

TREATMENTS FOR ADOLESCENTS AFFECTED BY EATING DISORDERS: A SYSTEMATIC REVIEW OF LITERATURE

Honors Thesis

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Abstract

A systematic literature review (analysis) for treatment options for patients diagnosed with eating disorders or predisposed to risk behaviors. Eating disorders are a mental health concern that affects many adolescents, who are more at risk due to certain behaviors such as body dissatisfaction or distortion, circadian rhythm disorders, or other diagnoses of mental/physical health such as obesity, poor nutrition, anxiety, depression, for example. This review is for the purpose of awareness of evidence-based practice in treatment and how care of patients in treatment plans can be improved in order to provide the best quality.

Key words: eating disorder, adolescents, mental health, treatments

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Introduction

Adolescents are a vulnerable and easily influenced population, which can lead them to become more susceptible to mental health conditions. Eating disorders and body dissatisfaction are among the top mental health disorders affecting this population, and it has grown in prevalence in recent years. Despite a greater amount of adolescents facing eating disorders, treatment options today still remains limited. As the healthcare field attempts to mitigate these developing concerns, the field remains standstill on the care available to aid in recovery for the long term approach. This literature review will consist of a systematic research to assess the quality of current treatments available, as well as developing treatments that may improve care in further works. Also, this review will distinguish behaviors and risk factors as evidenced by patients who enter treatment, as to provide clinicians with a clear approach to early intervention before concerns develop to full stage disordered eating.

Background

The term “eating disorder” is an umbrella term to describe abnormal behaviors around food accompanied by obsessive and/or compulsive eating habits, and weight or body concerns by the individual. Specific diagnoses that fall under the “eating disorder” term include, but are not limited to, anorexia nervosa (AN), bulimia nervosa (BN), and binge-eating disorder (BED). Eating disorders are a mental health concern that debilitate the wellbeing of the patient psychologically and physically. Diagnoses that fall under the eating disorder categories have implications that threaten the wellbeing of the individual diagnosed with them. As statistically recognized by (Conti, J. et al., 2022), “Around 8.4% of women and 2.2% of men are diagnosed in their lifetimes and, due to the nature of these conditions, EDs may be difficult to treat and often involve complex, ongoing care and multiple forms of treatment in both inpatient and outpatient settings ” (Conti, J. et al., 2022, p. 2). Furthermore, adolescents are a vulnerable population that are more likely to be persuaded by diet culture and trends to achieve their perceived model of health. Adolescent females (aged 14-15 years old in a particular study) were found to be eighteen times more likely to develop a serious eating disorder, if they began their habits with severe dieting, in comparison to peers who were not dieting. In the same cohort, adolescent females who began only dieting at a moderate rate were still five times more likely than their non dieting peers to develop an eating disorder (Patton, G. C. et al.,1999).

Methods

Data Search

Articles for review were selected through an internet-search process via official databases for nursing care and medical sciences. The search engine utilized was CINAHL, which allowed articles from the National Library of Medicine to be accessed and used. In addition, search for current information was found via BMC Journal of Eating Disorders, an evolving portfolio developed of 300+ peer reviewed journals from academic publishing and released with open access for further academic research (released in 1999).

A systematic review of the literature was conducted to identify a series of questions regarding the care of adolescents affected by eating disorders. These questions included, but were not limited to:

- What is an eating disorder in terms of mental health?
- What are the current standards of care for eating disorder patients?
- Are interventions and treatments sustainable for the long term care of the patient?

Advanced search key words were utilized, including “adolescents” AND “eating disorders” as the main consistent terms for related content. Other keywords in search had included “Treatments”, “Recovery”, “Care”, and “Inpatient”, each of which yielded related information on the topic. Only articles after the year 1999 were used, although majority of information is recent as of 2022.

Results

Patient Perspective in Treatments

The research in this section is small, however valuable to consider in developing treatments for patients, in terms of “patient-centered care” approach. In one particular study by Rance N., Moller NP., and Clarke V. (2017)., research was conducted using a small group of women who were diagnosed with eating disorders in adolescence. These women were voluntarily interviewed regarding their satisfaction with care for their eating disorder diagnoses. Overall, the participants reported dissatisfaction with their care, stating that (primarily in the National Health Services of Wales, England, where this study was based, but also) “their belief in the unhelpfulness of treatment which focused primarily on food and weight applied to all treatment settings.” (Rance N, Moller NP, Clarke V., 2017, p. 586). Other notable statements by participants about their care included feeling that cognitive behavioral therapy was overly rigid, constraints on allotted amount of outpatient therapy sessions, and implicit biases participants stated they felt while receiving care.

Another study focused on adolescents’ experiences in the inpatient treatment setting for anorexia nervosa. Participants were interviewed on their care and aspects that they noted to aid in their change. Between all participants, a common theme appeared unanimously, which was that the key to recovery from an eating disorder is the desire and motivation of the individual. If the individual is not engaged in their care or expressing readiness to “give up” their disorder, then recovery will seem less achievable by the patient. From the the study based on participants’ reports, “A unique feature of inpatient treatment is that anorexic patients live in close contact

with each other... Fellow patients were a valued source of support ...However, daily contact with fellow patients also had a number of serious consequences, such as competition to become thinner and the distress of witnessing others' disturbing behaviour." (Colton, A. and Pistrang, N., 2004). Throughout the study, participants continued to express that the key to aiding a adolescent patient to recovery must be based in patient-centered care. By valuing the patients' needs, concerns, and readiness, the likelihood for the adolescent patient to recover from disordered-eating behaviors will be greatly improved in the long term.

In one systemic review about the treatment interventions for eating disorders (specifically anorexia nervosa and bulimia nervosa), a blind extraction was done to follow up on if interventions utilized were effective in a patients' recovery. The review included patients of varied ages, majority of reports showed participants were diagnosed with an eating disorder in adolescence or young adulthood. A systematic search was performed, and data compared between the extracted researches showed that inpatient treatment were effective in the short term of improving eating disorder symptoms, however, in the long term the results were inconsistent. Other types of treatments were found to show better improvements, although none of the treatments investigated were able to give guaranteed recovery, which is supportive of the need for a patient-centered approach to treatment (Kotilahti, E. et al., 2020).

As researchers continue to navigate the possibilities for maximizing recovery in long term eating disorder patients, Reay, et al. places it best for following a patient-centered care approach as the most effective strategy to begin tackling a diagnosed eating disorder; "Although the evidence suggests that existing evidence-based therapies can lead to change in those with L-ED, it is also important that services are flexible and responsive to the needs and goals of this group of patients at all stages of their treatment journey in order to maintain engagement, hope,

and to enable co-produced, personalised care planning,” (Reay, M. et al., 2022 p. 2). The literature review studied by Reay, M., et. al (2022), provides detailed data organized in sections for clinicians to understand and therefore adapt care methods using evidence-based practices and patient-centered care approaches. Along with this, the researchers in this review offer review of care for patients affected by longstanding and complex eating disorder cases from multiple sources, allowing an outlook for what pathway for these patients may look like, using the data clinicians already have.

Nutrition Therapy in Refeeding

Nutritional therapy is a necessary portion of treatment in every plan of care in disordered eating patients. After occurrences of disordered eating, patients lack appropriate nutrients needed for normal bodily maintenances that they would typically receive through a healthy diet. The deficit of bodily requirements leading to severe secondary complications and chronic weight loss is typically associated with anorexia nervosa, although similar complications due to lack of body needs for homeostasis can be observed in different eating disorders. Along with the deficit of body requirements, is that chronic weight loss that can be associated with certain eating disorders (exemplified in AN) can cause secondary complications in patients, such as orthostatic hypotension and severe bradycardia (Pritts, S.D., et al., 2003). Therefore, weight restoration and nutritional therapy to restore a healthy food-relationship is rudimentary to the long term recovery of patients. In adolescents, however, there is inconsistent data to support appropriate energy and bodily requirements in nutritional therapy, as Tetyana Rocks et. al (2022), states, “Currently there is no evidence for the best approach to weight restoration in this population, because most recommendations are based solely on clinical experience and expert opinion... Empirical

evidence to support best practice in this field is lacking”, thus increasing the difficulty for adolescents diagnosed with eating disorders to receive treatment that will lead to recovery due to the lack of research evidence for developing evidence-based practices (Rocks T. et al., 2014, p. 898). The common goal for recovery in eating disorders is weight regain, which has shown favorable outcomes in the short- and long-term progress of the patient, where the greater regain in less time has outcomes that improve original risks of psychological or medical complications to occur. On the other hand, delays in weight regain during hospitalizations of adolescents have associated risks of disorder progression that may exacerbate the individual’s possible health complications already developed.

Current practices to nutritional therapy in adolescents advocate for intake growth at a steady rate to prevent refeeding syndrome (a life-threatening disorder that occurs from the reintroduction of food to severely malnourished persons, due to sudden shifts in nutritional needs, such as electrolytes), “Currently there is no consistent approach in recommendations for optimal refeeding practices or nutrition-related treatment of patients with AN. Most guidelines for young patients advocate for conservative energy intake at the initiation of treatment” (Rocks T. et al., 2014, p. 897). Commonly, refeeding in hospitalization practices a beginning of a diet with energy recommendations set lower than what the adolescent may need. With time, the caloric needs are increased gradually for the adolescent to develop increased energy level requirements without the risk of refeeding syndrome development. As previously mentioned though, delays in weight regain can complicate the recovery progress of the patient, and in turn, their outcomes.

Refeeding techniques like use of a nasogastric tube (NG tube) or primary oral intake are used in practice to reintroduce patients at a conservative rate of nutrition and calorie density.

Examined in one study regarding the lack of evidence of appropriate refeeding research in adolescents, “The energy prescriptions at initiation of refeeding ranged from 1,000 to >1,900 kcal/day. In the studies comparing oral refeeding with and without NG feeding, the initial as well as the maximum energy intake during the inpatient treatment, was greater with both modalities. However, the reported incidences of adverse effects were also higher in these groups.” (Rocks T., et. al, 2014, p. 898), representing the likelihood of recovery through the need to provide patients with the energy nutrition necessary to not only recover, but also to prolong recovery outcomes, are also associated with adverse effects that are equally as likely. Refeeding patients to their energy needs is a case by case study that requires more in depth research to allow healthcare professionals to appropriately gauge the needs of the individual (as needed when using the patient-centered care approach).

A Developing Approach in Treatment: Ketamine-Assisted Psychotherapy

Ketamine-assisted psychotherapy is a new, developing approach to treating patients chronically ill with their eating disorders. As patients with disordered eating begin to age away from an behavioral acute disorder to a chronic, long withstanding psychiatric issue, they grow resistant to the current treatments commonly seen, such as behavioral therapies or medications (antidepressants). While pharmacological approaches have demonstrated success in treating patients, many patients with long term disordered eating are unresponsive to first-line treatments, and more likely to be unsuccessful in recovery (Ragnhildstveit A. et al, 2021, p. 4).

With one case study of a single individual (21 year old female patient, with diagnosed bulimia nervosa of nine years old at time of study that was refractory to other interventions), this patient achieved an unexpected remission of Bulimia Nervosa. “Given the patient's extreme and

chronic refractory state, her physician recommended repeated KAP, with the understanding it constituted an exploratory and off-label intervention for her eating disorder,” (Ragnhildstveit A. et al, 202, p. 3).

A case series that researched the use of ketamine-assisted psychotherapy, patients who filled the research questionnaire after the study reported positive effects of the study on their mental health. The mean (out of 5) was 3.67 for satisfaction of the therapy use, provided feedback that they feel continuing this therapy by a few additional sessions would be beneficial, and none of the participants reported feeling harmed or worsened in the study. This is limited by study group size, as the original group consisted of 5 participants with diagnosed eating disorders, and only 3 returned the researchers’ post study survey. However, it is worthy to note (per the study) that “This case series is the first of its kind to explore depression and anxiety outcome measures, safety, and patient satisfaction of a G-KAP protocol to treat mood and anxiety symptoms of patients in intensive ED treatment,” (Robison, R. et al, 2022, p. 6), which may allow for more extensive research into this use of treatments to continue.

Supporting this, a systemic review by Kotilahti, E. et al (2020) has included a drug trial review, including the use of ketamine in eating disorder treatment. Research in this review supports that, “Ketamine blocks the excitement of the hippocampus by glutamate-NMDA receptors that leads to long-term potentiation (LTP) and thus can affect patients' compulsive drive characterized by frequent recall of anorexic thoughts” (Kotilahti, E. et al, 2020, p. 1297). In the study, nine of fifteen patients responded to ketamine treatment, and showed improvement in behaviors of concern. For patients who did not respond, there was no change found. Participant age data in this study was not included, and participant age population was not limited via Kotilahti, E. et al, (2020) literature review, however the data is also supportive to the purpose

that ketamine therapy should be considered for further research as a prospective treatment approach.

Limitations

Search strategies is a factor to the limitations of this review. This review was limited to peer-reviewed, full texts, and also limited to texts provided in English. Another limitation is that articles all reflected different disorders under “eating disorders”, therefore limiting the direct comparisons that could be made upon the articles. Another review in treatment would be necessary specifying on the needs of different disorders in order to provide more accurate conclusions to the efficacy of treatments being used.

A limitation in this study is the research of therapies used for adolescents. Adolescents are not included in current studies due to risks and consents, therefore many of the new and developing therapies included for review are in young adults. Due to this, developing studies that were utilized in this review were searched and limited to those that include participants who were diagnosed with eating disorders as an adolescent (with one exception being a literature review without age data supporting why ketamine psychotherapy could become useful). As well as limiting to articles of research to patients diagnosed in adolescence, articles were also limited to research including participant experiences of their adolescence (example being that participants are of age to consent to studies, that reflect on their eating disorders diagnosed in adolescence, and their experiences as adolescent patients).

As for nutrition therapy, there is a major limitation regarding the lack of research evidence to develop care outcomes appropriate for individual patients. There is agreement of refeeding patients at a conservative pace to decrease risk of refeeding syndrome while increasing their recovery outcomes, there is little to no guidelines of how to evaluate an adolescent patient

for beginning and progressing through the process of the therapy. The lack of guidelines limit the ability to provide patient-centered care fixed to the individual's needs, and therefore skewing the possibility of whether an adolescent may or may not recover from their eating disorder (in the short term or long term).

Discussion

Based on the literature found, the field of medicine still has room to improve in the understanding of eating disorders in adolescents. Without a better understanding and foundation on how to approach an adolescent with a diagnosed eating disorder, the ability to effectively treat the patient appropriately is limited.

A major key to treatment becoming effective for the patient in the long term is a focus on patient-centered care. As found in studies interviewing adolescents and young adults (previously treated as adolescents with disordered eating), it is necessary to consider the patient as a person holistically, rather than attempting to find a treatment to the diagnosis. Eating disorders are complex mental health illnesses; therefore, there will never be a one-treatment approach for every patient to use. Rather, professionals in the healthcare field (including but not limited to physicians, nurses, therapists, nutritionists, etc) will have a continued need for research of new approaches for these complex patients' care, and therefore will be able to more effectively treat the mental health aspect of these disorders in the long term time frame.

As per the results of ketamine-assisted psychotherapy, while having promising results thus far, it is still limited in its research and will need further studies conducted regarding if the benefits for utilizing this therapy will outweigh the risk for the patient. Along with these considerations (and in terms of adolescent population), studies will need to be completed to test if this approach will be effective in younger populations, and if the benefits would still outweigh the risks in use in adolescents. However, this new possible therapy does provide a positive

outlook for patients affected by eating disorders, especially for those who may have grown resistant or tolerant of the current treatments commonly used.

Conclusion

This review provides insight and raises awareness to the current guidelines of treatment for adolescents diagnosed with eating disorders, as well as understanding to the gaps of research in a challenging category of illnesses. The studies included in this review are of varied methodology, and of varied targets to develop a standard of care for adolescent eating disorder patients. However, the research evaluated in this review is not sufficient to draw any unanimity of treatments in adolescents. While there is much further research necessary to continue understanding eating disorders and how to treat them more effectively, the studies reviewed have represented steps previously taken to recognize the gaps currently affecting this field of medicine, allowing future researchers to build upon a foundation that may allow greater treatment options for afflicted youth.

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