Avoidant/Restrictive Food Intake Disorder (ARFID): An Eclectic Eating Disorder

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May 2013 marked the much-anticipated publication of the Diagnostic and Statistical Manual, 5th Edition (DSM-5) by the American Psychological Association. The first major update since 1994, the DSM-5 includes extensive revisions throughout its nearly 1,000 pages. Professionals working with eating disorders should take note of the new section, “Feeding and Eating Disorders,” which replaces and combines two former sections, “Eating Disorders” and “Feeding and Eating Disorders of Infancy or Early Childhood.” The new “Feeding and Eating Disorders” section includes expanded criteria for familiar diagnoses, such as Anorexia Nervosa (AN) and Bulimia Nervosa (BN), as well as several new diagnoses, including Purging Disorder and Avoidant/Restrictive Food Intake Disorder (ARFID), the latter of which replaces “Feeding Disorder of Infancy or Early Childhood.”

ARFID has been a diagnosis for a mere three years; as such, the literature to guide practitioners is limited. This article will define ARFID and discuss what is known regarding its prevalence, characteristics and treatment. Evidence-based treatment recommendations or best practice guidelines for ARFID have not yet been developed. However, several case studies have been published and are reviewed herein. The majority of research available has been conducted with children and adolescents; very little is known about ARFID’s presentation in adults. As with other eating disorders, the treatment described for ARFID is multidisciplinary and involves a collective approach. As Registered Dietitian Nutritionists (RDNs) are especially important in the management of this particular eating disorder, the role of the RDN within the treatment team is also discussed.

What is ARFID?

ARFID is an entirely new diagnosis within the section on Feeding and Eating Disorders in the DSM-5. The diagnostic criteria for ARFID are as follows:

“An eating or feeding disturbance (e.g., apparent lack of interest in eating or food; avoidance based on the sensory characteristics of food; concern about aversive consequences of eating) as manifested by persistent failure to meet appropriate nutritional and/or energy needs associated with one (or more) of the following:

1. Significant weight loss (or failure to achieve expected weight gain or faltering growth in children).
2. Significant nutritional deficiency.
3. Dependence on enteral feeding or oral nutritional supplements.
4. Marked interference with psychosocial functioning.”

ARFID is not:

• The result of a lack of available food or “an associated culturally sanctioned practice.”
From the Chair
Diane Spear, MS, RDN, LD, FAND

Your leadership team has been hard at work this summer planning a year full of events and new resources for you.

Have you explored BHN’s web site lately? We now have a Member Forum with discussion boards for each of the four practice areas, for public policy/reimbursement, and a discussion board specifically for our BHN Delegate to the HOD. You have direct access to BHN’s Resource Professionals, PAL and HOD Delegate. The forum will enhance your ability to share ideas and issues with member experts and to browse shared documents and resources at your leisure. Let’s begin the discussions and watch it grow!

Are you attending FNCE® in Boston? We have a number of exciting events planned. A member breakfast is planned for Monday, October 17th that features our new Case Study opportunity as well as awards and recognition. Continuing education (CPE) will be provided for those attending. Check out the Case Study Contest where the winner will receive a $375 stipend for FNCE® registration or six free webinars from BHN! Top case studies submitted will be featured on our web site and presented at the member event. Guests are invited to attend, so register early to ensure seating. Watch for registration announcements or go to BHN Website www.bhndpg.org and our Facebook page https://www.facebook.com/BHNDPG for details.

I hope to see everyone at the BHN Spotlight session, Monday, October 17 at 3:30pm, featuring Steven Bratman, MD, MPH and our own Jessica Setnick, MS, RD, CEDRD! This premiere session, Orthorexia Comes of Age: Perspectives on the “Healthy” Eating Disorder, will be moderated by BHN’s Eating Disorders Resource Professional, Marci Anderson Evans, LDN, CEDRD, CPT.

Make a point to stop by the member showcase on Monday October 17th and Make BHN Your Cup of Tea! Meet your BHN leadership team at our booth and plan to be energized with information and activity while receiving a spot of tea from us. Browse our many resources, including BHN’s new Brain Game publication. Invite your colleagues to join us at our showcase booth and enter a drawing to win one of our many teatime giveaways.

It is a privilege to serve as BHN’s Chair this year! I look forward to meeting each of you at FNCE®. If you are not able to come to Boston, please follow along on social media so you can be there with us! Remember, FNCE® is just part of our plans for the year. We have amazing webinars, factsheets, forum discussions, newsletters and CPE opportunities galore in the making. Your leadership team is here to help and support you, so please do not hesitate to reach out.

Are you interested in getting more involved with Behavioral Health Nutrition?

This is a great opportunity to expand your professional network and contribute to the growth and impact of BHN. We are in the process of putting together our Executive Committee ballot for the 2017-2018 year. We are looking for BHN members for the positions of:

Officer nominations needed:
- Chair Elect
- Treasurer
- Nominating Committee

If you are interested, send your name, member number, e-mail address and the position you are interested in to: Rachael Press, BHN Nominating Chair rachaelpress@gmail.com (440) 263-2713

Deadline for officer nominations is October 14, 2016.
We look forward to hearing from you!
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- Associated with body image disturbance and does not occur during the course of Anorexia Nervosa or Bulimia Nervosa.
- Attributable to a concurrent medical condition and is not better explained by another mental disorder. “When the eating disturbance occurs in the context of another condition or disorder, the severity of the eating disturbance exceeds that routinely associated with the condition or disorder and warrants additional clinical attention.”

In essence, the diagnosis of ARFID is applied to those children and adolescents (and presumably adults) who, for any one of a variety of reasons unrelated to body image disturbance, do not eat enough to meet their nutritional needs or experience significant interference in their daily lives due to their inability to eat certain foods. Some individuals express high levels of anxiety and distress when near certain foods, resulting in missed school, work and social isolation. The specific reasons that can apply to particular patients will be discussed later in this article.

Prevalence
Unlike its predecessor diagnosis, “Feeding Disorder of Infancy or Early Childhood,” which could not be diagnosed in those over 6 years old, ARFID does not have age limitations. Indeed, ARFID captures patients that would otherwise be lost to the DSM-IV’s Eating Disorder Not Otherwise Specified (EDNOS) diagnosis. Fisher, Gonzalez and Malizio, demonstrated this by comparing DSM-IV and proposed DSM-5 diagnoses. Adolescents (n=309) aged 7-21 years, presenting to an eating disorder clinic during 2011-2012 were assigned diagnoses using both DSM-IV and the proposed DSM-5 criteria. Using DSM-IV criteria, 198 patients (64.6%) had a diagnosis of EDNOS. This number dropped dramatically using DSM-5 criteria; all except four EDNOS patients were reclassified (those four patients received the DSM-5 diagnosis Unspecified Eating Disorder) and 60 of the 198 EDNOS patients were reclassified as ARFID. These numbers are striking: nearly 20% of the total sample (30% of the EDNOS group) received a diagnosis of ARFID. Also noteworthy is that all patients with a diagnosis other than EDNOS kept their original diagnosis.

Six institutions conducted a similar study and found that 14% of the 215 patients, aged 8-21 years, presenting to adolescent medicine physicians for an initial eating disorder evaluation received an ARFID diagnosis. Another adolescent medicine multi-institution study diagnosed ARFID in 13.8% of presenting eating disorder cases. In a retrospective chart review of 177 patients attending a day treatment program for eating disorders during 2008-2012, 22.5% met criteria for ARFID. In line with other studies, all patients diagnosed with ARFID would have received a DSM-IV diagnosis of EDNOS.

In contrast, a retrospective chart review of initial adolescent eating disorder cases spanning 12 years (2000-2011) and including 205 patients, found that only 5% met criteria for ARFID. This study also reported that 12% of ARFID patients eventually changed diagnoses to AN restricting subtype over the course of treatment due to changes in (or acknowledgment of) body image or weight gain concerns.

Two non-eating disorder focused studies have reported on prevalence rates of ARFID in the pediatric population. In the first study, researchers examined 2,231 consecutive new referrals to pediatric gastroenterology specialty clinics via retrospective chart review. Patients were 8-18 years old and 1.5% (33 patients) were found to have a diagnosis of ARFID. One or more ARFID symptoms were present in an additional 54 patients (2.4%), but a diagnosis could neither be assigned nor excluded based on available chart information. The authors report very low findings for other eating disorders. Despite this, the authors highlight important differences in presentation of PANS/PANDAS (primarily the acuity of symptom onset) as well as in treatment and outcomes: antibiotic or immunomodulatory therapy often results in swift symptom resolution of PANS/PANDAS. The authors point out the need for consideration of a PANS/PANDAS diagnosis in patients with acute onset of restrictive eating or food avoidance, without prior history of picky eating.

Characteristics
While ARFID encompasses a broad spectrum of clinical presentations, it has been consistently demonstrated that ARFID patients are more likely to be younger, male and have higher incidence of comorbid medical or psychiatric disorders compared to those with other eating disorders. Higher rates of OCD, anxiety disorder, and autism spectrum disorder, learning disorders and cognitive impairment have been reported by one source. A recent prospective cohort study of selective eating in preschoolers found that moderate and severe levels of selective eating was associated with higher rates of anxiety, depression and attention-deficit hyperactivity disorder. This study also found that selective eating is a marker for later increased psychological symptoms. However, a clear definition of selective eating was lacking; it is unknown if patients would have received an ARFID diagnosis.

ARFID is distinct from Anorexia Nervosa and Bulimia Nervosa in that there is no body image disturbance;
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ARFID patients may express a desire to increase their eating and gain needed weight, but they simply can’t get themselves to do it. The reasons behind this inability appear to be as varied as the patients themselves. The literature to date has identified some common patterns, which may be used to inform the course of treatment.

Several sub-categories of ARFID patients were described in a recent study by seven Adolescent Medicine divisions. Of 712 new patients presenting for eating disorder evaluations, 98 met criteria for ARFID (13.8%). According to documented symptoms, six sub-categories emerged: patients with selective eating since early childhood (28.7%), generalized anxiety (21.4%), gastrointestinal symptoms (19.14%), fears of eating secondary to fears of choking or vomiting (13.1%), food allergies (4.1%) and other reasons for restrictive eating (13.2%). No age or gender differences were found between the groups. ARFID patients were 28.6% male, compared to only 14.3% and 6% for AN and BN, respectively. Anxiety disorders were found in 58% of ARFID patients, compared to 35% for AN and 33% for BN. ARFID patients also had more medical conditions (55% vs. 10% for AN and 11% for BN). Mood disorders, such as major depressive disorder, were less common in ARFID (19%) compared to AN (31%) and BN (58%) patients.

Other studies have attempted to describe ARFID subtypes and features. One study divided 33 ARFID patients into three groups: does not eat enough/shows little interest in feeding (57.6%), only accepts limited diet in relation to sensory features (21.2%) and aversive/trumatic experience (9.1%). The most common symptoms of 34 patients presenting with ARFID in another study were abdominal pain (35.3%), fear of vomiting (26.5%), generalized anxiety eating (20.6%), nausea (17.6%) and unpleasant sensory experiences associated with eating (17.6%). In a day treatment program, enteral supplement use, fear of choking or vomiting and sensory issues were significantly higher among the 39 patients with ARFID as compared to those with AN or BN.

Two studies found ARFID patients to have a longer duration of illness, whereas another found it to be similar to other eating disorders. Weight and degree of malnutrition was similar to patients with AN in two studies in outpatient settings.

In a retrospective study comparing ARFID and AN patients hospitalized for medical stabilization, ARFID patients had a longer length of stay (8 days vs. 5 days for AN) and greater reliance on enteral nutrition, despite a similar calorie intake as AN patients. The authors note that greater reliance on enteral nutrition – not ARFID diagnosis – may explain the differences in length of hospitalization. Patients primarily receiving enteral nutrition were started on lower calories and experienced slower weight gain. At presentation, ARFID patients (13%, n=41) were younger, had less weight loss and less bradycardia than patients with AN (64%, n=203). Among the ARFID patients in this study, fear of vomiting (38%) and abdominal pain (26%) were the most common contributors to weight loss. In contrast to other findings, this study reported much higher rates of psychiatric comorbidities in the patients with AN (42%) than the patients with ARFID (12%). After a follow up period of 1 year, more patients with ARFID were deemed to be in remission (62% vs. 46% for AN), although the difference was not statistically significant.

Beyond Picky Eating
Some early responses to ARFID by both media outlets and feeding experts took a negative bent. Ellyn Satter, MS, RDN, MSSW, family therapist and author of the Division of Responsibility in Feeding, stated that, “diagnosing variants of normal as being pathological makes the problem seem far worse than it really is.” According to Satter, by its nature as a DSM-5 diagnosis, ARFID is a psychiatric disorder, and as such, criterion 4, “Marked interference with psychosocial functioning” should be required, not optional, for an ARFID diagnosis to be made. “For any eating malady to be a psychiatric disorder, a significant distortion in eating or feeding has to be precipitated/exacerbated/interactive with underlying psychosocial distortion.”

It is crucial to appreciate that ARFID is not meant to label all picky/fussy eaters with a psychological condition. Its purpose is to identify patients with clinically significant restrictive eating, the magnitude of which results in severe nutritional deficiencies and/or persistent inability to meet energy needs. While there is no gold-standard definition of picky/fussy eating, it is commonly described as consuming an inadequate variety of foods by rejecting a substantial amount of both familiar and new foods. Picky/fussy eating is not necessarily associated with under-weight in children. This controversy regarding picky/fussy eating centers on only one possible presentation of ARFID: that in which the patient has historically been a poor eater. In reality, ARFID’s patient population is perplexingly heterogeneous.

Treatment
No empirical data have been published regarding treatment strategies in the three years ARFID has existed as a diagnosis. ARFID patients often present with complex histories – both medical and psychological – making generalized treatment recommendations nigh impossible. The majority of information regarding treatment has been garnered from case studies, in which the aspect most responsible for the avoidance or restriction of food intake is targeted. Among the considerations for ARFID treatment are the extent of nutritional compromise, the effect on weight and growth (the latter for children) and impediment of social and emotional function. Patients may have long-standing histories of poor eating or may be restricting food for a constellation of reasons, including anxiety, fear of choking/vomiting, avoidance of physical pain or sensory experiences. Treatment often includes management of anxiety, systematic desensitization, a structured nutrition plan with gradual exposure based therapy and relaxation techniques. Feared foods are slowly and progressively incorporated into the patient’s eating pattern.
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In the Report of the National Eating Disorders Quality Improvement Collaborative, 14 adolescent medicine programs retrospectively reviewed the charts of 700 adolescents at intake and one-year follow up. Patients were 9-21 years old, had a DSM-5 restrictive eating disorder (AN, Atypical AN or ARFID) and had at least three visits. 12.4% of patients were diagnosed with ARFID, a similar range as reported by others. No differences were found between institutions in terms of weight restoration, regardless of taking varied approaches to treatment (e.g., individual therapy, family-based treatment (FBT), inpatient medical, partial hospitalization and intensive outpatient). Notably, fewer ARFID patients were followed for one year, despite having much lower odds of weight recovery compared to AN and Atypical AN patients. The authors note, “Patients with ARFID may be dropping out of care because they need to be treated with different therapies compared with the classic treatment for AN with nutrition, mental health treatment and medical visits.”

ARFID treatment goals should be tailored according to the patient’s needs and should be realistic and attainable: to ameliorate nutritional, physical and emotional risks, while assisting the patient in managing anxiety and expanding their own eating.

Published Case Studies

The sampling of case studies below, described with a focus on nutrition care, provide treatment examples for an eclectic selection of ARFID presentations.

Bryant-Waugh depicts a 13 year old male, B, who was described by his mother as always a lazy/fussy eater with never much interest in food. At presentation, his weight was 78.5 lbs (9th percentile) and height was 57.9 in (10th percentile). His diet consisted of dry cereal, bread sticks, potato chips, biscuits and one probiotic drink daily (consumed with his mother’s prompting). B refused meats, fish, vegetables and fruits of any kind. He took a multivitamin when younger, but currently did not. Over the years, both parents had encouraged B to eat and try foods, but he always refused. Eventually, B’s parents had stopped offering him alternatives and foods they knew he would not eat (due to a limited income), although B had access to a variety of foods at school. B had two sisters (one older, one younger) without any current problems. B expressed a desire to be taller and “to fill out a bit.” He reported sometimes feeling hungry, but would also forget about eating when busy. “B agreed that his eating was different to his peers and described something stopping him from trying unfamil iar foods. He said he did not like the feeling of making himself try things so generally didn’t.” Treatment consisted of a cognitive behavioral therapy (CBT) approach, including self-monitoring, behavioral experiments, cognitive restructuring and anxiety management techniques. Providers worked with B on introducing a few new foods useful in social situations and to address nutrition deficits. B agreed to add yogurt, smoothies (similar in texture to the probiotic drink he was already consuming) and to take multivitamin and iron supplements. He chose French fries as a social food. Upon discharge, B’s height increased from the 10th to 35th percentile and through breathing and progressive muscle relaxation techniques, he was better able to manage his anxiety when confronted with new foods.

A 10 year old female, Gwen, experienced sudden onset of ARFID. While away at camp for a week, she choked on a potato chip. Although Gwen said she was alright, her counselor sent her to the camp nurse, with whom Gwen had an unpleasant experience. The nurse appeared annoyed; she told Gwen she had overreacted, implied that Gwen had “brought this on herself” and would not listen as Gwen explained it was actually her counselor who sent her there. From that day, Gwen avoided new foods and any foods not soft or smooth that could potentially choke her. Gwen’s change in eating continued at home and she lost weight (the amount of weight loss was not reported). She began to avoid eating altogether. At first, Gwen was afraid to tell her parents about the choking and camp nurse experience for fear that she might be in trouble. Gwen’s emotional response to food and eating became conditioned. Treatment included explaining to Gwen that the choking was not her fault; it was an automatic response of her esophagus that she did not create herself. Biofeedback was used to help recondition Gwen’s response. She gained confidence and a sense of mastery, which assisted her in feeling able she could retrain her esophagus to accept regular foods again. She was taught and practiced self-regulation exercises and participated in talk therapy regarding her camp nurse experience and subsequent embarrassment. Gwen’s eating improved very quickly after she grew confident and was able to swallow a variety of foods and textures in clinic; she needed only four visits to accomplish this.

In another case of selective eating from a young age, a 17 year old male, G, presented to the ER with dehydration, malaise, lethargy, nausea, poor appetite, vomiting and walking difficulty due to lower limb weakness. G was of normal height (74.8 in) and weight, although he had lost from 209 lbs to 165 lbs within the two months prior to hospitalization, dropping his BMI to 20.7 kg/m^2 from 26.3 kg/m^2. Since G was five years old, his diet had consisted only of rice, fried potato chips, chicken nuggets, potato crisps and occasional chocolate. G refused dairy, vegetables or other meats. He took a multivitamin until two years ago when his favorite brand was discontinued. After hospital admission, G was diagnosed with deficiencies in vitamins A, D, E, K, B12 and folate and a DEXA bone scan showed he had osteoporosis. An MRI revealed G also had subacute combined degeneration of the spinal cord, which is a consequence of B12 deficiency. G refused to eat, drink or swallow, a nasogastric tube was inserted and he received 2400 kcal/day of formula in addition to the necessary vitamin supplements. His cognitive functioning - initially slowed - improved with nutrition. With the assistance of nursing staff and a Registered Dietitian

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Nutritionist, G slowly added foods while his nasogastric tube provided overnight supplemental feeds. Prior to discharge, G was eating meats, vegetables and carbohydrates, and his weight had increased to 180.4 lbs. He regained some function to his leg, but still required assistance walking. At follow up appointments, his eating remained improved and he no longer met criteria for ARFID.

While most of the available research on ARFID has been published on children or adolescents, two recent case studies describe the treatment of adult patients:

King, Urbach and Stewart describe the treatment of a 41 year old female, Ms. Q, with a history of illness anxiety disorder (fear of having or developing an illness) and eating difficulty due to fear of gastrointestinal pain from Crohn's disease. She had painful experiences with Crohn's disease as a child, but no issues since adolescence. Ms. Q had been under outpatient care with a psychiatrist for anxiety and persistent depressive disorder. She was admitted to an inpatient psychiatry unit for medical stabilization following a 24 lb weight loss over the preceding four months. Her BMI upon admission was 15.5 kg/m² and her intake was an estimated 300 calories per day. Ms. Q stated that she had stopped eating “due to perceived abdominal bloating, early satiety, chest palpitations, shortness of breath, sensations in her throat and fears that she would choke and die.” She had gastroenteritis 6 months prior, which may have aroused her fears regarding Crohn’s disease and gastrointestinal pain. Ms. Q denied any body image disturbance or desire to lose weight, and wanted to return to her previous healthy weight. A combination of medications (lorazepam and paroxetine) and cognitive and behavioral techniques was used in treatment, including systematic desensitization, cognitive restructuring and psychoeducation. Relaxation training was used to assist with pre-meal anxiety. As Ms. Q became full after only a few bites of food, she was instructed to eat past her level of fullness and discomfort. Initial goals were to increase the total amount of food consumed, followed by variety of foods. Cognitive restructuring was used to help Ms. Q overcome her feared consequences of eating. She was educated regarding normal swallowing sensations to help interpret the feelings of regular bodily functions. As she progressed, goals were set for eating larger bites and eating more quickly. Ms. Q’s intake gradually increased to 1650 calories per day at discharge, and her BMI increased to 16.5 kg/m². Two months following discharge, she was eating three meals per day and her BMI had increased to 17.4 kg/m². Eight months after discharge, Ms. Q’s BMI was 19.4 kg/m²; she continued to push herself to eat more solid foods, was reportedly less picky about foods, less anxious and more social.

A 32 year old male was referred to psychiatric outpatient care by his primary care physician due to fear of swallowing secondary to fear of choking. One year earlier, the patient choked for 30 seconds on a piece of chicken while he was eating dinner home alone; he was able to remove the meat with his hand. Since then, the patient had relentless fears of choking and dying. At first, he ate more slowly, cutting meat into very small pieces and chewing extensively. Over time, he felt more and more anxious about eating; he began to restrict meat, avoided eating around other people and eventually missed days of work because he couldn’t eat in front of his coworkers. Over the course of the year, he lost 22 lbs, bringing his BMI to 19.6 kg/m² from an initial 22.9 kg/m². The patient was started on two medications (fluvoxamine and ethyl loflazepate) and received CBT, including cognitive restructuring, anxiety management, desensitization and gradual exposure based therapy. Psychoeducation regarding the effects of malnutrition was also provided. The patient was gradually exposed to foods while practicing muscle relaxation and breathing techniques. He was instructed to introduce first ground meats, then gradually increase bite sizes and decrease chewing time. Progressively he added regular meat (roast beef), chicken and was instructed to eat with others. After three months, the patient regained all weight he lost, no longer restricted meat, did not miss work and reported being fearful of choking only two times. After six months, the patient’s anxiety and fear of choking were no longer present and he was eating normally, without restriction.

The Role of the RDN: Research is Needed

Undoubtedly, more research is needed to define the role of RDNs in the care of ARFID patients. RDNs currently working with ARFID patients are the pioneers of nutrition care in this population. In conjunction with the medical and psychological providers, RDNs can use their expertise to guide food recommendations based on the patient’s individual needs and capabilities. As demonstrated in the cases above, each patient required a differing nutritional approach, and nutrition treatment goals were adjusted according to the patient’s presentation and history. One patient’s goal may be to simply return to his or her normal eating style; this simply may not be realistic or feasible for someone who never actually developed a normal eating pattern due to anxiety or sensory issues.

RDNs working with eating disorders should take the lead in contributing to the body of evidence that will further knowledge regarding appropriate treatment strategies for ARFID patients.

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CPE Questions for AFRID

1. Which of the following is included in the diagnostic criteria for ARFID?
   A. Body image disturbance
   B. Fear of gaining weight
   C. Lack of available food
   D. Significant nutritional deficiency

2. Compared to other eating disorders, patients with ARFID are more likely to be
   A. Adult women with yo-yo dieting practices.
   B. Younger, female and have a concurrent significant medical condition.
   C. Younger, female with AN.
   D. Younger, male and have higher incidence of comorbid medical or psychiatric disorders.

3. Limitations of current research with ARFID include:
   A. A lack of published literature on treatment strategies
   B. Primarily retrospective chart review and case studies available
   C. Both A & B
   D. None of the above

4. Common characteristics of ARFID patients include:
   A. Fear of weight gain or becoming fat
   B. Mood disorders, including major depressive disorder
   C. Purging after meals to relieve anxiety
   D. Selective eating since early childhood or a fear of choking, vomiting or gastrointestinal symptoms

5. The diagnosis of ARFID may be used for individuals who
   A. also have Bulimia Nervosa.
   B. are not adults.
   C. for reasons unrelated to body image disturbance do not eat enough to meet their nutritional needs.
   D. use food as an associated culturally sanctioned practice.

About the Author
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Now that you are fortified with the underlying theories and core concepts of hands-on nutrition education (HONE), we are ready to roll up our sleeves and dive into practical application, such as grocery store tours and cooking classes.

Shopping 101
Stocking the pantry is key to healthy food habits. Touring a food market with a dietitian is an opportunity to freshly experience familiar terrain and attain a new level of understanding and discernment. Advance planning helps ensure success.

Store tour preparation:
1. Choose a store with a good assortment of foods you would recommend to your tour group. Also look for wide aisles, friendly staff, and relative cleanliness.
2. Contact the store manager for permission. Let them know how many are in your group. Inquire when are the least crowded times, are there accommodations for people who may have difficulty standing for a long time, and any thing else relevant to your visit.
3. The ideal number of participants depends on many factors (store size, width of aisles, mobility of participants, etc.). More than six is usually unwieldy. Participants can’t hear you and are more easily distracted, and they may impede store traffic.
4. Case out the store in advance with the specific needs of your students in mind. Do they provide unit pricing? Organic or local produce? Special diet foods?
5. There are many commercially available supermarket tour curriculum guides. My most invaluable resource has been a book: What to Eat by Dr. Marion Nestle. This well-researched, common sense, delightful read takes the reader on a guided tour of America’s supermarkets, up and down the aisles, helping to decipher labels and manufacturing and marketing practices to get the best nutrition for your buck.
6. If possible, prime the participants in advance to read and understand food labels. Ask them if they have specific questions that they hope to have answered. Remind them to bring reading glasses, calculators, and anything else they might need for an optimal food market tour.

Conducting the store tour:
1. Give clear instructions from the get-go: how long will the activity last, cluster together to not obstruct traffic, where are the restrooms, etc.
2. Empower them to become formidable consumers: give an overview of market layout, discuss product placement, note the benefits of shopping the perimeter and scanning all heights of shelves, explain that end cap “sales” may not really be good deals.
3. Be guided by what consumer skills are particularly relevant for these participants. This may include comparing similar products, highlighting nutritional benefits and pitfalls or calling attention to unit pricing, serving sizes, generics vs brand names.
4. Promote active engagement by posing questions, asking them to share what has worked for them, devising a scavenger hunt or quiz, or inviting them to taste, touch, and smell. With permission from management, let them sample new-to-them foods.
5. Self-disclosure is OK at the food store. Beyond the facts and figures, they want to know what the dietitian eats and why.
6. Explain what makes the items in bulk bins such good deals.
7. Linger over the fruits and vegetables, noting why diversity is good in the produce department.
8. Include a discussion of sanitation and safety: canned food safety, expiration dates, picking up perishables last, and how to prevent cross contamination in the shopping cart.
9. Paradoxically, when it comes to food shopping, you can think big by thinking small. The best nutritional buys are often at smaller, noncorporate food outlets. When touring such stores be sure to point out the advantages of locally grown food in terms of nutrition, the local economy, and the environment.

Cooking 101
Cooking classes are the most experiential mode of hands-on nutrition education, with the greatest outlay of equipment, supplies, and preparation.

Logistics
The ideal location is one that is easy to find and park at, has a well-lit kitchen with ample work surfaces and elbowroom, and at least one sink. The absolute dream kitchen also has basic appliances, adequate pots, pans, and cooking utensils, and storage for ingredients. The more there is, the less you have to carry in each time you teach. With a bit of ingenuity, any space will do – bring in hotplates, electric woks, specialize in raw foods. It is important to remember that such challenges can serve to illustrate what can be done with barebones equipment which may be the situation of many of our students. By approximating your participants’ home kitchen, they feel at home and get the message that you don’t need to get fancy to eat healthy. This is not to say you can’t make suggestions. Personally, I’m a big fan of second generation, non-jiggle top pressure cookers, and I demonstrate their use in class to show how they can make healthy foods, such as beans, ‘convenience’ foods.

Also, although no-frills is do-able, if you have the budget it is helpful to have more than one of items such as mixing bowls, measuring spoons and cups, cutting boards, and knives. Depending on your participants, adaptive equipment may also be needed, such as vegetable peelers with large grips for people with arthritis.

Hospital-based programs may need to retrofit a dayroom, commandeer a

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break room, or create an entirely new, dedicated teaching kitchen space. If you are community based or self-employed, the possibilities are infinite: churches, women’s clubs, retreat centers, apartment complex clubhouses, off-hours restaurant kitchens, or even your home kitchen. Take into account local regulations and accessibility to participants (including counter heights, etc). Partnering with a community organization, such as a church, can score you both a location and students.

Other cooking class considerations include:

1. Numbers: How many people can work comfortably and safely in the available space? Take into account the size of the kitchen, skills of your participants, and number of staff/volunteers.

2. Staffing: Extra capable hands on deck allows for more individual attention and the entire class to taste a wider variety of dishes. We have been very fortunate to have dietetic student volunteers whose youthful enthusiasm helps to engage our participants while giving the students valuable experience. Staff can also be drawn from past participants, local chefs, or fellow dietitians. Indeed, this latter co-teaching arrangement is a great strategy for benefitting from the strengths and expertise of two, instead of one, professional dietitians. My personal fall-back curriculum has been a five-session program: four hands-on session in the kitchen, roughly themed ‘breakfast’, ‘lunch’, ‘dinner’, and ‘snacks’, plus one food market field trip. This provides a natural framework and instant, practical, doable answers to questions such as, “What can I eat for breakfast?” Stay flexible and responsive to participants’ input: one class’s interactions may generate ideas for the next.

Ready-to-use curricula from both non- and for profit organizations are also available. Although less responsive to your specific cohort, if such curricula remove barriers to your entering the HONE arena, my advice is go for it!

Advance preparation smooths the way to a more successful class. A packet of recipes with the session’s menu as the cover sheet orients both you and the students. Add in any other relevant handouts. Set up the kitchen in a way that works best for the group. Possible configurations include:

- Cooking stations – group ingredients and equipment by recipe in one location
- Centralized method – place all the ingredients for all the recipes in one area – this requires a bit of higher thinking by the cooks but is a more home-like situation.

The former is more streamlined, less hubbub but you will still have sink traffic.

Conducting the cooking class

Begin the class by distributing and reviewing the recipe packet, explaining why these recipes were chosen, and how they fit their needs and interests. (If this is not the first class, ask if anyone has questions or feedback about the last session or tried any of the recipes at home.) Ask for volunteers to prepare each menu item. Buddy them with a staff person, if appropriate. Remind everyone to wash their hands. Make it perfectly clear that cooking is not a spectator sport. During the class, as you are able, circulate to the various cooking groups to check on progress and offer any needed help. Take photos! During the meal, reinforce mindful eating practices and invite feedback and questions.

Oh, the irony of it all...

So here you are reading an article about the superiority of experiential learning. Highly ironic, aye? Remedies to this dilemma abound. Create a self-styled internship by finding someone who is already conducting HONE – ask if you can shadow or help. There are also several formal programs (see resource list), some providing certification, funding, equipment, and other types of support.

Resources for HONE practitioners

Books


Training Programs

(most provide CDR-approved CEUs and/or certification to provide their ready-to-teach curricula)

Field to Plate - http://www.fieldtoplate.com

Healthy Kitchens, Healthy Lives - www.healthykitchens.org

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Delegate Update

Cynthia Burke, MS, RD, LDN - Delegate BHN

As your delegate, one of my responsibilities is to communicate information from the Academy to you and ask for your feedback on the information. The following are three topics that have or will be discussed by the House of Delegates this year.

1. The major topic for the fall HOD meeting will be Wellness and Prevention. Expect a Survey Monkey soon asking for your input.

2. The Second Century: Please copy and paste the link below to read a brief summary of the initiative and a message from our president.

   http://www.eatrightfoundation.org/secondcentury/

   There have been requests from Academy members to develop a position paper on GMOs. That request coupled with some new action in Congress brings this issue forward in importance to the Board of Directors, the HOD and our members. I hope this message helps you convey accurate responses to your constituents, key informants and all members.

   As published in the July 20th Eat Right Weekly "Food Technology Initiatives", Congress recently passed legislation requiring the government "to establish a national disclosure standard for bioengineered foods and for other purposes." The White House says President Obama will sign the bill, which would pre-empt a Vermont law that took effect this month. The bill, which passed by a 306 to 117 vote, directs the U.S. Department of Agriculture to create a national labeling standard that allows food producers to choose how they want to disclose the presence of genetically modified ingredients. Under the legislation, manufacturers will be able to use text, symbols or a QR code that consumers must scan with a smartphone to relay the information.

   Currently, two active Academy initiatives related to food technology, including genetically modifying foods, are underway:

   1. A manuscript describing the Evidence Analysis Library systematic review titled "Advanced Technology of Food Production" (currently available on the EAL). Its results will be submitted for publication in the fall to the Journal of the Academy of Nutrition and Dietetics.

   2. A white paper discussing genetically modified foods within the food supply will be submitted for publication upon completion.

   As background for your understanding of the Academy’s GMO initiatives, our Academy Positions Committee (APC) discussed development of a position paper on genetic engineering during its meeting in October 2015 and reported the following: "the EAL project on this topic had been completed and the majority of research available on human consumption of genetically engineered plant and animal foods relates to allergenicity. Allergenicity research on humans has inherent limitations due to ethical concerns, various testing methodologies, identifying studies with sufficient sample sizes, etc. Steve Taylor, PhD, an internationally recognized expert on genetically engineered foods and allergenicity, assisted the EAL expert workgroup. However, the majority of the EAL questions are Grade V indicating very little evidence to support the questions."

   Based upon that discussion, the APC decided to not proceed at that time with development of a position paper entitled "Advanced Technology in Food Production", because APC would not be able to formulate a strong position statement, based upon the limited evidence resulting from the project. Members were informed about this decision at the time. Here is a link to the Academy’s Position and Practice Paper webpage:

   http://www.eatrightpro.org/resources/practice/position-and-practice-papers

   Academy members will be updated on these projects when near completion.

HOD Spring Meeting 2016

The 95th meeting of the House of Delegates (HOD) took place virtually on April 30 and May 1, 2016. The topics for discussion were Envisioning Our Second Century (day 1) and Technological Innovations that Impact Food and Nutrition (day 2).

The results of the dialogue can be found on the BHN website at: https://www.bhndpg.org/members/forums/topic/spring-hod-2016/
Need for Nutrition Services for those with Substance Use Disorders
By Maria Schellenberger, BA and David A. Wiss, MS RDN

The use of illicit drugs in the United States has increased in recent years and presents as a prevalent social issue with a significant healthcare burden. It is estimated that 27 million Americans over the age of 12 use an illicit drug in a given 30 day period, which corresponds to approximately 10.2% of the population. Further, nearly 21.5 million people suffer from a substance use disorder. Substance use disorders (SUDs) are defined as repeated use of alcohol or illicit drugs which “causes clinically and functionally significant impairment, such as health problems, disability, and failure to meet major responsibilities.” Clinically, SUDs are diagnosed using the eleven criteria in the DSM-5. Most treatments plans for SUDs involve long term care from a team of health care providers, which may include psychiatrists, other physicians, therapists, certified counselors and more. Given the immediate and potentially life-threatening complications of medical detoxification, the importance of proper nutrition is often overlooked by those providing recovery services. The Academy of Nutrition and Dietetics published a position paper in 1990 stating that registered dietitian nutritionists (RDNs) should be an integral member of the team in developing patient care plans for individuals with SUDs. However, the position was not renewed after five years and there has been little progress incorporating dietitians into treatment settings. The purpose of this review is threefold. First, to demonstrate the severity of nutrition-related health conditions experienced by individuals undergoing treatment for SUDs. Second, to discuss supporting literature for the benefits of incorporating nutrition education and nutrition services in rehabilitation programs. Finally, to highlight gaps in existing literature and propose future research to assist with improved program development.

Statement of Problem
Patients in SUD recovery often experience malnutrition, diminished gastrointestinal function, excessive weight gain during recovery and eating disorders. Malnutrition is defined as a “condition that develops when the body does not get the right amount of vitamins, minerals and other nutrients it needs to maintain healthy tissues and organ function,” and affects many substance users. Malnutrition can also occur in early recovery where the addict eats sufficient calories but lacks foods with nutrient density. Studies indicate that while in active drug use, individuals experience sporadic eating habits and often refrain from eating meals regularly. Many individuals report eating only once per day4 with others eating as infrequently as twice per week. Meal choices are often poor quality with a common preference for sweets and convenience foods. A study involving a 24-hour dietary recall of active drug users revealed that fewer than 1/3 had consumed vegetables, fruits or fish during the previous day. Not surprisingly, 30% of energy consumed was derived from added sugars. Both the inconsistency of meals and poor quality contribute to under-nourishment, as well as create dysfunctional eating patterns that can persist into recovery. Studies have demonstrated that active drug users experience significant weight loss. One study found 38% of subjects were classified as having marasmus or kwashiorkor-like malnutrition. Additionally, half of individuals with an SUD experience at least one micronutrient deficiency, with 70% not meeting the lower reference value for Vitamin D. Severe deficiencies are unlikely to subside even when consuming a balanced diet and require targeted supplementation. Malnutrition is further exacerbated by the side effects of drug use and detoxification. Opiates often cause constipation and impaired appetite. Individuals in detoxification frequently experience constipation or diarrhea. Personalized nutrition counseling by a dietitian should be utilized to minimize gastrointestinal distress and encourage healthy eating habits. Once in rehabilitation, individuals often gain excessive amounts of weight, exceeding the weight lost during their addiction. Many residential treatment centers offer meals that are high in carbohydrates or fried, with more emphasis on taste and pleasure than on optimal nutrition. Weight is gained rapidly in early recovery with many individuals gaining 15 to 25 pounds within the first month of sobriety. Throughout the duration of treatment, it is not uncommon for individuals to gain between 14 to 80 pounds, leading them to a body mass index higher than considered healthy. Food is often consumed as a replacement for drugs, to regulate mood and to combat cravings. Excessive weight gain throughout recovery is a source of distress for many individuals and can encourage unhealthy nutrition practices such as fad dieting or the development of eating disorders. It is also common for drug addicts in recovery to develop exercise dependence to compensate for excessive consumption of highly palatable foods.

Both SUDs and eating disorders require long-term treatment plans, and there is currently very little empirical research on treatment strategies for comorbid diagnoses. It is estimated that the prevalence of comorbid SUD’s and eating disorders is between 17-46%. In early recovery, many individuals report binge eating behaviors and hoarding food. These behaviors lead to rapid weight gain which may initially be viewed as beneficial, however feelings of anxiety often emerge later in recovery due to difficulty in controlling appetite and fear of

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Need for Nutrition Services for those with Substance Use Disorders

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becoming overweight.4 In later recovery, individuals often struggle to adopt healthier eating habits, and studies indicate that most do not acquire sufficient nutrition skills throughout treatment to ensure success in the future.6 Evidence suggests that maintaining proper nutrition is critical for optimal cognitive function and is linked with the likelihood of maintaining sobriety.13

Directions for Future Research
To date, there are a limited number of empirical studies which have measured the outcome effects of incorporating nutrition services into SUD treatment facilities. Existing data show that facilities incorporating nutrition services (offering healthier foods and limiting processed foods) result in a significant reduction in total energy consumption, reduced consumption of fats, and reduced BMI.14 An intervention in a residential SUD treatment program found significantly improved nutrition habits and likelihood of reporting improved health by individuals participating in a series of nutrition workshops compared to a control group who did not.15 Another study found significant trends in the amount of nutrition services provided in treatment and positive changes in the Addiction Severity Index, a tool often used to assess predictive treatment outcomes in SUD recovery.16 A review of nutrition services offered to incarcerated addicts found that optimization of nutrition and counseling was associated with improved mood and a decrease in problematic behaviors.17 However, implementation of nutrition services and enhanced nutrition education can be seen as tedious, presenting barriers of resistance from current facility staff members.14 Currently there exists a unique opportunity for RDNs to utilize their expertise in SUD treatment facilities.

Registered dietitian nutritionists are uniquely positioned to assess and treat various dietary complications faced by many individuals in SUD treatment programs.5 RDNs are skilled at evaluating malnutrition and creating individualized meal plans to replenish body stores while minimizing gastrointestinal distress. Further, RDNs have knowledge of eating disorders and can provide targeted nutrition education to teach sustainable nutrition habits. Evidence shows that singular treatment of SUDs and EDs often has poor outcomes due to the complex interactions between comorbid disorders.18 In recent years there has been a push towards integrated SUD and ED treatment which shows improved treatment outcomes and decreased treatment time while yielding lower overall treatment costs. Broadening the involvement of RDNs in SUD treatment facilities is an important step in the movement of integrated treatment.

Despite their qualifications and clear necessity, dietitians are under-utilized in the SUD treatment facilities. A survey of 90 SUD treatment facilities found that fewer than 34% of patients received a nutrition assessment on arrival, less than 50% were offered group nutrition education, and fewer than 25% had access to individualized nutrition education.16 There is paucity of published empirical research regarding nutrition services offered in SUD treatment facilities. For this reason, insurance does not yet cover individual nutrition counseling for SUD.

To increase the involvement of RDNs in SUD treatment programs, it is first necessary to understand current nutrition services and procedures in treatment facilities. A survey of relevant questions should aim to:
1. Determine the percentage of treatment facilities currently offering nutrition services by a qualified nutrition professional
2. Elucidate the types of services offered, including access to group and individual nutrition counseling
3. Identify the professional background of those responsible for implementing nutrition services
4. Understand barriers preventing facilities from incorporating further nutrition services at their facilities
A better understanding of current procedures and barriers will highlight opportunities for future program development. Hopefully, there will be more data to support the effectiveness of nutrition interventions in addiction recovery in order to establish a basis for insurance coverage. Meanwhile, RDNs should market their specific skill set to SUD treatment facilities while considering the barriers and resistance to their involvement. Unless we take aggressive action and begin conducting research, we cannot expect the climate to change. In light of the current addiction epidemic, it seems that the time for change is now.

References
11. Harrop EN, Marlatt GA. The comorbidity of substance use disorders and eating disorders

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Need for Nutrition Services for those with Substance Use Disorders

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Introduction

Disordered eating is defined as “a full spectrum of eating-related issues which include, but are not limited to; food restriction; bingeing; eating for reasons other than hunger (e.g. to seek comfort, relieve stress); and labeling foods as ‘good,’ ‘bad,’ ‘unhealthy,’ and ‘fattening,’ which can lead to feelings of anxiety and guilt if these particular foods are consumed or consumed in excess.”1 Eating disorders (EDs) are a complex interaction between genetics, neurobiology, personality characteristics, and the environment. A consistent personality trait seen in EDs is perfectionism.2 Perfectionism has been reported as a risk factor for both anorexia nervosa (AN) and bulimia nervosa (BN) and associated with disordered eating patterns, specifically in women.3 Generally, perfectionists pursue perfectionism without compromising their self-esteem. However, in a more serious form, clinical perfectionism (CP), individuals still strive for high standards but the impact of not meeting these standards can have a negative impact on self-evaluation. CP can be further described as “the overdependence of self-evaluation on the determined pursuit of personally demanding, self-imposed, standards in at least one highly salient domain, despite adverse consequences” and can lead to dysfunction in individuals.4 Perfectionism can be a healthy pursuit of excellence but if clinical perfectionism in individuals exists, psychological problems may arise. It has been found that a high level of perfectionism correlates with a variety of disorders, such as obsessive-compulsive disorder, and a low level of mindfulness.5

Mindfulness, a nonjudgmental awareness of the present moment, is an increasing approach in the treatment of disordered eating. In the context of nutrition, “mindful eating” can be described as a nonjudgmental awareness of physical and emotional sensations while eating.6 Being mindful strips away the stigma of indulging in a “bad,” “unhealthy,” or “fattening” food and encourages the incorporation of all foods in the diet. It focuses on intention and attention of foods put into our bodies while understanding internal cues of hunger and satiety and external cues that drive our behaviors to foods. Mindful eating has been an effective intervention in treating disordered eating and weight management and obesity. Six college-aged women with bulimia nervosa participated in an 8-week mindfulness-based treatment group. Pre-and post-treatment self-evaluations described their transformation from emotional and behavioral extremes to greater self-awareness, acceptance and compassion; less emotional distress and improved ability to manage stress.7 Even though mindful eating is primarily used in the treatment of binge eating disorder and bulimia, there has also been success in the treatment of food restriction and anorexia.8 Even with its annotated success, there is little published literature exploring mindful eating. Katrina et al. examined the relationship of BMI and mindful eating and found that lower BMI was significantly associated with overall

Research Corner

Does Perfectionism Diminish the Ability of Dietetic Students to Practice Mindful Eating?

By Sydney Lappe, RDN

Note from the Editor: The following thesis research is being published to promote the need for research in all areas of Behavioral Health Nutrition DPG, offer contemplative pieces of interest and to collaborate more widely with our members and students.

Sydney Lappe, RDN

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David A Wiss, MS RDN is the founder of Nutrition In Recovery, which specializes in: Addictions, Eating Disorders, Weight Management, Sports Nutrition, and General Wellness. Mr. Wiss has shared his expertise with numerous eating disorder and addiction facilities throughout the greater Los Angeles area. View some of his work at www.NutritionInRecovery.com.

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Does Perfectionism Diminish the Ability of Dietetic Students to Practice Mindful Eating?  
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This current study explored, in part, the prevalence of CP among dietetic students, a group generally perceived as perfectionists and type A students.14 Additionally, this study sought to determine whether a link existed between clinical perfectionism and risk for disordered eating or eating disorders among dietetic students.10 Even with extensive training and developed expertise, the dietetic population still do face food-related issues including disordered eating behaviors, obesity, and diagnosed eating disorders compared to other disciplines and the general population.10 Although the exact prevalence of EDs is not fully known in dietetic students, one third of the students entering the field of dietetics are motivated by self or friends’ experiences with obesity or eating disorders.11 Gaining a better understanding of dietetic students’ relationships with food can help to confirm curriculum areas needing further development and to help diminish harmful eating attitudes while surfacing mindful eating concepts and practices. The purpose of this study is to examine disordered and/or mindful eating patterns in relation to perceived perfectionistic characteristics. This will be accomplished by answering questions such as “Does perfectionism exist in dietetic students?” “Do disordered and mindful eating practices vary in this population?” and “Do eating practices vary between body mass index classes?”

**Methods**

A total of 42 participants completing a didactic program in dietetics (DPD) were included in this study. To qualify, the students needed to be classified as having junior or senior status in a DPD program, as the concepts of disordered and mindful eating practices are explored further in upper division courses such as Nutrition Counseling where students are able to learn the application of basic nutrition knowledge. Junior and senior students have the potential to practice the concepts of mindful eating if exposure has been implemented through their coursework. There were no other inclusion or exclusion criteria to participate in the study. Thirty nine schools with DPD Programs were contacted with nine agreeing to participate. Seven schools and their participants came from different states across the country. A Qualtrics survey was conducted and administered via e-mail to the didactic program in dietetics (DPD) directors who then sent out the survey link to the qualifying students.

The survey included validated questions from the Clinical Perfectionism Questionnaire (CPQ), Eating Attitudes Test (EAT-26), and Mindful Eating Questionnaire (MEQ). Additional questions included height and weight and whether or not participants had exposure to mindful eating: either in the classroom, independent research, conferences, from family and friends, or an “other” option. Body mass index (BMI) was computed with participant’s height (inches) and weight (pounds) and added as an additional variable.

**Clinical Perfectionism Questionnaire:**

The Clinical Perfectionism Questionnaire was completed to help serve as a self-report questionnaire. The CPQ exhibits modest internal consistency and reliability.4 Four questions were utilized in this particular study as a subjective scale and included whether or not others thought of them as a “perfectionist,” if their standards were too high, etc. These questions were simply answered on a “yes” (1) or “no” (0) basis, with the highest level of perfectionism at a level of 4 and lowest level at 8. Scores represent an inverse relationship to its level. A low score represents a higher level of perfectionism and vice-versa.

**Mindful Eating Questionnaire:**

Although “mindful eating” cannot completely be measured objectively, the Mindful Eating Questionnaire can help individuals to deepen their understanding of eating patterns and how mindful eating can liberate relationships to eating and food. The MEQ is a 28-item survey that features domains of disinhibition, awareness, external cues, emotional response, and distraction, with all having the potential to impact eating behaviors. Four questions from the MEQ were pulled to analyze mindful eating practices. The MEQ features good measurement characteristics after providing evidence of construct validity in a cross-sectional survey examining associations of MEQ scores with demographic and health-related characteristics.5 Statements such as “I notice when I’m eating from a dish of candy just because it’s there,” “Before I eat I take a moment to appreciate the colors or smells of my food,” and “I taste every bite of food that I eat,” were answered based on an ordinal score of always=1, usually=2, often=3, sometimes=4, rarely=5, never=6. A lower number represents a higher mindful eating score while a higher number represents a lower mindful eating score with scoring ranging from 4-24. A low score reflects more mindfulness in eating behaviors and a freer relationship to the many sensations, emotions, and thoughts that influence eating behaviors.

**Eating Attitudes Test:**

The Eating Attitudes Test (EAT) is a simple screening measure to help identify if an eating disorder needs professional attention. Even though the EAT has been validated with anorexia nervosa and found useful in identifying eating disturbances in non-clinical samples, it is important to understand the screen is not designed to make a diagnosis or take the place of a professional consultation.11 Five questions like “I find myself preoccupied with food” and “I avoid foods with sugar in them” were answered based on an ordinal score of always=1, usually=2, often=3, sometimes=4, rarely=5, never=6. Like the MEQ, a lower number (5 as the lowest) represents more disordered eating characteristics while a higher number (30 as the highest) represents lower disordered eating characteristics. Lowest and highest score values were determined by multiplying the number of total questions from each eating pattern subset (disordered and mindful eating) by answering all the questions as always=1 or never=6.

**Results**

Of the 42 participating students, 11 (26%) students identified as a junior, 30
Does Perfectionism Diminish the Ability of Dietetic Students to Practice Mindful Eating?

(74%) students identified as a senior, and one did not disclose their academic standing. Ages ranged from 19-34 with an average of 22.46512. When investigating the prevalence of perfectionism in dietetic students, descriptive analysis was utilized to compare the frequencies of perfectionism scores and the average among them. The mean perfectionism score was 5.5714 (SD=1.25218) based on a 4-8 scale; four as the highest level of perfectionism and eight as the lowest. Ten (23.8%) answered all perfectionism questions as “yes” and three (7.1%) answered all as “no” with the frequencies decreasing as the perfectionism score increased, representing a low perfectionism score. The average level of mindful eating was 11.1081 (SD=3.48635) based on a 4-26 scale; four as the highest ability to practice mindful eating and 26 as the lowest. The average level of disordered eating was 14.4167 (SD=3.94516) based on a 5-30 scale; five as the highest pattern of disordered eating and 30 as the lowest (Table 1).

Pearson Correlation found that there was a positive correlation between perfectionism and disordered eating ($r=.289, p<.005$) This represents as perfectionism scores increased to eight (low perfectionism), disordered eating scores also increased (or lower disordered eating patterns). There was not a significant correlation between perfectionism and mindful eating ($r=-.210, p=.113$). BMI classes did not have a significant correlation among mindful eating and disordered eating practices (Table 2).

Of the participating students, 34 (80.95%) students responded that they had been introduced to mindful eating while three (7.14%) of the students had not and five (11.90%) chose not to answer the question. Figure 1 identifies that the 34 students introduced to mindful eating had an average 10.7941 (SD=3.40925) mindful eating score while the 3 who have not been introduced scored an average 14.6667 (SD=2.51661) mindful eating score. The introduction to mindful eating does contribute to increased mindful eating practices ($p<0.05$) when interpreted as a 1-tailed test (Table 3).

Discussion

Clinical Perfectionism scores reported that high perfectionism was more prevalent than low perfectionism in junior

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Table 1:

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<td>BMI</td>
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Note. *p<0.05 based on 1-tailed test.

Table 3:

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<tbody>
<tr>
<td>Sig. (2-tailed)</td>
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</tbody>
</table>

Note. *p<0.05 based on a 1-tailed test.

Figure 1: Comparison of Mindful Eating Scores Between Those Introduced to Mindful Eating and Those Who Have Not
and senior status dietetic students. Perfectionism became less frequent as the perfectionism score increased, representing lower perfectionism characteristics. Students on average demonstrate perfectionism characteristics. Perfectionism also had a positive correlation on disordered eating, a consistent characteristic and risk factor seen in eating disorders. Students should be able to embrace all foods in a diet and discourage the perception as “good” and “bad” foods while listening to their intuitions on hunger, satiety, and emotions. The incorporation of all foods in moderation is a healthy notion and can help prevent characteristics of disordered eating. Although the sample size was fairly small, it is important to identify any disordered eating in this, and all, populations. Dietetic educators are in a unique position to help address food-related issues early in students’ education. Students’ knowledge and skills in patient counseling are critical to their success in future practice. If actions become harmful to the student or potential clients, he or she should withdraw from practice. However, the Academy of Nutrition and Dietetics suggests that RDs can be an important source of support and education of eating disorders: “RDs involved in ED treatment have a responsibility to obtain advanced training, continuing education and case consultation, as well as read the most current research findings and apply evidence-based treatment modalities.” The Academy also states the necessity of all RDs, including entry-level RDs, knowing the basics about ED recognition. In this present study, an introduction to mindful eating significantly impacted mindful eating practices. Students with mindful eating exposure displayed more mindful eating patterns than those lacking exposure. If an introduction to mindful eating significantly increased mindfulness practices, perhaps more research should explore the use of mindful eating curricula. A brief curriculum called Mindful Eating and Living (MEAL) promoted awareness of emotional and physical states, ultimately increasing the ability to recognize and respond to normal satiety in obese individuals. The participants all lost weight without focusing attentions on calories, but rather focused on internal cues of hunger, taste, satiety, and fullness and restoring the body’s natural ability to regulate eating behavior. Training in mindful eating and diabetes self-management facilitated improvements in dietary intake, modest weight loss, and glycemic control among adults with type 2 diabetes. Providing options for effective treatments allows patients with diabetes choices in accommodating their self-care needs. An elaborate development of mindful eating in the DPD curriculum poses an opportunity to help diminish disordered eating among students with or without perfectionism characteristics and equip them with skills and knowledge to relay those techniques to future clients as professionals.

The study was limited with a small sample size of 42 participating students. Natural limitations of subjective data should be considered. However, the exploration of such interest should be further researched due to its underdevelopment and importance in the dietetic curriculum and community. Additional investigation incorporating all undergraduates, graduate students, and practicing dietitians as well as students from other majors could help determine if differences exist between each stage of professional development and between professions.

References
In the BHN Pipeline!

Member forum online
Our new way for BHN members to communicate and ask questions and get responses is now operational and on the BHN website. Check it out, read the instructions to post and get started!

Mentoring project
Bridget Arriazza, Student Member is working with the Academy on their e-mentoring system to evaluate their program and our participation. We are also working to develop our own mentoring program based on successful programs run by other DPGs. If you have any comments on this program, please share with the Membership Chair.

Member Marketplace online
Members can now post books and guides that they developed and are for sale or other services such as training and web-based services.

Case Studies Project
Promotions are in place as an incentive for members to submit case studies. Check it out and contribute to our base of working knowledge.

BHN Speaker’s Bureau in the works.
Be on the lookout for this new project to give notice to members who desire to do more public speaking in their area of expertise.

Fact Sheets now available:
• Spina bifida
• Stress Management
• ADHD (Attention Deficit Hyperactivity Disorder)
• Autism
• Depression
• Eating Assistance in Adults with Developmental Disabilities
• Feeding Children with Developmental Disabilities
• Prader Willi Syndrome
• Rett Syndrome

Membership benefits web section
What are the cost benefits of being a member of the Academy/BHN? What resources are available to assist the member in the area of practice? We will be requesting member testimonials – what they like about BHN membership – how has it improved their practice. The Resource Professionals and others will be working with the membership to determine these benefits. Watch for more to come.

Calendar of Events
We are working on developing a web-based calendar of activities related to our areas of practice. This would include local, state, national and international events sponsored by service and professional organizations, colleges and institutions, government and our members.

BHN Highlights at FNCE® 2016 in Boston
Make BHN Your Cup of Tea in Boston!

BHN Member Appreciation Breakfast
Monday, October 17, 2016; 6:30AM - 8:00AM
Where: Boston Convention Center, Rm 258AB
Program:
• Case Study Presentations in BHN Practice (1 Hour CPE)
• Awards and Recognition
Pre-registration link coming soon.
Cost: $10; Guests are welcome!

BHN Showcase
Monday, October 17, 2016; 9:00AM - 12:00PM
Where: TBD
BHN: Your Cup of Tea!
• Stop by to see what’s new with the BHN communiTEA!
• Receive a complimentary packet of tea
• Visit with fellow members and officers
• Browse our resources and new Brain Game!

FNCE® 2016 Spotlight Session
Monday, October 17, 2016; 3:30PM - 5:00PM
Where: TBD
Topic: Orthorexia Comes of Age: Perspectives on the “Healthy” Eating Disorder
Speakers: Steven Bratman, MD, MPH; Jessica Setnick, MS, RD, CEDRD
Moderator: Marci Anderson Evans, LDN, CEDRD, CPT

Other FNCE® sessions of interest to BHN members:
Tuesday, October 18, 9:45 AM - 11:15 AM
Addressing Unspoken Alcohol Use - Health, Calories, Assessment, and Counseling.
Presenters include BHN Addictions Resource Professional Renée Hoffinger, MHSE RD and Laura E Nagy, Ph.D.

Sunday, October 16, 12:00 PM - 1 PM
"Meet the Author” at The Academy bookstore.
Renée Hoffinger will be discussing and signing her latest book “Hands-on Nutrition Education: Teaching Healthy Eating Skills through Experiential Learning” which is due to be published by The Academy in time for FNCE®.
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Contribute an article or topic for future BHNewsletter issues!
Contact
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or one of the BHN leaders listed in this newsletter.

Mission: Empowering BHN members to excel in the areas of Addictions, Eating Disorders, Intellectual and Developmental Disabilities and Mental Health by providing resources and support.

Vision: Optimizing the physical and cognitive health of those we serve through nutrition education and behavioral health counseling.

Academy of Nutrition and Dietetics website: www.eatright.org
BHN website: bhndpg.org • BHN practice standards: www.bhndpg.org/members/practice-standards/