Children's Hospital of Philadelphia
PolicyLab

Enhancing Outcomes in Adolescent Anorexia Nervosa with Cognitive Remediation Therapy

Statement of Problem

Anorexia nervosa is a serious eating disorder that impacts nearly 4% of people throughout their lifetime. A hallmark of the illness is weight below what is normal for that person's sex, height and developmental trajectory; many individuals with anorexia engage in behavior to avoid weight gain. In addition to having a number of serious medical consequences, anorexia has the highest mortality rate of all psychiatric disorders.

Because anorexia begins in adolescence, early intervention is key to prevent a chronic course of the disorder. To date, there is only one intervention with substantial evidence-based support for treating anorexia in adolescents: Family Based Treatment (FBT). FBT is a manualized treatment, meaning that the therapist follows a standard protocol to ensure uniformity in care, that is effective for youth aged 12-18. It is a conjoint family treatment, that is, all family members participate in treatment. However, currently only 50% of adolescents reach full remission after treatment. Thus, there is a need to improve our treatments for adolescents with anorexia to ultimately improve their health.

Description

Studies in adults and adolescents with anorexia indicate that they have inefficiencies in cognitive flexibility (e.g., have a difficult time switching gears or topics) and may struggle with big picture thinking. In addition, they frequently exhibit reduced behavioral flexibility (e.g. extreme perfectionism, perseveration, difficulties in learning new behaviors) that researchers believe reflects this underlying neurocognitive inefficiency. Importantly, researchers hypothesize that cognitive inefficiencies are a generalized risk factor for the development of anorexia. Targeting these inefficiencies may increase the effectiveness of treatment.

Cognitive Remediation Therapy (CRT) is a treatment known to improve cognitive flexibility. CRT focuses on the development of meta-cognition, or teaching individuals to think about how they think. It involves presenting individuals with a variety of tasks requiring increasingly complex mental abilities including geometric figures, illusions, reversing sequences of numbers and letters, completing sorting tasks wherein the rules change and finding various routes on a map. Most importantly, CRT focuses on process instead of outcome. That is, instead of focusing on whether or not a task was accurately completed, individuals in CRT are asked to think about how they solved a puzzle, reflect on their thought processes and identify steps they used in problem solving.

Practitioners can only provide CRT in addition to regular treatment for anorexia nervosa. We believe that by adding this treatment to FBT, we can improve long-term outcomes for more adolescents with anorexia. However, there is little research on how best to combine CRT with FBT for adolescents. In the first phase of this project, we explored whether or not it would be more impactful to provide CRT to the parents of adolescents with anorexia as parents are the individuals carrying the burden of treatment and re-nourishmnet of their child. In the first two years of the study, families received treatment in one of three arms: FBT alone, FBT plus parent-focused CRT, or FBT plus adolescent-focused CRT. Preliminary data indicated that we had more rapid improvement in flexibility for youth who received CRT compared to those who did not. We did not observe significant changes in flexibility in parents. In the next phase of this work, we will further our research on CRT by focusing on adolescents.

In the current study, we are recruiting adolescents ages 12-18 with anorexia and enrolling them into one of two treatment arms: FBT alone or FBT plus adolescent-focused CRT. We will collect psychosocial, neurocognitive and behavioral measures throughout the study. The ultimate purpose of this project is to replicate our initial findings, deepen our understanding of how CRT may work or for whom it is most beneficial, and to determine

whether or not CRT improves outcomes in youth with anorexia.

Next Steps

Moving forward, we hope that augmenting FBT with CRT either in adolescents or in parents can improve overall treatment outcomes and weight restoration goals for adolescents with anorexia. It may be that CRT is more effective for some families/individuals. If we know this, we can inform practice guidelines to target treatment and provide the most effective treatment or treatment combination earlier. Ideally, this project will also inform our knowledge about the role of executive functioning in anorexia nervosa.

For more information about our work, please contact us at 267-425-1315 or 267-425-1318.

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- Educators and Caregivers Need Better Tools to Support Youth with Eating Disorders
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- One Size Doesn't Fit All: The Need to Improve Eating Disorder Assessment Tools
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- Sex Differences in Adolescent Anorexia and Bulimia Nervosa: Beyond the Signs and Symptoms
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- Cognitive Remediation Therapy (CRT) as a Pretreatment Intervention for Adolescents with Anorexia Nervosa During Medical Hospitalization: A Pilot Randomized Controlled Trial Protocol
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- How Does Fasting Affect Cognition? An Updated Systematic Review (2013-2020)
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