BN are limited, and no clinical trials have specifically examined FBT for binge-eating disorder. Recognizing that obesity in youth is a public health concern and has a predictable course of obesity into adulthood, FBT for pediatric obesity (FBT-PO) has been proposed, with preliminary testing in a case study and RCT.^{45,46} In FBT-PO, the treatment approach is modified according to the age of the patient. Parents are involved at the beginning of treatment to varying degrees, depending on the maturity of the child and not the severity of the “illness,” to account for the absence of

interfering mental disorders. Parents initially assume full responsibility for eating-related and exercise-related changes in the home, and all family-level modifications are health oriented, safe, and applicable even for nonoverweight family members. As with FBT-AN, parental control over eating and exercise lessens over the course of treatment.

Several research groups are developing and investigating versions of FBT for avoidant resistant food intake disorder (ARFID) (eg, Ref.⁴⁷). In an FBT model currently being adapted for ARFID, psychoeducation is provided about features unique to this disorder. The focus of treatment is on empowering parents, restoring weight as necessary, uniting the family against the ED, and improving eating behaviors to include a greater variety of foods. As research continues to improve understanding of ED diagnoses clarified by DSM-5, adapting FBT treatments for suitable use in these populations implicates promising avenues to address a wider array of ED symptoms in a greater variety of formats and forums.

ADAPTATIONS OF FAMILY-BASED TREATMENTS BASED ON TREATMENT OUTCOME MODERATORS

Evidence from studies of moderators that may affect treatment outcomes in RCTs for FBT-AN and FBT-BN has guided specific adaptations in treatment protocols. Specifically, early weight gain,⁴⁸ parental criticism,⁴⁹ and obsessiveness²⁴ have all been identified as moderators that may significantly and negatively affect FBT treatment outcomes. To address each of these moderators in turn, modified versions of FBT have been tested.

Early weight gain (a specific degree of weight gain by 1 month of manualized FBT) is a strong early predictor of remission.^{24,25,48,50} Parental self-efficacy is a proven mediator of FBT treatment outcomes, suggesting that maneuvering weight gain early in treatment may assist parents in becoming more empowered within the context of FBT, thereby improving overall weight gain at end of treatment.⁵¹ For those adolescents with AN who are considered nonresponders in not gaining a sufficient amount of weight (2.4 kg) in the first month of manualized FBT treatment, an adaptive treatment approach, with intensive parental coaching (IPC), has been developed. In this treatment augmentation protocol, sessions 4 through 6 follow a specific format with the intent to enhance parental self-efficacy in families of early nonresponders. Specifically, session 4 introduces the adaptive treatment, and reemphasizes the importance of weight gain. Parents receive a session alone (ie, session 5 is a separated family session) to orchestrate a renewed intense scene about the severity of illness, and reinvigorate a sense of immediacy in the need for weight restoration. In addition, in session 6, parents participate with their adolescent in a second family meal. In one study of this adaptive treatment, 45 adolescents with AN were randomized to either FBT (n 5 10) or FBT with IPC (n 5 35) if patients did not gain 2.4 kg by session 4. In addition to standard FBT, IPC included 3 additional sessions (ie, sessions 4–6). At end of treatment, patients receiving FBT-IPC had gained significantly more weight than patients continuing after session 4 with standard FBT.²⁷ Results should be interpreted with caution given the small sample size, but preliminary results suggest that this adaptive FBT may be effective in ultimately eliciting weight restoration for early treatment nonresponders. A confirmatory multisite trial of this

adaptive treatment is currently being conducted with a 2-site sample of adolescents with AN and their families.

Several studies have shown that parental criticism, as measured by expressed emotion, can negatively affect treatment outcomes.^{41,49,52} To address this issue, a recent RCT compared FBT with PFT, a separated version of the same treatment.^{26,53} In PFT, the adolescent is seen at the beginning of the session and weighed, with brief supportive counseling. The remainder of the session is spent meeting alone with the parents. In this study of 107 adolescents with AN comparing conjoint FBT with the separated format (PFT), remission rates were higher in PFT (43%) than in FBT (22%) at end of treatment. However, the treatment groups did not differ at 6-month or 12-month follow-up.²⁶ Regardless of remission rates, reduction in criticism is much more likely to occur within the context of PFT, rather than FBT. These findings provide preliminary evidence that PFT can be an effective treatment of adolescents with AN, and perhaps preferred for families with baseline parental criticism.

When individuals present with greater severity in perseverative ED thinking or obsessive-compulsive features, FBT is superior to AFT in achieving weight restoration.⁴¹ This finding suggests that a more behavioral approach, such as FBT, is better equipped to address this mental disorder than an individual psychotherapy. However, individuals with this cognitive presentation may require a longer course of FBT.²⁴ Relatedly, preliminary research suggests that cognitive remediation therapy (CRT) is feasible and acceptable to adolescents with AN, and could reduce the effects on cognitive inflexibility on treatment outcome, as indicated in recent work.⁵⁴ Thirty adolescents meeting criteria for DSM-5 diagnosis of AN, who also reported perseverative thinking, were randomized to manualized FBT plus CRT, or manualized FBT plus art therapy. because both groups gained weight and showed improvements on the EDE, it remains unclear whether adding a targeted and specific individual therapy to FBT aimed at perseverative thinking is worthy of further study.

Treatment adaptations that have targeted early weight gain, parental criticism, and cognitive rigidity show promise in improving precision treatment efforts in specific populations. Continued study of predictors of response to FBT in both AN and BN and the factors that moderate the effects of treatment on outcome are critical to the development of more precise and tailored treatment efforts. This study is particularly needed for BN, for which moderators of outcome have been less studied.

FUTURE DIRECTIONS

Systematic review of AN treatment across both adolescents and adults indicates that specialty treatments, including FBT, are more adept than comparator interventions at achieving weight-based improvement at end of treatment, but that psychological symptom relief does not follow a commensurate course.⁵⁵ Within FBT for adolescents specifically, weight restoration is an explicit focus; based on evidence that early weight gain in the context of treatment is critical (eg, Ref.²⁵), future study of FBT adaptations that increase early weight gain may improve indices of weight restoration at follow-up. To address the latency of psychological symptoms in the context of recovery, improving the implementation

of FBT across specific populations for whom standard FBT is less effective may greatly improve treatment response.

Perhaps even more important than improving the efficacy of FBT is increasing its dissemination capacity. Access to specialty providers for ED treatment is a challenge outside of urban environs, and there are a limited number of trained providers outside the specific sites where FBT was developed.⁵⁶ Increasing access to FBT training through Web-based education and supervision is a key area of development. In addition, preliminary effectiveness for the delivery of FBT via telehealth has been established^{34,35} and warrants further examination across a larger trial. A recent examination of a parental guided self-help format of treatment of adolescents with AN showed initial feasibility and may also serve to extend treatment services beyond what is available with in-person providers.⁵⁷

SUMMARY AND DISCUSSION

The last decade has witnessed advances in the development of FBT for adolescent EDs, particularly in the study of AN but also with a recent, notable initiation in study of FBT for BN. Taken together, there is a robust body of evidence supporting the efficacy of interventions that emphasize family involvement. Further research is needed to investigate the precise nature of optimal family involvement, and specifically to determine for whom, and under what conditions, certain types of family involvement might be most effective. In addition, the dissemination of specialty treatments such as FBT is crucial to the advancement of precision medical treatment of ED in adolescents, toward which concerted efforts should be directed.

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KEY POINTS

- Current best practices for eating disorder treatment in adolescence and young adulthood include family-based interventions.
- Although evidence is gathering, there remains a paucity of randomized clinical trials for eating disorders aside from anorexia nervosa.
- Future efforts in family-based eating disorder treatment must include a focus on dissemination and implementation.