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Abstract

Family-Based Treatment (FBT), is the treatment of choice for adolescents with anorexia nervosa (AN). Much research supports its success, and yet little is known about its use by adolescent health care providers and their use of nutrition providers. **Objective:** This study aimed to identify the use of FBT and its treatment manual in the treatment of adolescent patients with AN by members of the Society for Adolescent Health and Medicine (SAHM), as well as the utilization of a dietitian in the treatment process. **Method:** In total, 72 SAHM members completed an online survey. **Results:** Overall, 84% of responding SAHM practitioners (81% in the USA) recommended FBT for the treatment of patients with AN --- with 54% of providers feeling that they had the necessary support and resources to implement FBT in their area of practice. Only 9% of those who practice FBT stated that the follow the treatment manual exactly as written, with 48% following just the principles of the manual. Of those who utilized FBT, 97% (98% in the USA), stated that a dietitian was used as part of the treatment team. **Discussion:** Given the need for consistency among practitioners, further research is needed to assess and define the role of the dietitian in FBT.

Introduction

Anorexia nervosa (AN) is an eating disorder seen in adolescents, which is described as the "restriction of energy intake relative to requirements leading to a significantly low body weight in the context of age, sex, developmental trajectory, and physical health." For adolescent patients, significantly low body weight can be defined as an individual not meeting their minimally expected weight, and as a consequence of the restricted energy and nutrient intake this can manifest as failure to grow.[1] The prevalence of AN is approximately 0.3% to 1.1% in adolescent females in the United States, and tends to onset with puberty, at approximately 12 years of age.[2] The mortality rate for patients diagnosed with AN is the highest for any psychiatric disorder, at 5.9% --- this high mortality rate is attributed to the complications of starvation or suicide.[3-5] Additionally, many adolescents also suffer from anorexia nervosa-like symptoms but do not meet the full diagnostic criteria for the disorder; therefore, the actual prevalence of such behaviors in adolescents may be higher than current research suggests.[6-7]

A variety of outpatient treatment options exist, including cognitive-behavioral therapy,[8] individual therapy, family therapy, and Family-Based Treatment (FBT).[9] Complete recovery from AN had been seen in 47% of all surviving patients, across treatments prior to the introduction of FBT.[10] Introduced as an outpatient treatment option in 2003 at the Maudsley Hospital in south London, in FBT, the multidisciplinary medical team work with the parents of patients with AN to empower them to take charge of their child's treatment, as well as help them to differentiate between their child and the illness.[11]

Research has shown that within one year, 50-60% of those who undergo FBT are able to achieve full remission, while 25-35% achieve partial recovery.[12] Furthermore, FBT has been shown to be more effective in reducing early hospitalizations of patients when compared to those receiving Systemic Family Therapy,[13] as well as being more effective at preventing remission at the time of treatment completion, when compared to parent-focused treatment.[14]

Due to the higher treatment success rate, FBT, also known as the Maudsley Method, is the current treatment of choice for adolescents suffering from AN and is recommended by the Society for Adolescent Health and Medicine (SAHM), the American Academy of Pediatrics (AAP), and the Academy of Nutrition and Dietetics (AND).[15-17]

In 2001, the *Treatment Manual for Anorexia Nervosa: A Family-Based Approach* was published. This manual outlined the principles of FBT as a therapeutic approach in the treatment of adolescents with AN.[18] Updated in 2015, this manual is used by treatment providers and specifically states that a dietitian should not work directly with the patient or family, but rather only serve as a consultant to the therapist if needed.[9] Despite the recommendations of the manual there are many anecdotal reports of dietitians working with FBT patients. Workshops on this subject are available and advertised to dietitians. With no manual to guide intervention, dietitians are left to develop protocols with no evidence. In an attempt to start to understand the role of the dietitian in FBT treatment we attempted to assess the use of nutrition professionals by adolescent health providers who were also members of SAHM.

With prior research highlighting the success of FBT, we aimed to define its utilization in the treatment of adolescent patients with AN by members of the Society for Adolescent Health and Medicine (SAHM). Our goal was to discern the number of SAHM providers who recommend and practice FBT, as well as understand their attitudes towards utilizing this treatment method. We also wanted to understand if programs using the FBT model utilize the services of a dietitian in the treatment of adolescents with AN, which is not recommended in the treatment manual.

Methods

The survey was developed in collaboration with the statistical department of Baystate Medical Center. A pilot was conducted with Baystate physicians to test the survey's ease of use. The 18-item survey was distributed via the SAHM-listserv in October of 2015. The survey asked participants about their familiarity with FBT, as well as the treatment methods they utilize while treating adolescents with AN. Participants were also asked about the resources available to them to implement FBT. Further questions asked participants to identify to what extent they use the FBT manual; as well as whether or not they use a dietitian as part of their treatment team. Lastly,

the demographics of each participant were recorded, including their educational background, place of work, and any specialized training that they may have received. Participants had the option to skip questions which did not apply to them or that they did not wish to answer. This study was approved by the University of Massachusetts Amherst Institutional Review Board.

Results

In total, 78 surveys were completed by health care providers on the SAHM-listserv from the 7th of October 2015 to the 28th of November 2015. Of these 78 participants, six did not complete the survey past the initial consent form, and were excluded from the study. Of the remaining 72 participants, six were international participants (non-U.S.A./Canada) and five were Canadian. The remaining 61 participants were from the United States. Of the 72 responses, 86% stated that they held a medical degree (MD).

Ninety seven percent of respondents saw adolescents with AN in their practice, with 89% being at least relatively familiar with what FBT entails. (*Are you familiar with Family-Based (Maudsley) Treatment of Anorexia Nervosa?).* Eighty-four percent of SAHM participants surveyed (81% of USA practitioners alone) stated that they recommend FBT as one of the treatment options for their adolescent patients with AN (Table 1). Although 91% of those surveyed agreed that FBT is more efficacious than individual therapy in the treatment of AN, only 54% of providers felt they had the necessary support and resources to implement FBT (Table 2).

SAHM members also reported varying degrees of utilization of the Family-Based Treatment manual (Lock & Le Grange, 2015). *(Do you follow the Family-Based Treatment Manual in your treatment of anorexia nervosa?).* Of those who utilize the manual, 9% stated that they follow it exactly as written, with others stating that they use the manual as a guideline (28%.) Still others used the manual with a modified approach (16%), while most just used the principles of the manual (48%). Meanwhile 98% of American respondents (97% for all participants surveyed) using FBT reported that they use a dietitian as part of the treatment team.

Discussion

This study is the first to document the use of FBT in adolescent medical providers. Our aim was to discern the number, and the manner in which members of SAHM recommend and practice FBT for the treatment of adolescents with AN, and how many of these practitioners use a dietitian as part of the treatment team. We also assessed the utilization of the FBT manual during the treatment process.

Of interest is the finding that only 81% of United States SAHM participants who responded to the survey recommend FBT to their adolescent patients with AN, despite its endorsement by the Society for Adolescent Health and Medicine (SAHM), the American Academy of Pediatrics (AAP), and Academy of Nutrition and Dietetics (AND).[15-17] The fact that not 100% of practitioners were utilizing FBT highlights the need for more research to better understand the current barriers that may be limiting the adoption of its methods. It is possible that practitioners are not using FBT because of limited supportive resources in certain areas of the United States, as only 54% of providers felt they had the necessary support and resources to implement FBT.

We also found that ninety-one percent (91%) of SAHM members who practice FBT reported that they do not follow the treatment manual verbatim. We speculate that the training and education of adolescent health care professionals in the use of FBT needs to be improved. Since many of our participants were physicians, it is also possible that they use the treatment manual only as a guideline, while leaving more exact approaches for the therapist to implement.

Despite the recommendation in the FBT manual that a dietitian only be used as a resource for the therapist, nearly all (98%) American SAHM members reported that a dietitian is used as part of the treatment team with the patient. Further research is needed to identify the significance and specify the dietitian's role in FBT and how best to use dietetic services throughout the treatment process.

Six percent of the 1,217 SAHM listserv subscribers responded to this survey, making it difficult to generalize the results to all providers in SAHM caring for patients with AN. It is

important to note; however, that not all members of SAHM work directly with adolescents or treat those with AN.

Our aim was to define the utilization of FBT in the treatment of adolescent patients with AN by members of SAHM. There is a wide variation in how members of SAHM utilize the treatment manual for FBT. Since we found that nearly all SAHM participants use a dietitian as part of the treatment team, although not recommended in the FBT manual, we believe that future research is warranted to determine how to implement dietetic services most effectively within the FBT model of care.

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Table 1: Responses to: *Which of the following treatments do you recommend for your patients who are outpatients with anorexia nervosa? (Select all that you use) n=69*

Treatment Type	**Percentage**
Family-Based (Maudsley) Treatment	84%
Cognitive Behavioral Therapy	64%
Dialectical Behavioral Therapy	35%
Individual Therapy	77%
Family Therapy	71%
Other	10%

Table 2: Participant rankings of the below statements n=66

Statement	**Strongly Disagree**	**Disagree**	**Neutral**	**Agree**	**Strongly Agree**	**n**

I understand exactly what Family-Based (Maudsley) Treatment entails.	1	4	2	32	27	66
Family-Based (Maudsley) Treatment has been shown to be more efficacious than individual therapy in the treatment of anorexia nervosa.	1	0	5	33	27	66
The families that I work with would not be able to do Family-Based (Maudsley) Treatment.	11	30	16	7	1	65
I do not have the resources/support to institute Family-Based (Maudsley) Treatment in the area where I practice.	17	18	17	9	4	65