

Virtually Delivered Eating Disorder Treatment using an Enhanced Multidisciplinary Care Team: A Case Study

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Abstract

Family-based treatment, the recommended treatment for adolescents and young adults with eating disorders, it is often not accessible for families. The aim of this case report is to describe outcomes of two patients treated virtually with an augmented team approach to provide preliminary evidence of feasibility and efficacy.

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Abstract:

Objective: While family based treatment (FBT) is the recommended treatment for adolescents and young adults with eating disorders, it is often not geographically accessible, and outcomes can be negatively impacted by misalignment between treatment providers. The aim of this case report is to describe outcomes of two patients treated virtually with an augmented team approach to provide preliminary evidence of feasibility and efficacy. **Methods:** Two patients were enrolled at Equip for 4 weeks of treatment. Engagement and outcomes were assessed before, after, and at 4 week follow-up. Sessions were held via telehealth with four providers (therapist, dietitian, peer mentor and family mentor). **Results:** Patient one gained 6.4 lbs, and patient two gained 4.2 lbs during the trial. Eating disorder symptom scores also decreased for each patient. Patients attended 18 and 16 total sessions respectively, and parents and patients reported that they would “definitely recommend” the treatment to a friend or family, suggesting strong acceptability. Weight gain

continued for both patients at 4 week follow-up (2 lbs and 4.8 lbs respectively). **Discussion:** These findings offer preliminary support for this treatment resulting in meaningful clinical improvements. Future research should examine this treatment in larger samples, with longer follow-up periods and comparison treatments.

Keywords: Telemedicine, Family Therapy, Adolescents, Anorexia Nervosa, Feeding and Eating Disorders, Mentors

Key Clinical Message: Both patients experienced meaningful clinical improvements with this virtual approach and the augmented treatment team in regards to weight gain, acceptability and clinical assessment scores. These findings offer preliminary support for this model.

Introduction:

Eating Disorders are life-threatening conditions characterized by a marked disturbance in how one experiences weight (DSM-V). Further, eating disorders have the second highest standardized mortality rates of all psychiatric illnesses (Chesney et al., 2014). Family-based treatment (FBT) is well established as the gold standard treatment for anorexia nervosa (AN) (Couturier, 2013). Delivery of FBT requires use of a specialized provider trained in the approach, which presents a challenge for families residing in ‘treatment deserts’ without access to specialized services.

Evidence-Based Treatment and Access Limitations

A study exploring types of therapeutic approaches used by community providers treating eating disorders demonstrated that, despite the abundance of evidence supporting FBT as a first line treatment, the majority of providers do not adhere to best practice standards/evidence based practices. The approach most commonly used by psychotherapy providers is ‘eclectic’ (43%), and addiction-based/‘12-step’ approaches (26%) (Von Ranson et al., 2013). Further, the majority (57%) received no clinical training or supervision on eating disorders. The most common reasons for choice of approach are compatibility with clinicians’ style and training, and ‘appropriateness’ based on clinical judgment. Only a minority endorsed choosing an approach because it was supported by evidence, and it is well documented that favoring clinical judgment over well established interventions results in poorer outcomes (Von Ranson et al., 2013; Waller, 2016).

Efficacy of Virtual Eating Disorder Treatment

Outcomes for care delivered via telehealth rival those of in-person care across a number of conditions, while also addressing issues relating to access to specialized care (Sprock, 2019). Since the onset of the COVID-19 pandemic, there’s been a staggering jump in mental health conditions (MMWR, 2020). Rates of depression, anxiety, substance use and suicidality have risen significantly since 2019 (MMWR, 2020), and persons with existing psychiatric issues are particularly vulnerable. Prevalence of comorbid anxiety, depression and substance use disorders are increased in individuals with eating disorders, and there is an expected increased burden on the health care system in the years ahead (Woodside & Staab, 2006; Ulfvebrande et al., 2015). The social isolation and challenges with service access highlight a need for increased use of telehealth for delivery of evidence-based treatment. A recent report described anticipated challenges (such as rapport building, medical and weight monitoring) and proposed solutions for delivering FBT virtually (Matheson et al., 2020). Findings suggest that the merits of virtually-delivered FBT outweigh limitations and that adaptations can be developed to minimize many of the challenges (Matheson et al., 2020; Anderson, 2017).

Mentorship Support as an Adjunct to Standard FBT

While FBT is regarded as the ‘gold standard treatment’ for anorexia nervosa, there is a continued need for testing further improvements to the approach, given that over half of those who undergo FBT do not show remission by end of the treatment course (Lock, 2018). A number of studies have been conducted looking at the benefits and challenges of providing an individual with a ‘lived experience’ mentor, defined as one who has a shared struggle and has since recovered. Mentorship programs have been shown to improve quality of life and decrease psychiatric symptoms in other health conditions (Pitt et al., 2013). When looking specifically at mentorship in eating disorders, reported benefits to mentees include feelings of belonging, comfort, hope,

connection and a unique sense of support due to the mentor’s lived experience. One study examined the influence of parent to parent support on outcomes of FBT for anorexia nervosa by randomizing 20 families to receive either standard FBT or FBT with the addition of parent consultation. The rate of weight restoration was found to be higher in the group receiving parent to parent support (Rhodes, 2008). More recently, adjunctive peer mentorship has been shown to reduce mentees’ symptoms of anxiety, depression and body dissatisfaction, and to improve engagement in treatment (Ranzenhofer et al., 2020).

Study Objective

While positive outcomes of virtual care are well supported, and while its merits are significant, gaps in literature exist when considering efficacy of virtually delivered FBT. The aim of this case study is to examine the treatment of two patients with eating disorders using an augmented virtual FBT approach provided by Equip Behavioral Health. We enrolled 2 families in a beta trial from April to May 2020, providing 4 weeks of no-cost treatment. The conventional treatment team consisting of a family therapist and registered dietitian was enhanced by the addition of a ‘lived experience’ arm consisting of a peer mentor and family mentor. The care team held individual sessions weekly (at minimum, with additional sessions available upon request) with parents, patient or both, via Equip’s HIPAA compliant telehealth platform. For these trial cases, medical care was provided locally for participants outside of the Equip system. We tracked outcomes and solicited feedback via a combination of surveys and assessments, typically at both baseline and discharge. The primary outcome of this study was weight change in participants with the expectation that each patient gain an average of one pound per week during the 4 weeks of treatment. Secondary outcomes are changes in GAD-7, PHQ-9, and EDE-QS scores over time, with the expectation that scores on these scales would decrease during the 4 weeks of treatment. In addition to these clinical measures, we aimed to evaluate comfort level with the technological aspects of the telehealth platform.

Methods:

Participant Characteristics

Two patients with a diagnosed eating disorder (participant 1 with anorexia nervosa and participant 2 with atypical anorexia) participated in the beta trial. Patients were recruited by Equip providers through postings made on social media-based professional networking groups and listservs. Assessments were performed by a licensed doctoral level psychologist. Inclusion criteria required that the patient live at home with carers, that carers were willing and able to engage fully in treatment (including attending family therapy, dietary sessions, family mentor sessions, and carer skills groups) and that carers had the ability to supervise eating, if needed. Patients were excluded from participation if they were medically unstable or struggled with any of the following: actively suicidality or past suicide attempts, borderline personality disorder or other personality disorder, significant substance abuse or significant current non-suicidal self injury. Patients were also excluded if carers had an active eating disorder, a significant personality disorder, engaged in neglectful or abusive behavior toward the patient, or were unwilling/unable to prioritize the patient’s needs. This trial met criteria for ‘chart review’, and thus Equip received approval for exemption status from Western Institutional Review Board.

Treatment Approach

Each treatment team contained a family therapist, dietitian, peer mentor and family mentor. The therapist worked with the patient and carers utilizing an FBT approach. The therapist incorporated CBT and DBT techniques where appropriate to challenge rigidities in cognitions and maladaptive coping skills. The dietitian used the patient’s current weight and growth charts to create an informed target weight range for the patient. The dietitian additionally prescribed a meal plan and exercise plan to safely and effectively allow for appropriate weight restoration. The peer mentor engaged in weekly meetings with the patient, offering support and judicious self-disclosure, and acting as a role model for recovery. The family mentor met with the patient’s carers to offer support and advice for ways to provide effective nourishment and limit unhealthy behaviors. The Equip treatment team collaborated with an in-person medical provider to monitor patient’s medical stability including vital signs and laboratory tests.

Measures

Generalized Anxiety Disorder Scale (GAD-7)

The Generalized Anxiety Disorder Scale (GAD-7) is a widely used, validated and reliable self-report tool for screening, diagnosing and assessing severity of an anxiety disorder. Individuals are asked to rate seven items pertaining to anxiety symptoms which are scored from 0-3, and the score is totaled. Anxiety is rated as either minimal, mild, moderate or severe. The GAD-7 was administered at baseline, and again upon discharge (Spitzer et al., 2006).

Patient Health Questionnaire (PHQ-9)

The Patient Health Questionnaire (PHQ-9) is a brief, well-validated and reliable diagnostic tool for depression. Individuals are asked to rate 9 items pertaining to depression symptoms they've found bothersome over the last two weeks from "0" (not at all) to "3" (nearly every day). Depressive symptoms are then rated as minimal, mild, moderate, moderately severe or severe. The PHQ-9 was administered at baseline, and again upon discharge (Kroenke et al., 2001).

EDE-QS

Patients completed the Eating Disorder Examination Questionnaire Short Form (EDE-QS) at baseline, and again at discharge. The EDE-QS is an abbreviated 12-item version of the 28-item Eating Disorder Examination Questionnaire (EDE-Q) survey. The EDE-QS is a well-validated and reliable measure which assesses eating disorder symptom severity. Scores range from 0-36, with higher scores suggesting increasing severity of eating disorder behavior (Gideon et al., 2016).

Satisfaction Rating

Upon completion of the beta trial, parents and the patient were asked the following question: "On a scale from 0-10, how likely are you to recommend Equip to a friend or family?" with zero representing "Would definitely not recommend" and 10 representing "Would definitely recommend."

Engagement

Engagement with the therapist, dietitian, peer mentor and family mentor was measured by counting the number of sessions attended by both parents and patient, and number of total messages exchanged within the Equip platform's 'chat' feature.

Weight

The patient's weight (in pounds) was taken by parents twice weekly, and communicated via text from parents to Equip's HIPAA compliant platform. Parents also provided a weight update at four weeks post discharge. Target weight was calculated using expected weight data from each patient's CDC BMI-for-age Growth Charts.

Results:

Patient characteristics and outcome data are reported in Table 1. In terms of our primary outcome, both patients gained at least 1 pound per week over the course of the trial (6.4 and 4.2 lbs in four weeks respectively). For secondary outcomes, scores for EDE-QS decreased by 7 and 12 points, suggesting a marked decrease in eating disorder symptoms. Relatively little change was noted in PHQ-9 and GAD-7 scores, with one participant scoring 'mild' at baseline and discharge on both assessments, and the other scoring 'moderate' at baseline and discharge on both assessments. Patients and parents attended 18 and 16 sessions, respectively, though parents of patient 2 engaged with the team via the 'chat' feature at a much higher frequency. Both parents and patients reported that they would 'definitely recommend' Equip to a friend or family.

Discussion:

The beta trial patients demonstrated a positive response to Equip’s treatment model, as both patients gained at least one pound per week during the trial. In terms of secondary outcomes, there was a decrease in EDE-QS scores for both patients however GAD-7 and PHQ-9 remained stable and subclinical over the course of treatment. Further, both patients continued to progress with weight restoration after treatment ended. Patients and parents were both highly engaged during the trial with both traditional providers (therapist and dietitian) as well as mentors. This was promising given potential for loss of rapport or connection when care is virtually delivered. Having the additional support from the ‘lived experience’ vantage point with the addition of mentors to the treatment team may overcome perceived limitations related to virtual care. Parents and patients were very satisfied with the approach overall, and verbally expressed finding great value in the unique support received from all four team members.

This case study’s results are limited by the short intervention period and use of non-validated measurement tools in regard to satisfaction and engagement scores. Further, we have limited data post-discharge (weight only). Engagement and satisfaction may be influenced by treatment being at no cost, and thus expectations of paid patients may differ. Additionally, further investigation is needed to ensure that other patients show similar improvements with the treatment approach, although the report of these two cases is promising.

These findings offer preliminary support for achieving meaningful clinical outcomes using Equip’s virtually delivered augmented FBT model. If future studies of this approach that include larger samples, longer follow-up periods, and comparison treatments replicate the outcomes from these cases, the treatment approach could be crucial for addressing limitations in access to care for families living far from trained FBT specialists.

Author Contributions

Megan Hellner’s primary contributions were as follows:

- Conception of the study; review of literature; data analysis and interpretation; initial draft of the manuscript; critical revision of manuscript and approval of final version prior to submitting for publication.

Sam Kolander’s primary contributions were as follows:

- Interpretation of data; initial draft of the manuscript; critical revision of the manuscript and approval of the final version prior to submitting for publication.

Cara Bohon’s primary contributions were as follows:

- Review of literature; Interpretation of data; critical revision of the manuscript and approval of the final version of the manuscript prior to submitting for publication.

Erin Parks’ primary contributions were as follows:

- Conception of the study; collection of data; final approval of the version of the manuscript prior to submitting for publication.

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