

Avoidant/Restrictive Food Intake Disorder: An Adult Case Responding to Cognitive Behavioral Therapy

Clinical Case Studies
2018, Vol. 17(6) 443–452
© The Author(s) 2018
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/1534650118795286
journals.sagepub.com/home/ccs



Aynur Görmez¹, Alperen Kılıç², and İsmet Kırpınar³

Abstract

Avoidant/restrictive food intake disorder (ARFID) is a new diagnostic category in the *Diagnostic and Statistical Manual of Mental Disorders-5 (DSM-5)* which replaces and extends the *DSM-4* diagnosis of feeding disorder of infancy or early childhood. There is limited information as to the characteristics of the patients with ARFID, its course and prognosis and treatment. We aim to contribute to available literature on ARFID by presenting this case. We discussed a young lady with ARFID who responded well to cognitive behavioral therapy (CBT) with successful application of in vivo exposure, systematic desensitization, and cognitive restructuring techniques. After the 12 sessions of CBT as inpatient and eight sessions as outpatient, she gained 4 kg (8.81 lbs); her body mass index (BMI) rising from 16 to 17.5 kg/m², Hamilton anxiety rating score dropped from 27 to 5. She continued to improve reaching the BMI of 18.3 kg/m² 6-month post-discharge. This case suggests that CBT can be a useful treatment modality in adults with ARFID.

Keywords

avoidant/restrictive food intake, eating disorder, adult, therapy, treatment

I Theoretical and Research Basis for Treatment

Avoidant/restrictive food intake disorder (ARFID) is a new diagnostic category in the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; *DSM-5*; American Psychiatric Association [APA], 2013) which replaces and extends the *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-4*; APA, 1994) diagnosis of feeding disorder of infancy or early childhood. Moreover, it is expected to be included in the *ICD-11 (International Classification of Diseases, Eleventh Revision)* as well (Uher & Rutter, 2012). Despite the fact that it has replaced the feeding disorder of infancy or early childhood, it is not limited to the childhood presentations. The diagnosis can be made across the whole age range including childhood, adolescence, and adulthood (APA, 2013).

¹Istanbul Medeniyet University, Turkey

²Ahi Evran University Training and Research Hospital, Kırşehir, Turkey

³Bezmialem Vakıf University, Istanbul, Turkey

Corresponding Author:

Alperen Kılıç, Department of Psychiatry, Ahi Evran University Training and Research Hospital, Kervansaray Mah., 2019. Sok D:1, 40200 Kırşehir Merkez/Kırşehir, Turkey.

Email: alperenkilic88@hotmail.com

The diagnostic indicators of the ARFID include persistent failure to meet appropriate nutritional and/or energy needs associated with at least one of follows: significant weight loss (or failure to achieve expected weight gain or growth in children), significant nutritional deficiency, dependence on enteral feeding or oral supplements, marked interference with psychosocial functioning. The eating disorder does not occur exclusively during the course of anorexia nervosa or bulimia nervosa, and there is no evidence of a disturbance in the way one's body weight or shape is experienced. The disturbance is not better explained by a lack of available food or a culturally sanctioned practice. The eating disturbance is not attributable to a concurrent medical condition or better explained by another mental disorder. However, another mental disorder can coexist with ARFID, as long as the severity of the latter exceeds what is typically seen and requires distinct clinical attention (APA, 2013).

As ARFID diagnosis is relatively new in the *DSM-5*, there is limited information as to the epidemiology and characteristics of the patients with ARFID, its course, and prognosis. Limited available studies have mostly focused on children and adolescents. Through a number of studies and case analysis, it was figured out that between 5% and 14% young people with eating disorders suffer from ARFID (Fisher et al., 2014; Norris et al., 2014; Ornstein et al., 2013). One study reported that 4 of 45 malnourished adult patients were categorized as having ARFID (Tanaka et al., 2015), and in another study looking into adults with feeding and eating disorders, 95 out of 1,029 (9.2%) patients were reported to have met criteria for ARFID (Nakai, Nin, Noma, Teramukai, & Wonderlich, 2016).

Being a new diagnostic category, there is even less literature available to guide management of ARFID. There seems to be no randomly checked trials which have assessed the efficiency of any kind of ARFID treatment seen in adults and adolescents. Any kind of treatment of ARFID centered around proofs during the infancy period. In the case studies of treatment of ARFID in young people, the use of behavioral parent training, cognitive behavioral therapy (CBT), inpatient refeeding, and family-centered partial hospitalization have been reported (Chandran, Anderson, Kennedy, Kohn, & Clarke, 2015; Fischer, Luiselli, & Dove, 2015; Murphy & Zlomke, 2016; Ornstein, Essayli, Nicely, Masciulli, & Lane-Loney, 2017; Strandjord, Sieke, Richmond, & Rome, 2015). Few reports based on cases relating to adults who have chronic ARFID appear to be seen (King, Urbach, & Stewart, 2015; Tsai, Singh, & Pinkhasov, 2017). Any documented adult case with a chronic course of ARFID treatment is yet to be reported.

The most effective treatments for eating disorders are psychotherapies (National Institute for Health and Care Excellence, 2017; Waller, 2016). For nonunderweight disorders such as bulimia nervosa and binge eating disorder, CBT leads to recovery in approximately 40% to 50% of cases (Fairburn et al., 2009; Knott, Woodward, Hoefkens, & Limbert, 2015). For anorexia nervosa in adults, generic CBT has only modest benefits, but specifically tailored form of CBT-E (enhanced CBT) has efficacy in weight restoration and maintenance (Fairburn et al., 2009; Fairburn et al., 2013). Our experience about treatment of ARFID via CBT is in a great extent limited to case presentations. It is highlighted in individual case reports that cognitive behavioral treatment seems to have a potential efficacy (Bryant-Waugh, 2013; King et al., 2015).

2 Case Introduction

We obtained permission from the patient to present the case below. DB (27) was a single female patient. She was a university graduate, currently unemployed, and living with her mother, stepfather, and younger sibling. She presented to our outpatient psychiatry department with ongoing eating difficulties and serious weight loss.

3 Presenting Complaints

For the previous 2 months, DB had been finding it increasingly difficult to eat food to an extent that she could not stand the sight and smell of food and suffered from nausea, retching, and vomiting when she forced herself to eat. She was fearful of the return of these gastrointestinal symptoms (nausea, retching, and vomiting) and thus refusing to eat most food. Due to the fear of throwing up, she would wait for some time before taking another bite so eating would take a lot of her time. The patient said that she was able to try eating only certain food such as fruits, dried nuts, and two mouthfuls of cheese, one or two spoonfuls of soup or pasta but she would still feel sick and throw up right after eating them. She would particularly refuse eating meaty, oily types of food and stew. Her daily diet would usually consists of a few slices of fruits or one or two slices of cheese for breakfast, couple of nuts or crackers for lunch and one or two spoonful of soup or pasta or salad for dinner.

4 History

In her personal history, she was of full-time normal delivery. She has been about average height since her infancy. She has always been a slim person who ate little all her life. Her parents would criticize and force her to eat food and, at times, punish her for not eating. She did not desire for thin body and never tried to lose weight intentionally by exercising or other means, and in fact she herself wanted to gain weight since her adolescence due to adverse health effects and psychosocial consequences of her low weight. She had used some weight gaining pills but reported to have not gained any benefit. There was no history of binge eating, self-induced vomiting, or purgative behavior. She had laryngomalacia during the first 2 years of her life. She was diagnosed with gastroesophageal reflux disease and gastritis, but her doctors suggested that such pathologies failed to account for her actual clinical condition.

It was established that her current medical complaints (nausea, vomiting in relation to eating) were added to her ongoing low appetite 9 years ago which seemed to have been triggered by the divorce of her parents. At the time, she had also been revising for university entrance exam. For the past 9 years, she had had six admissions to psychiatry unit due to symptoms of inability to eat and serious weight loss with medical complications as well as anxiety around eating. Her father died at a road traffic accident about 2 years ago and since then her clinical condition had worsened progressively. At times, her body mass index (BMI) had dropped to as low as 14 kg/m²; therefore, she had required TPN (total parenteral nutrition), intravenous (IV) fluid, vitamin, and mineral replacement at medical wards. During her previous admissions, she had been diagnosed with eating disorder not otherwise specified and comorbid generalized anxiety disorder and depressive disorder. She had been put on various psychotropics (antidepressants and low-dose antipsychotics) with limited benefit. Although she had had some nonstructured supportive counseling from a psychologist in the past with limited benefit, she never had a structured psychotherapy targeted specifically for her eating habits.

Her eating habits seemed to have made a significant impact on her psychosocial functioning. She reported to have been teased by her friends because of her eating problems. She tended to shy away from people and social environments because of her physical thinness and has had become increasingly lonely. She entered puberty 2 years later than her peers and was taken to doctors by her parents as she failed to menstruate and started getting her periods through medication. Having lost serious weight due to inability to eat properly during her university education, she had to take breaks from her studies at various times, so she graduated a year later than her classmates.

Premorbidly, she was an anxious and perfectionist personality. Although she seemed to have had an overprotective and enmeshed relationship with her mother, she described to have had a cold and distant relationship with her late-father. She apparently did not have a good relationship

with her step-father either. Neither her father nor her only male sibling had a history of any physical or mental disorder. Her mother, however, showed an anxious temperament pattern.

5 Assessment

On mental state examination, she appeared as an undernourished young lady who looked lethargic but well kempt. She was cooperative during the interview and made good eye contact. Her mood was anxious but demonstrated reactive and appropriate affect. She had low energy levels but she was sleeping okay. She demonstrated intense anxiety around eating and worried about her low weight due to health concerns which seemed appropriate given her physical health status. She did not display disturbed body image perception and denied a desire to lose weight/preference for thin body. She was worried about the health risks of remaining at her low body weight and was willing to seek help and gain weight.

She had lost 6 kg (13.22 lbs) in the past 2 months and had oligo-hypomenorrhea for the past 2 years. She looked weak and pale. Her BMI was 16 kg/m² weighing 41 kg (90.38 lbs) with a height of 160 cm. For her height, she needed to weigh at least 47.3 kg (104.27 lbs) to have the minimum healthy BMI of 18.5 kg/m². Her Prolactin (PRL) was normal of 3.14, parathyroid hormone (PTH) was high of 79.9, and vitamin D was low of 13. Whereas other biochemical and hematological values were normal. Her Hamilton Depression Scale (HAM-D) was 15 and Hamilton Anxiety Rating Scale (HARS) was 27 with high somatic anxiety scores. The patient met all the ARFID diagnostic criteria listed in the *DSM-5* and was admitted to our inpatient general adult psychiatry unit. There was no evidence of either clinical depression or generalized anxiety disorder.

6 Case Conceptualization

It is not uncommon to come across with the patients with eating issues that cannot be medically explained. Their eating difficulties can be associated with a combination of medical and psychiatric factors and conceptualized in a manner similar to anxiety disorders. In accordance with the Mowrer's (1960) two-factor theory of anxiety, fear of eating (sitophobia) is formed by classical conditioning (i.e., repetitive associations formed between gastrointestinal sensations and eating are perceived as severely threatening and/or associated with previous traumatic consequences) and maintained by operant conditioning (i.e., refusing to eat reduces anxiety experienced when encountering eating cues thus negatively reinforcing food avoidance). In addition, psychosocial factors—including the reinforcing aspects of the patient's role and parental pressure for eating food—may also shape up and sustain eating-related anxiety (Galloway, Fiorito, Francis, & Birch, 2006; Taylor & Asmundson, 2004).

The current eating difficulties and fears experienced by the patient could have been reinforced by the overprotective and overanxious parental attitude toward her eating behaviors during the childhood, interparental conflict, departure of the patient's father as a result of divorce and his subsequent death and other social stresses that might have been aggravated in the context of the perfectionist personality of the patient. In this case study, we have discussed a recurring ARFID condition in a patient who has a childhood history of gastritis and gastroesophageal reflux and suffer from eating difficulties arising from fears related to such gastrointestinal symptoms. We aimed to present the case conceptualization and discuss successful treatment of young lady with ARFID using CBT techniques such as in vivo exposure, systematic desensitization, and cognitive restructuring.

Systematic desensitization seems to be an efficient counterconditioning method developed for treatment of anxiety disorders (such as phobias) that present generalized behavioral characteristics with respect to the eating-related avoidance. In the literature, there are two case studies

reporting successful application of in vivo exposure, systematic desensitization, and cognitive restructuring techniques. The first one was reported on an adult person who suffered from food intake avoidance due to a fear of choking on food (Millikin & Braun-Janzen, 2013) and the other case was of an adult with anxiety disorder who had eating difficulties as a result of catastrophizing his gastrointestinal sensations (King et al., 2015).

Psychoeducation provided in the present case started with normalization of the physical symptoms of anxiety she experienced during eating. The conditions of gastritis and reflux that appeared in the patient's medical history are likely to have played a role in development of her fears associated with gastrointestinal sensations in the first place. However, with the reemergence of such dyspeptic symptoms, we thought that the patient once again conditioned herself to the fears based on her gastrointestinal sensations; hence, such symptoms also played a role in maintenance of her fears and therefore eating problems. These benign gastrointestinal sensations then triggered a chain of other symptoms such as hypervigilance orientation, catastrophic interpretations, and fear reactions in the presence of food cues. We discussed that she controlled her gastrointestinal system (GIS) symptoms and associated anxiety through escape or avoidance, which further reinforced anxiety- and eating-related behaviors.

7 Course of Treatment and Assessment of Progress

During her stay with us for 12 weeks, as well as taking mirtazapine 30 to 45 mg which she was already on before the admission to stimulate her appetite and to help with anxiety around eating, she had weekly CBT sessions for 40 min. The therapy was delivered by one of the authors (A.K.) under the supervision of I.K. who is a certified CBT trainer. We followed a generic CBT approach, not the CBT-E specialized for eating disorders. For her diet, we liaised with a dietician who designed her meals in cooperation with the patient. She also had nursing care which involved supervising her diet, supporting, and encouraging her during meal times. She was not trying to do exercises, which is a common behavior seen among the individuals with eating disorders, nevertheless she was not allowed to do activities with a potential to burn calories such as going for a walk.

The psychoeducation was about the physical symptoms of the anxiety and how they could be misinterpreted as signs of gastrointestinal symptoms. It was discussed that her past history of stomach problems might have contributed to her hypersensitivity to gastrointestinal symptoms and suggested that her gastrointestinal sensations leading to hypervigilance and catastrophic interpretations and subsequent fear reactions in the presence of food cues were anxiety symptoms rather than being evidence of an actual gastrointestinal disease. She initially found this explanation difficult to accept, pointing to the severity of her gastrointestinal symptoms. In the following sessions, she gradually understood that her anxiety and gastrointestinal symptoms such as nausea and retching increased when she saw food, but she mostly chose to deal with her anxiety triggered with such cues via escape or avoidance. Such behavior led to a quick decrease in anxiety; hence, the reduction of anxiety was negatively reinforced by the avoidance of food.

In vivo exposure was applied throughout the meals during the systematic desensitization sessions. A list of what she called "safe" meals (i.e., soups) and "unsafe" meals (i.e., meat dishes) was made and a gradual fear (anxiety) hierarchy was established with the patient. Relaxation exercises were used to help the patient cope with anxiety. Gradual exposure involved increasing the amount and the variety of food. She was encouraged to take bigger bites and eat more rapidly with each session. The patient was asked to rate her anxiety for each session on a scale of 1 (*none*) to 10 (*highest*). At first, the patient wanted to stop eating after taking a few bites as she felt full or uneasy; however, once the level of uneasiness subsided, she was instructed to resume eating later. Throughout the first session, the pre-meal anxiety was 9/10. Her anxiety got gradually lower with each session; however, it reached its highest (10/10) during the sixth session when

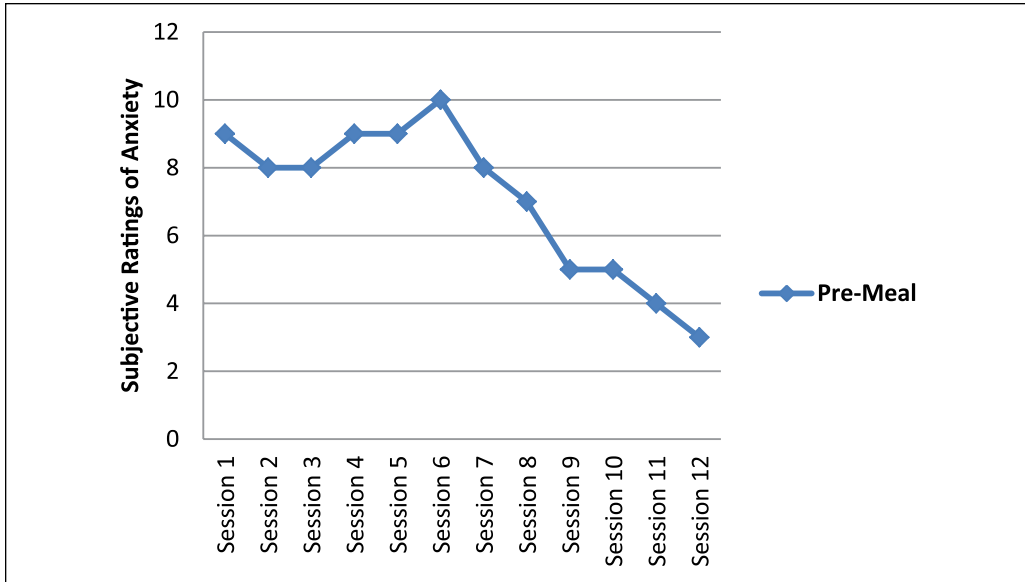


Figure 1. Ms. DB's subjective ratings of anxiety by session.

meaty dishes were added to her diet. At her 12th session, her pre-meal anxiety dropped to 3/10 (Figure 1).

The patient was given homework between the sessions, which were designed at the level of skills she gained at each session. She was able to keep up with the progress she made during the sessions; however, she had difficulty in applying these skills at home when she was on leave. This, we thought, was mostly due to the enmeshed relationship she had with her mother. Only after the 10th session, she was able to feel as comfortable at home as she was on the ward.

Cognitive restructuring was utilized to help her produce counterevidence against her catastrophic beliefs about GIS sensations. The patient was assisted in reinterpreting the gastrointestinal signals which are considered to be normal bodily reactions in relation with the physiological symptoms of digestion and anxiety. During the second session, she was able to identify the fact that the feared consequences of eating (vomiting) did not actually materialize. By acquiring relaxation skills and decatastrophizing her thoughts, she realized that she could overcome her fears without resorting to escape- or avoidance-related behaviors.

Because of her fear of eating, she was given food supplements in the first 2 weeks to help her gain some strength and to prevent detrimental health effects. As the therapy progressed, the patient progressively became capable of controlling her anxiety and eating more than she previously could. The anxiety, nausea, and sense of retching that she had experienced before the meal times gradually receded and vomiting was no longer the case. From third week on, she was only given meals, without food supplements. In consultation with a dietitian, her calorie intake went up from 400 kcal/day to 1,450 kcal/day at the end of her stay. Her depressive and anxiety complaints improved, HARS score dropped to 7, and HAM-D score to 3. The patient gained 2 kg (4.40 lbs) reaching 43 kg (94.79 lbs) in weight with a BMI of 16.79.

8 Complicating Factors

Some of the likely reasons for failure to achieve the expected weight gain could be attributed to the fact that she has had a chronic course of her illness with a history of multiple admissions to

Table 1. DB's Measures Throughout the Treatment.

	HARS	HAM-D	Weight	BMI (kg/m ²)
Pretreatment/Session 1	27	15	41 kg (90.38 lbs)	16.0
Posttreatment/Session 12	7	3	43 kg (94.79 lbs)	16.7
Postdischarge 2 months	5	2	45 kg (99.20 lbs)	17.5
Postdischarge 6 months	4	2	47 kg (103.61 lbs)	18.3

Note. HARS = Hamilton Anxiety Rating Scale; HAM-D = Hamilton Depression Scale; BMI = body mass index.

and in-patient stays in hospitals and that there has not been a dramatic change or improvement in the domestic and social stressors throughout her stay with us and while receiving CBT. Her enmeshed relationship patterns with her overinvolved, overprotective anxious mother remained to be an issue that could not have been addressed during the therapy. She also seemed to have enjoyed the attention she got from her mother by embracing the sick role.

9 Access and Barriers to Care

Before the emergence of ARFID as a diagnostic category in *DSM-5*, the patient attracted various diagnoses and had not received any structured therapy addressed to her condition, which seemed to have played a role for chronicity of her presentation. Psychological therapies are not easily available or accessible in Turkey, which is another reason why she had been mostly managed by pharmacological interventions despite previous history of limited benefit.

10 Follow-Up

The patient was discharged with a plan of weekly CBT sessions for the following 2 months. She continued to improve on cognitive domains, her energy levels went up, and anxiety continued to decrease. She gained 2 kg (4.40 lbs) reaching a BMI of 17.5 kg/m². Her HARS score was 5 and HAM-D was 2 then. Now, it has been 6 months since her discharge from the unit and she continued to have monthly follow-up appointments with the treatment team and is able to eat three meals a day and finish nearly 80% of her meal as comparing with 20% when she had first presented. She gained further 2 kg (4.40 lbs), weighing 47 kg (103.61 lbs) with a BMI of 18.3 kg/m². HARS score was 4 and HAM-D remained 2 in the sixth-month post-discharge appointment. Summary of changes of her measures throughout the treatment is presented in Table 1.

11 Treatment Implications of the Case

Although the triggering factors in ARFID tend to vary, they are usually accompanied by physical, social, and emotional challenges. Psychiatric comorbidities which are commonly seen among individuals with ARFID such as anxiety disorders (Fisher et al., 2014; Norris et al., 2014), autism spectrum disorder (Nicely, Lane-Loney, Masciulli, Hollenbeak, & Ornstein, 2014), obsessive-compulsive disorder, and attention deficit/hyperactivity disorder (Nicely et al., 2014) are listed as the factors that could increase the risk of ARFID or development of the eating-related behavior that is characteristically associated with ARFID. History of digestive tract disorder, gastroesophageal reflux disease, vomiting, and various other types of medical problems are associated with the eating-related behavior characterized by the ARFID (APA, 2013).

Although we are not suggesting that the present case of DB is a typical one with ARFID, her symptoms and presentation are very similar to what was described in the existing literature. In

a retrospective study describing 95 adult patients with ARFID, it was reported that they were all women, most had restricting eating related to emotional problems (Nakai et al., 2016), and some had multiple gastrointestinal complaints as contributing factors similar to DB's case. However, there were not any cases with food avoidance related to sensory characteristics of food. ARFID requires "significant dysfunction in the individual's cognitions, emotions, or behaviors." DB had to do a repeat year at university, had a very limited social life, and has had several admissions to hospital due to her eating disorder. Therefore, a significant dysfunction due to her illness is evident.

The patient was admitted to our service due to ARFID and serious weight loss. We are of the opinion that the patient's fear of vomiting and not being able to eat again with the assumption of the recurrence of dyspeptic symptoms supports the catastrophic interpretation of benign physical sensations—attributed to both anxiety or normal digestion processes—and hypervigilance on the part of the patient.

The present case has documented the implementation of cognitive behavioral techniques for eating-related anxiety and may present some useful suggestions in terms of treating patients with ARFID. It also underscores the importance and benefit of a collaborative care approach which involved psychiatrists, psychotherapist, nursing care, and a dietitian. It was suggested, during the ongoing interviews with her psychiatrist, that the proper understanding of the therapy principles would help improve her eating comfort and they might be generalized for the challenges she faced in other areas of life.

There is a similar case of a 41-year-old lady with ARFID who was reported to have been successfully treated with CBT (King et al., 2015). As a new diagnosis, there is much room for describing cases across the age range. Recently, Thomas et al. (2017) have developed a new form of CBT for ARFID via their three dimensional models: sensory sensitivity, lack of interest in eating, fear of aversive consequences, and the authors are in the process of conducting an open trial of CBT for young people with ARFID.

12 Recommendations to Clinicians and Students

As the evidence-based treatments become available, it will be important to apply treatments that optimize outcomes with an aim to minimize morbidity associated with the illness. It can be suggested that a proper understanding of the therapy principles would help improve patients' eating comfort that could then be generalized to the patients' other areas of life.

Given the lack of empirical data on the treatment strategies of ARFID and absence of best practice treatment guidelines, further research is needed to describe different presentations of cases with ARFID and develop effective treatment strategies.

Acknowledgment

We would like to thank the participant in this case and all colleagues at the Department of Psychiatry of Faculty of Medicine, Bezmialem Vakif University, for their assistance and cooperation.

Declaration of Conflicting Interests

The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Authors report no proprietary or commercial interest in any product mentioned or concept discussed in this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

References

- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Bryant-Waugh, R. (2013). Avoidant restrictive food intake disorder: An illustrative case example. *International Journal of Eating Disorders, 46*, 420-423.
- Chandran, J. J., Anderson, G., Kennedy, A., Kohn, M., & Clarke, S. (2015). Subacute combined degeneration of the spinal cord in an adolescent male with avoidant/restrictive food intake disorder: A clinical case report. *International Journal of Eating Disorders, 48*, 1176-1179.
- Fairburn, C. G., Cooper, Z., Doll, H. A., O'Connor, M. E., Bohn, K., Hawker, D. M., . . . Palmer, R. L. (2009). Transdiagnostic cognitive-behavioral therapy for patients with eating disorders: A two-site trial with 60-week follow-up. *American Journal of Psychiatry, 166*, 311-319.
- Fairburn, C. G., Cooper, Z., Doll, H. A., O'Connor, M. E., Palmer, R. L., & Dalle Grave, R. (2013). Enhanced cognitive behaviour therapy for adults with anorexia nervosa: A UK-Italy study. *Behaviour Research and Therapy, 51*(1), R2-R8.
- Fischer, A. J., Luiselli, J. K., & Dove, M. B. (2015). Effects of clinic and in-home treatment on consumption and feeding-associated anxiety in an adolescent with avoidant/restrictive food intake disorder. *Clinical Practice in Pediatric Psychology, 3*, 154-166.
- Fisher, M. M., Rosen, D. S., Ornstein, R. M., Mammel, K. A., Katzman, D. K., Rome, E. S., . . . Walsh, B. T. (2014). Characteristics of avoidant/restrictive food intake disorder in children and adolescents: A "new disorder" in DSM-5. *Journal of Adolescent Health, 55*, 49-52.
- Galloway, A. T., Fiorito, L. M., Francis, L. A., & Birch, L. L. (2006). "Finish your soup": Counterproductive effects of pressuring children to eat on intake and affect. *Appetite, 46*, 318-323.
- King, L. A., Urbach, J. R., & Stewart, K. E. (2015). Illness anxiety and avoidant/restrictive food intake disorder: Cognitive-behavioral conceptualization and treatment. *Eating Behaviors, 19*, 106-109.
- Knott, S., Woodward, D., Hoefkens, A., & Limbert, C. (2015). Cognitive behaviour therapy for bulimia nervosa and eating disorders not otherwise specified: Translation from randomized controlled trial to a clinical setting. *Behavioural and Cognitive Psychotherapy, 43*, 641-654.
- Millikin, C., & Braun-Janzen, C. (2013). Collaborative treatment of choking phobia in an older adult. *Clinical Case Studies, 12*, 263-277.
- Mowrer, O. H. (1960). *Learning theory and behavior*. New York, NY: John Wiley.
- Murphy, J., & Zlomke, K. R. (2016). A behavioral parent-training intervention for a child with avoidant/restrictive food intake disorder. *Clinical Practice in Pediatric Psychology, 4*, 23-24.
- Nakai, Y., Nin, K., Noma, S. I., Teramukai, S., & Wonderlich, S. A. (2016). Characteristics of avoidant/restrictive food intake disorder in a cohort of adult patients. *European Eating Disorders Review, 24*, 528-530.
- National Institute for Health and Care Excellence. (2017). *Eating disorders: Recognition and treatment*. Retrieved from nice.org.uk/guidance/ng69.
- Nicely, T. A., Lane-Loney, S., Masciulli, E., Hollenbeak, C. S., & Ornstein, R. M. (2014). Prevalence and characteristics of avoidant/restrictive food intake disorder in a cohort of young patients in day treatment for eating disorders. *Journal of Eating Disorders, 2*(1), Article 21.
- Norris, M. L., Robinson, A., Obeid, N., Harrison, M., Spettigue, W., & Henderson, K. (2014). Exploring avoidant/restrictive food intake disorder in eating disordered patients: A descriptive study. *International Journal of Eating Disorders, 47*, 495-499.
- Ornstein, R. M., Essayli, J. H., Nicely, T. A., Masciulli, E., & Lane-Loney, S. (2017). Treatment of avoidant/restrictive food intake disorder in a cohort of young patients in a partial hospitalization program for eating disorders. *International Journal of Eating Disorders, 50*, 1067-1074.
- Ornstein, R. M., Rosen, D. S., Mammel, K. A., Callahan, S. T., Forman, S., Jay, M. S., . . . Walsh, B. T. (2013). Distribution of eating disorders in children and adolescents using the proposed DSM-5 criteria for feeding and eating disorders. *Journal of Adolescent Health, 53*, 303-305.
- Strandjord, S. E., Sieke, E. H., Richmond, M., & Rome, E. S. (2015). Avoidant/restrictive food intake disorder: Illness and hospital course in patients hospitalized for nutritional insufficiency. *Journal of Adolescent Health, 57*, 673-678.

- Tanaka, S., Yoshida, K., Katayama, H., Kohmura, K., Kawano, N., Imaeda, M., . . . Ozaki, N. (2015). Association of Beck Depression Inventory score and Temperament and Character Inventory-125 in patients with eating disorders and severe malnutrition. *Journal of Eating Disorders, 3*(1), Article 36.
- Taylor, S., & Asmundson, G. J. (2004). *Treating health anxiety: A cognitive-behavioral approach*. New York, NY: Guilford Press.
- Thomas, J. J., Lawson, E. A., Micali, N., Misra, M., Deckersbach, T., & Eddy, K. T. (2017). Avoidant/restrictive food intake disorder: A three-dimensional model of neurobiology with implications for etiology and treatment. *Current Psychiatry Reports, 19*(8), 54.
- Tsai, K., Singh, D., & Pinkhasov, A. (2017). Pudendal nerve entrapment leading to Avoidant/Restrictive Food Intake Disorder (ARFID): A case report. *International Journal of Eating Disorders, 50*, 84-87.
- Uher, R., & Rutter, M. (2012). Classification of feeding and eating disorders: Review of evidence and proposals for ICD-11. *World Psychiatry, 11*, 80-92.
- Waller, G. (2016). Recent advances in psychological therapies for eating disorders. *F1000Research, 5*, 702.

Author Biographies

Aynur Görmez, MD, MRCPsych, is a psychiatrist, working in general adult and intellectual disabilities psychiatry in Göztepe Training and Research Hospital, İstanbul. She is also assistant professor in the Department of Psychiatry of İstanbul Medeniyet University, Turkey.

Alperen Kılıç, MD, is a psychiatrist, working in general adult psychiatry. Having completed his psychiatry training in the Department of Psychiatry of Bezmialem Vakıf University, he is on mandatory clinical service at Ahi Evran University Training and Research Hospital, Kırşehir, Turkey.

İsmet Kırpınar, MD, is professor of psychiatry and head of the Department of Psychiatry of Bezmialem Vakıf University, İstanbul, Turkey. His special interests include geriatric psychiatry, liaison psychiatry and cognitive behavioral therapy.