INTUITIVE EATING AS AN APPROACH TO PROMOTE HEALTH

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ABSTRACT OF THESIS

Obesity is a growing concern in the United States with over one-third of adults classified as obese. In contrast to the obesity epidemic is the ultra slim body ideal leading many people begin calorie restricted diets as a method of weight management. Unfortunately, studies are showing that calorie restricted diets may not be as effective at producing long-term weight losses as once thought. Additionally, calorie restricted diets do not promote a healthy relationship with food and eating.

Intuitive eating is a non-diet approach to health that is in contrast to the typical calorie restricted dieting method for weight management. Intuitive eating promotes body acceptance and attunement with hunger and satiety body signals while dismissing the use of diet rules or strict weight management techniques. Intuitive eating is not a weight loss technique but will help body weight settle into a natural range that is uniquely healthy for each individual. There are 10 major principles within intuitive eating that are highlighted in the book "Intuitive Eating: A Revolutionary Program that Works" (Tribole & Resch, 2012).

Nationwide, there are numerous classes that teach the principles of intuitive eating. However, none of these classes offer their curriculum for other educators to use and to the best of my knowledge there is not a standardized curriculum for health care professionals to use when educating on intuitive eating. The purpose of this project was to create a complete five-session intuitive eating curriculum that was easy for any healthcare professional to use when facilitating an intuitive eating class. This curriculum was developed using the 10 major principles outlined by Tribole and Resch.

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Chapter 1: Introduction

Obesity is a growing concern in the United States and across the world. The Centers for Disease Control (CDC) estimates that over one-third of adults in the United States are obese (2013). Along with the obesity epidemic is a growing obsession with physical appearance. Slender bodies are idealized in the media while larger bodies are portrayed as unsatisfactory (Lake, Staiger & Glowinski, 2000). The dichotomy of the growing obesity rate and the ultra-slim body ideal ultimately create a strained relationship with food and body image (Stice, Schupak-Neuberg, Shaw & Stein, 1994). Therefore, many Americans resort to dieting techniques as a method of weight management.

A phone survey conducted in 2000 found that 57% of women were currently engaging in "weight control behaviors" (Neumark-Sztainer et al., 2000). In a study of college aged women, 43% were actively dieting although 78% of these women had a BMI within normal range (Fayet, Petocz & Samman, 2012). Other studies have shown that 60-80% of college aged women have been on a diet in the past year (Ackard, Croll, Kearney-Cooke, 2002). The use of dieting and weight control behaviors is extremely prevalent.

Many professional organizations endorse calorie restricted diets as the best method for weight loss and weight maintenance (Jensen et al., 2013; Academy of Nutrition and Dietetics, 2009). Unfortunately, research has also found that dieting is not a successful long-term tool for weight loss in all individuals; one study estimated that less than 20% of individuals who attempt to lose weight with dieting are successful and only 10% of people who are initially successful are able to maintain that weight loss for more than one year (Kraschnewski et al., 2010).

Beyond the difficulty to lose weight and maintain the weight loss, dieting may facilitate an unhealthy relationship with food. Some diets require that individuals divide food into “good foods” and “bad foods”, which should be avoided because they are against a certain diet rule. One study found that 45% of American adults said they have felt guilty after eating their favorite foods because the food is forbidden by diet rules (Eating Guilt, 1992). Additionally, 14% of adult women studied reported being embarrassed to buy a chocolate bar at a store. These results suggest that a sizable minority of people included in this study had a considerable concern about eating and food in respect to weight, physical appearance, and health (Rozin, Bauer, Catanese, 2003).

Americans eat for many other reasons beyond hunger. Many may overeat because they are upset, lonely, celebrating, bored, happy, or dieting and in these settings, rarely listen to their body’s need for food. Ignoring the body’s hunger and satiety cues can result in overeating and ultimately weight gain causing a reduced health status. Intuitive eating, a theoretical approach to eating, is a method designed on recognition of hunger and satiety cues. Implementation of intuitive eating has the potential to guide individuals into weight maintenance and a peaceful relationship with food.

Intuitive eating was popularized by Evelyn Tribole, MS, RD and Elyse Resch, MS, RDN, CED, RD in 1995 with the release of their book, “Intuitive Eating: A Revolutionary Program That Works”. Individuals may become trained in this approach to become “Certified Intuitive Eating Counselors”, but the access to these specialized practitioners is limited and comes with a counseling fee. There are intuitive eating classes across the country, some with fees and some without. None of these classes offer their

curriculum online for use by other educators, and to the best of my knowledge there is not a standardized intuitive eating program that is available for use to teach such courses. The purpose of this project is to develop curriculum on intuitive eating that can be used to teach an intuitive eating courses around the country.

Project Statement

An educational module complete with an instructor's manual will be designed to instruct people looking for relief from the dieting cycle on the methods of intuitive eating.

Sub-problems

What is intuitive eating? How do individuals implement the principles of intuitive eating? How can intuitive eating be assessed?

Limitations

There is minimal research backed methods for education on the topic. As to be expected with a new endeavor, there will be opportunities for improvement and advancement in future drafts of this intuitive eating curriculum.

Delimitations

The curriculum will be targeted to middle-aged overweight and obese women, because dieting is not a helpful approach for long-term weight management and health risk reduction in this population.

Assumptions

Assumptions include that facilitators of this curriculum will be somewhat knowledgeable in the principles of intuitive eating. It is important for the group's facilitator to present the information in an honest manner, with knowledge of the

struggles and concerns of those who are attempting to adopt the method of eating.

Definitions

- Calorie Restricted Diets- Meal patterns that restrict caloric intake in an effort to manage weight. The level of calories in a restricted diet is sometimes determined by current body composition, age, activity, and desired outcome.
- Intuitive Eating- A nutrition philosophy popularized in 1995 with the release of the book, “Intuitive Eating: A Revolutionary Program That Works”. This philosophy helps clients become attuned to internal signals of hunger and satiety cues in order to create a healthy relationship with food (Intuitive Eating, 2013).
- Intuitive Eating Scale-2 (IES-2)- Measures individuals tendency to follow their physical hunger and satiety cues when deciding what, when, and how much to eat (Tylka & Van Diest, 2013).
- Weight Control Behaviors- Behaviors done in an effort to control weight, including taking diet pills, restricting caloric intake, skipping meals, and exercising for weight loss.
- Healthy At Every Size- A lifestyle approach that rejects diet and weight loss and instead focuses on intuitive eating and enjoyable activity along with self-acceptance (Bacon, 2008).
- Non-diet Approach- A lifestyle approach that uses mindful eating techniques and supports self-esteem with body acceptance for managing weight (Bacon, 2008).
- Mindful Eating- The process of being aware of what you are eating, including the sensations, thoughts, and emotions that surround food (Albers, 2011).

- Mindfulness- The practice of focusing attention in the present moment without judgment or thought of how the experience should or should not be (Kabat-Zinn, 1990).
- Dichotomous thinking- Cognitive rigidity that results in categories of polarities, such as thinking that foods are either good or bad, and can result in a list of forbidden foods.
- Disinhibition: The inability to stop eating when full.

Chapter 2: The Literature Review

Introduction

Over the past 25 years, there has been an astounding increase in the rate of overweight and obese individuals in the United States. The United States obesity rate in 1990 was less than 10-15% of the population and escalated to 34.9% of Americans being obese by 2013 (CDC, 2013; Ogden, Carroll, Kit & Flegal, 2014). Along with the increasing body mass index (BMI), is a growing concern with physical appearance due to the media's portrayal of the ideal physique. The stress to obtain the perfect body is especially aimed at females with extremely slender clothing and fitness models (Grabe, Ward & Hyde, 2008). The dichotomy of the obesity epidemic countered with the unrealistic expectations for body size has the potential to foster an unhealthy relationship with food, eating, and body image.

The growing obesity crisis is of greatest concern because of the associated health concerns. Obesity related health conditions include heart disease, stroke, type 2 diabetes, and some types of cancer (CDC, 2013). The CDC estimates that in 2008, $147 billion dollars were spent on obesity-related medical costs. This equates to about $1430 higher medical cost per year for an obese individual compared to someone at a healthy weight (CDC, 2013).

With these facts in mind, it is pertinent to explore the effectiveness of our current weight management methods. There is a myriad of diet plans on the market ranging from calorie restriction techniques to minimizing intake of one of the macronutrients. The

following questions arise: Is the pressure to follow a certain meal pattern for the sake of weight loss and health improvement really making a difference in controlling overweight and obesity rates? Are the focuses on dieting and physical appearance creating an unhealthy relationship with food? And is there a better method to promote health without overriding our body's innate ability to regulate food intake?

The most popular and supported approaches for weight loss are calorie restricted diets (Jensen, et al., 2014; Academy of Nutrition and Dietetics, 2009). Given the enormous growth in overweight and obesity rates, other methods beyond dietary restriction are being examined to control this crisis. The non-diet approach to health focuses on rejecting diet rules and instead focusing on internal cueing for hunger and satiety. Intuitive eating is a non-diet approach popularized in the mid-1990s with the book "Intuitive Eating: A Revolutionary Program that Works" written by Elyse Resch and Evelyn Tribole. The purpose of this literature review is to critically analyze evidence on intuitive eating as opposed to dieting as a method of health promotion in well adults. There are a number of studies that have investigated health risk indicators in relation to intuitive eating. Most research on this topic is relatively recent, with research beginning in the mid to late 1990s.

Background

Dieting is commonplace in today's world. A telephone survey of 4,291 adults and adolescents found that 57% of adult women were currently engaging in "weight control" behaviors (Neumark-Sztainer et al., 2000). In a study of college aged women, 43% were actively dieting although 78% of these women had a BMI within normal range (Fayet, Petocz & Samman, 2012). Other studies have shown that 60-80% of college aged

women have been on a diet in the past year (Ackard, Croll, Kearney-Cooke, 2002). Because of the high use of weight loss techniques through dieting and weight loss aids, the diet industry has increased their presence in the advertising world. Between 1973 and 1991, there was a dramatic increase in advertisements for weight loss aids such as diet foods and diet programs. By 1991, 4-5% of all commercials on television were related to dieting (Wiseman, Gunning & Gray, 1993). A 2013 study estimated that the weight loss industry is worth more than $60 billion annually (Marketdata Enterprises).

Diet Approaches

Several health care organizations have published position papers recommending calorie restricted diets as the best method for weight loss and weight maintenance. The position paper on weight management published by the Academy of Nutrition and Dietetics (2009) recommends a calorie reduction of 500-1000 calories per day without a specific need to limit any certain macronutrient. The American College of Cardiology/ American Heart Association (ACC/AHA, 2013) weight management publication recommends a calorie deficit of 500-750 calories per day to promote weight loss. The ACC/AHA publication also describes the typical pattern of weight loss over a two-year period. Within the first 6 months of starting a calorie deficit diet, dieters are expected to lose 4-12 kg. Slow weight gain is then expected over the following 18 months, with total weight loss of 4-10 kg at the 12 months and 3-4 kg at the 24 months (ACC/AHA, 2013).

While countless diets exist, they can largely be categorized into a few different types, including low-fat, low-carbohydrate, and calorie restriction. The diet rules associated with the Atkins diet, one of the low-carbohydrate diets, can be difficult to follow due to the level of restriction. A recent study examined a high protein, low-

carbohydrate diet in comparison to a general diet for several health indicators and dietary compliance. Over the course of the 68 week study period, the participants were asked to follow either the high protein, low-carbohydrate diet or a general diet with standard protein amounts. The first 12 weeks was a calorie reduction stage followed by a four week calorie balance stage. After the first 16 weeks, participants on the high protein, low-carbohydrate diet had a mean weight loss of 8.7 ± 0.7% compared to 9.1 ± 0.7% for the general diet. During the following 52 weeks, participants were asked to independently follow the same dietary pattern with minimal professional support. By the end of the 68 week study period, the individuals on the low-carbohydrate diet and general diet had significant amount of weight regained. The total weight loss for the low-carbohydrate diet was 4.1 ± 1.3% compared to the general diet with a total weight loss of 2.9 ± 0.8%. The difference in weight loss between the two study groups at 16 weeks and 68 weeks were not significantly different (p=0.44). The authors concluded that overall compliance with the low carbohydrate dietary restrictions were poor. Initially, the participants in the high protein, low-carbohydrate diet group were able to follow the diet, but by the end of the study period were noncompliant with the high protein intake necessary with this style of dieting (Brinkworth, Noakes, Keogh, Luscombe, Wittert, & Clifton, 2004). A review study concluded that although high protein diets are effective at quick weight loss results, the modest weight losses achieved with Atkins type diets were at least partially regained over a 24 month period (Atallah, et al., 2014).

Low fat diets, another popular weight loss technique, were popularized after the 1977 publication of the “Dietary Goals”, which recommended that dietary fat not exceed 30% of total calories daily (Dietary Guidelines, 2005). A recent study compared diets of

different macronutrient compositions, including both high and low fat diets. Participants on a low-fat diet lost an average of 3.3 kg over the 2 year course of the study, which was not different from the weight loss for participants on the high-fat diet (Sacks, et al., 2009). In sum, there was no weight loss advantage to following a low-fat diet in comparison to other types of varying macronutrient composition diets.

Calorie restricted diets are another common form of dieting. A growing field of research now suggests that calorie restricted diets may not be as successful as once believed for weight loss (Neumark-Sztainer, Wall, Guo, Story, Haines & Eisenberg, 2006; Pietilainen, Saarni, Kaprio, & Rissanen, 2011). A recent study examined the intuitive eating approach verses a calorie restricted diet for several indicators, one being weight change. The study found a significant weight loss of 5.3 ± 6.7 kg ($p<0.05$) in the calorie restricted group immediately following the study. However, the significant weight loss was not maintained by the two-year follow up with an ending total weight loss of 3.2 ± 7.2 kg ($p=0.068$). Over this same time period, the intuitive eating group maintained their weight without statistically significant fluctuations (Bacon, Stern, Van Loan, & Keim, 2005). These results suggest that calorie restricted diets may not be effective for long-term weight loss. Furthermore, there is evidence that dieting is associated with weight gain. In an interesting study published in 2011, 1,660 sets of twins were followed for nine years and after reviewing their data results and other recent studies on the topic of weight gain, the authors found that dieting was associated with modest weight gain. In monozygotic twin pairs, the twin who engaged in dieting behaviors weighed on average 1.2 kg more ($p=0.041$) than the twin who did not engage in any dieting behaviors (Pietilainen, Saarni, Kaprio, Rissanen, 2012).

There are three previously published theories that could explain why those who diet tend to weigh more. The first theory proposes that restrictive eating with dieting leads to a greater possibility of binging and ultimately causes individuals to gain weight back after the restriction period (Polivy & Herman, 1985). The second theory states that dieting causes metabolism to slow down. Therefore, after a period of restriction and weight loss, the body is more apt to lay fat mass (Prentice, Goldberg, Jebb, Black, Murgatroyd, & Diaz, 1991). And finally is a theory called the "obesity paradox", referring to the concept that dieters tend to be built heavier and are genetically set to gain weight and to have a larger body shape (Hill, 2004). While these are three cited theories to explain why dieters weigh more, there are certainly other possible explanations that have yet to be reported or are not documented here.

Dieting and Relationship with Food

A potentially harmful outcome of dieting is a strained relationship with food. Diet related messages through the media may be created with the intention of promoting health, but instead may promote feelings of guilt surrounding food. A recent study of the relationship between guilt associated with eating forbidden foods (specifically chocolate cake) and attitudes, intentions, and perceived behavioral control for healthy eating did not find any beneficial relationship with guilt for improving dietary habits (Kuijer & Boyce, 2014). The participants of the study who reported guilty feelings associated with eating chocolate cake did not report higher levels of healthy eating, and in fact, reported lower levels of behavior control when eating. The participants that associated chocolate cake with guilt were also less successful at maintaining their weight over the course of the 18 month study period (Kuijer & Boyce, 2014).

External Eating Cues.

A number of external factors including atmosphere, social setting, and visual appearance of the food impact how much people eat (Wansink, 2004). One randomized controlled study with 122 participants examined how the eating environment impacted total calories consumed. The first group was offered the food in a meal-type setting with ceramic plates, glasses, silverware, and cloth napkins. The second group was offered the same meal in a snack-type setting with paper plates, plastic cups, and no utensils. The food intake from both groups was recorded, and the results of the study showed that people who were in the meal-type setting ate 27.9% more calories than participants in the snack-type setting (416 verses 532 calories). However, this relationship was only true among participants who were hungry at the time the food was served. This study suggests that environmental and situational cues associated with an eating occasion could dictate overall food intake in people who are hungry (Shimizu, Payne, & Wansink, 2010).

Another study on the topic of external eating cues looked at whether visual cues related to portion size can influence intake. A total of 54 participants were included in this between-subject designed experiment. Four participants at a time were brought to a restaurant style table with four separate bowls of tomato soup. Two of the bowls were imperceptibly refilled and the other two bowls were normal without any re-fill. The participants who were assigned to the self-refilling bowls ate 73% more soup than the participants eating from the normal bowl. Interestingly, both groups reported feeling as though they consumed similar amounts of soup and reported similar satiety levels. The

results from this study suggest that intake is at least partly mediated by consumption norms and expectations. All participants assumed that the amount portioned to them was the correct serving size and should be finished. The self-filling bowl participants unknowingly continued eating beyond the expected serving size but were unable to recognize this. The results of this study suggest that people can base their satiation on visual cues related to portion size instead of actual amount consumed (Wansink, Painter, & North, 2005).

Intuitive Eating

An alternative approach to health is one that is not based on diet and ideal body weights. Intuitive eating is a type of non-diet approach to health that was first popularized in 1995 by Evelyn Tribole and Elyse Resch, both of whom are registered dietitians. Tribole and Resch founded this method as a bridge between a traditional non-diet approach and the typical health community approach, which includes dieting to achieve ideal body weight. The traditional non-diet approach requires full body acceptance regardless of size or shape but often does not address health risks. On the other hand, the health community's approach stresses the importance of minimizing health risks, including BMI, without mention of accepting personal weight and shape differences. Tribole and Resch attempt to mesh these two polar ideas into a single program in intuitive eating (Tribole & Resch, 2012).

Due to their lack of success with traditional diet approaches, Tribole and Resch were inspired to find alternate means to promote health (Tribole & Resch, 2012). Their clients would find mild success through calorie restricted diets, but quickly regain the weight they lost because they could not maintain the strict diet rules. Tribole and Resch

developed 10 principles of intuitive eating to help their clients make peace with food (Tribole & Resch, 2012). The 10 intuitive eating principles ultimately boiled down to three main concepts: (a) reliance on internal hunger and satiety cues, (b) eating for physical rather than emotional reasons, and (c) unconditional permission to eat when hungry (Tylka & Van Diest, 2013).

The ultimate goal of the intuitive eating program is to teach people to rediscover trust in their body's natural ability to regulate food intake through hunger and satiety cues. When this ability is regained there is no need for dietary restrictions or rules because people will stop eating when full and satisfied. Intuitive eating does not restrict any food items. Also, it discourages the use of "good/bad" food lists and it aims to eliminate food-related guilt. Tribole and Resch (2012) say that by removing the guilt and restriction, people will inherently make food choices that will help promote a natural weight that is uniquely healthy for each person. For some individuals, this may mean intuitive eating will result in weight gain and for others weight loss or weight maintenance. Of course, it is crucial to highlight that intuitive eating is not a weight loss program and does not promote itself as one. Instead, intuitive eaters will instinctively make better food choices and eat a variety of foods to promote positive health and well-being. Intuitive eating helps individuals re-access the inherent ability to make healthy food choices (Tribole & Resch, 2012). In sum, Tribole and Resch (2012) wrote that intuitive eating, "encourages a reconnection with your body's innate signals of hunger, fullness, and food preferences, and helps you find the weight you are meant to be."

Intuitive Eating Measures.

The Intuitive Eating Scale (IES) was the first validated measure of intuitive eating (Hawks, Madanat & Merrill, 2004). The IES is divided into four main subscales with a total of 30 questions, all assessed by a Likert scale with higher scores representing higher intuitive eating behaviors. The four subscales of the IES include: (1) anti-dieting subscale, (2) intrinsic subscale, meaning eating based on internal hunger and fullness cueing, (3) extrinsic subscale, or eating for social, emotional, or environmental reasons, and (4) self-care subscale which measures a person's consciousness with health and wellbeing compared to beauty and fashion. The IES was reviewed by a panel of six intuitive eating experts and fifty-six students enrolled in upper level health courses. The IES was trialed on 391 students in the initial administration and 285 students in the four week follow-up administration. Pearson's correlation coefficients from baseline to the 4-week retest ranged from r=0.560 to r=0.866 (p<0.0001) for the four sub-scales described above. With all factors combined, the correlation coefficient from baseline to 4-week retest was r=.845, p<0.0001 (Hawks, Madanat & Merrill, 2004).

The Intuitive Eating Scale-2 (IES-2) is an update to the original IES (Tylka & Kroon Van Diest, 2013). The IES-2 re-phrases the four major sub-scales that relate to intuitive eating from the original IES to: (1) eating for physical rather than emotional reasons (2) unconditional permission to eat, which assesses restraint in eating (3) reliance on hunger and satiety cues, and (4) body-food choice congruence. The tool contains 23 items and is scored on a five point Likert scale with higher scores representing greater adherence to intuitive eating behaviors. The tool went through a validation process that included three phases: (1) development and expert review, (2) confirmatory factor analysis, and (3) a social desirability analysis. The IES-2 was determined to be valid after

it was shown to be (1) positively related to body appreciation, self-esteem, and satisfaction, (2) inversely related to eating disorder behaviors, body shame, BMI, and internalization of media appearance ideals, (3) negligibly related to social desirability; and (4) predictive of psychological well-being. The sample population used in creating and validating the scale was largely white college-aged individuals that self-selected to participate in the study. This tool was used in several studies discussed below.

Research on intuitive eating has accelerated over the past 20 years leading to a better understanding of how this approach may impact health. Several studies on the topic of intuitive eating will be reviewed and examined throughout the remainder of this chapter.

Intuitive Eating and Health

A review of relevant literature was completed and summarized to provide an overview of the current understanding on intuitive eating. Research has examined the relationship between intuitive eating and BMI as well as intuitive eating and health risk indicators. Other studies have examined the use of mindfulness techniques in combination with intuitive eating. The remainder of this chapter will review current literature on intuitive eating.

Dieting and BMI.

The relationship between dieting and weight gain was examined in a 2012 observational twin study (Pietilainen, et al., 2012). The objective of the study was to determine whether weight gain following a calorie-restricted diet was related to a genetic disposition or the act of dieting alone (Pietilainen, et al., 2012).

Consent was obtained from 1,660 pairs of twins; participants were excluded if they had known diseases or were taking a medication known to cause weight changes. With the use of both monozygotic and dizygotic twins, researchers were able to hold genetics constant and examine the relationship of weight gain and dieting episodes (Pietilainen, et al., 2012).

Participants were enrolled in the study at the age of 16 and followed until age 25. Baseline data included height and weight, parent's height and weight, health habits, general health, and social relationships. The same data was again collected at age 17, 18.5 and 25. At age 25, participants were also asked, "how many times during your life have you intentionally lost more than 5 kg of weight?" (Pietilainen, et al., 2012).

In the initially non-overweight subjects, the risk of becoming overweight by 25 years of age was proportional to the number of prior intentional weight loss episodes. Those with one intentional weight loss had a 2.72 times increased risk of becoming overweight at age 25, while those with five or more intentional weight loss episodes had a 5.22 times greater risk of becoming overweight at age 25 (p=0.001). There was also a relationship between weight at baseline and number of weight loss episodes. The mean BMI in males (22.2 ± 2.8 kg/m^2) and females (22.2 ± 3.0 kg/m^2) with two intentional weight loss episodes was higher at baseline than males (21.3 ± 2.5 kg/m^2) and females (21.0 ± 2.2 kg/m^2) with one intentional weight loss episode. The mean BMI in males (20.1 ± 1.8 kg/m^2) and females (19.5 ± 2.0 kg/m^2) who had no weight loss episodes weighed significantly less at baseline (p=0.001) than the participants with one or more weight loss episode (Pietilainen, et al., 2012).

When both monozygotic twins were a healthy weight at baseline, the twin who indicated intentional weight loss during the study period was consistently heavier than the twin without intentional weight loss (0.4 kg/m $^{-2}$; p=0.041). Further, they found that the risk of becoming overweight at age 25 in the initially non-overweight group was proportionate to the number of episodes of intentional weight loss (Pietilainen, et al., 2012).

Twin studies are an excellent tool for assessing environmental variables because it is a natural control for genetics. Beyond the use of monozygotic twins to control for genetics, the study also controlled for several other variables including physical activity, smoking, breakfast eating, number of offspring, mother/father weight status, and socioeconomic status. The sample size was large, which is a strong positive for determining outcome strength and generalizability. Still there were some limitations to the study. It was not a randomized controlled trial with monozygotic twins, which means that causation is limited. Also, the heights and weights were self-reported by the participants, as were the episodes of intentional weight loss (Pietilainen, et al., 2012). Whenever weight or weight loss is self-reported there is a risk of social desirability error.

This twin study suggests that intentional weight loss efforts are not associated with a lower BMI, but rather a higher BMI. However, the participants who started at a healthy baseline weight had predicted weight gain proportional to the number of weight loss episodes. With the monozygotic twins, the twin who indicated intentional weight loss episodes ultimately weighed more at the end of the study period, with a p- value trending towards significance. However, genetic predisposition could still play a part in weight gain. Participants who were at a higher weight at baseline engaged in more weight

loss episodes suggesting the possibility that they were genetically predisposed to have higher weights and use weight control techniques to manage weight (Pietilainen, et al., 2012). While there is some evidence that dieting is related to weight gain, there are further questions regarding the connection between genetic dispositions for weight gain and dieting.

Intuitive eating's relationship to westernization.

In 2004, the relationship between intuitive eating and the onset of westernization in Asian countries was examined (Hawks, et al., 2004). Recent dietary changes in Asian countries include a reduction in grains, fiber, fruits, and vegetables with increased consumption of fat, sugar, animal proteins, and sodium that mimics more of a Western style of eating (Popkin, 2002). In addition to the dietary changes, there was also a change in body ideals. Previously, a plump body figure had been preferred in Asian countries, as it signified adequate food access (Treloar, et al., 1999). The new body ideal is a slim body shape (Lake, Staiger & Glowinski, 2000). However, the dietary changes noted with westernization do not facilitate such a figure and instead promote the intake of excess calories and unhealthy fat sources (Stice, Schupak-Neuberg, Shaw & Stein, 1994). Researchers hypothesized that the Asian countries that are further westernized, as indicated by Gross Domestic Product (GDP), will show a greater restriction in their eating habits and less intuitive eating in order to obtain the western body ideal (Hawks, et al., 2004).

An exploratory cross sectional study was conducted using a convenience sample of 2,334 undergraduate students from selected universities in Japan, Thailand, China, the Philippines, and the United States. Participants were given a paper survey that included

the Intuitive Eating Scale (IES) as well as several demographic questions (Hawks, et al., 2004).

The study's reported results are adjusted mean levels of agreement with the four IES subscales, with a score of 5 indicating high agreeability with that subscale. The United States scored lowest on the intrinsic eating subscale, which correlates to poor intuitive eating habits and Japan scored second lowest on the intrinsic eating subscale (2.55 and 3.23, respectively). The United States scored highest on the extrinsic eating subscale, or eating for reasons beyond hunger and satiety (3.37), while Thailand scored lowest in this category (2.70). Japan and the United States, the two most westernized nations based on GDP, scored lowest in the self-care subscale (3.03 and 3.33, respectively), indicating that these nations put higher emphasis on fashion and beauty over health and wellness. The authors concluded that increased westernization was associated with reduced intuitive eating behaviors.

The limitations of this study include the inherent inability to draw causal relationships from a cross-sectional study. The authors also pointed out that the convenience sample may not be representative of the national populations. Also, the sample of four Asian countries is not sufficient to provide clear cross-cultural trends. The questions in the anti-dieting and self-care categories ask about overeating, emotional eating, and social eating; all of which are areas that may provoke certain answers that are deemed socially appropriate. Finally, the authors assumed that GDP, an economic index, was an accurate measure to rate westernization. The authors were not able to control for all potentially confounding variables beyond westernization that contributed to the dietary pattern change (Hawks, et al., 2004).

This research article captures the changing dietary pattern from not only the United States but among Asian nations as well. The researchers were able to provide some insight into a relationship between westernization and a reduction in intuitive eating. The results of this study suggest that in the United States, the ability to eat based on internal cues is less than other nations that are less touched by western influences, as assessed through the IES. The impact from media and the current food supply within the United States likely influences the health of the body and mind. This study also demonstrates the possibility of intuitive eating when individuals are separated from cultural pressures, as in those nations with lower GDP and westernization (Hawks, et al., 2004).

Intuitive eating and BMI.

A cross sectional study examined the association between intuitive eating and BMI using the hypothesis that intuitive eaters would have lower BMIs (Madden, Leong, Gray, & Horwath, 2012). This study also investigated whether the lower BMIs in intuitive eaters could be explained by their food choices (Madden et al., 2012).

The sample population was collected from the New Zealand electoral roll, a nationally representative sampling frame. Inclusion criteria were as follows: female gender, age 40-50 years, and not pregnant or lactating. A total of 2,500 participants who met these inclusion criteria were randomly selected to participate in the study and were mailed a survey to complete, along with a pen for incentive. Those who returned the survey were also entered into a drawing for a monetary prize. The survey assessed intuitive eating via the IES. The survey also asked participants about the frequency of binge eating, food frequency questions, rate/speed of eating, and physical activity. The

scores from each question were summed for a total range of 21-105 points (Madden et al., 2012).

The data from 1,601 returned surveys were analyzed using multivariate and linear regression models. In comparison to the demographics for New Zealand, the sample population was similar in most areas except the sample had more college educated individuals and fewer obese individuals. After adjusting for confounding variables, results showed an inverse relationship between BMI and scores on IES, which indicates better intuitive eating at lower BMIs. Specifically, for each 10-unit increase in the summed IES scores, there was a 6.5% decrease in BMI (95% CI [-7.4, -5.6]; $p<0.001$). Analysis also showed that women who scored higher on IES had 1.65% lower rates of binge eating, a 0.015% slower rate of eating (95% CI [-1.82, -1.48] and 95% CI [-0.02, -0.01], respectively; $p \leq 0.001$). In conclusion, the authors of the study found that individuals who eat based on external cueing tend to have higher BMIs than those who follow their internal cueing (Madden et al., 2012).

Hunger and satiety cues are likely lost in many chronic dieters because of years of ignoring these cues (Birch & Fisher, 2000). Previous studies have suggested that people who are more aware of their hunger and fullness cues are less likely to engage in behaviors that result in weight gain, such as binge eating and emotional eating (Tylka, 2006; Hawks, Madanat, Hawks & Harris, 2005). Further studies are needed to fully understand the relationship between intuitive eating and BMI, but intuitive eating may be "a promising approach to weight management and weight gain prevention" (Madden et al., 2012).

This study does have some potential downfalls. As a cross-sectional survey, one is not able to draw causative conclusions about the data. Another downfall of the study is the use of self-reported height and weight. Some strengths of the study include a large sample size and a moderately high response rate. Also, the sample population closely matched the national population in most characteristics (Madden et al., 2012). For future research, it would be beneficial to study a more diverse population, which would make the results more applicable in the United States.

While this study shows an association between intuitive eating and BMI, several questions still remain. First, it is unclear whether intuitive eating is a skill that can be retaught after years of dieting. This study does not show any insight into how the intuitive eaters became such eaters. Additionally, the study does not address how food culture in New Zealand differs from that in the United States. It is important to understand their cultural view on food and their access to both fresh and processed food items before generalizing results to the United States population.

Intuitive eating for weight loss: a pilot study.

A small pilot study was conducted to determine whether the intuitive eating approach was an effective method of weight loss in overweight women (Anglin, 2013). Specifically, the aim of the study was to assess BMI and waist circumference in obese adults after receiving either calorie restricted diet education or intuitive eating education. The design was a randomized controlled study with the calorie restricted diet group serving as the control because the calorie-restricted diet is the current method for managing weight (Anglin, 2013).

This pilot included 16 women, age 20 to 48 years with a BMI >30 kg/m^2 and free of chronic disease. For the calorie-restricted groups, energy needs were estimated using the Harris-Benedict equation and 500 calories were subtracted to promote weight loss. The study did not provide specifics about education provided to either the intuitive eating or calorie-restricted groups or the compliance rate for either group. The intervention period lasted six weeks and weights and waist circumferences were measured at baseline, three weeks, and six weeks (Anglin, 2013).

Results of the study showed a modest, but significant weight loss in pounds from baseline to six-weeks in the calorie-restricted group but not in the intuitive eating group (5.31 ± 0.97 pounds and 3.38 ±1.84 pounds, respectively; p= 0.03). At three weeks, those in the intuitive eating group initially lost a small but non-significant amount of weight in pounds (3.18 ± 0.93 pounds; p=0.5). However, by the six-week weigh in there was no further weight loss (0.19 ± 1.06 pounds; p=0.2). Over the six-week study period, there was not a significant reduction in waist circumference or BMI in either the calorie restricted or intuitive eating study groups. The author of the study concluded that intuitive eating is not an effective weight loss strategy and that calorie-restricted diets were more effective at promoting weight loss during this six-week study (Anglin, 2013).

The limitations of the Anglin (2013) study include the small sample size. With only 16 participants, it is difficult to draw conclusions. All subjects were female college students so there is limited generalizability from this population to the population at large. The author also did not report compliance of either the intuitive eating program or the calorie-restricted diet. The short study period should also be noted; a six-week intervention for weight loss is a very short time period. There was no follow up time to

assess how weight loss was maintained in the participants outside the intervention time period (Anglin, 2013). This is a crucially important missing piece, as one of the largest criticisms of a calorie-restricted diet is the inability to maintain weight loss long-term (Pietilainen, et al., 2012; Brinkworth, Noakes, Keogh, Luscombe, Wittert, & Clifton, 2004; Bacon, Stern, Van Loan, & Keim, 2005). Additionally, this was a pilot study and there is an indication that a more complete study will be published in the future (Anglin, 2013).

Several other studies have additionally found that non-diet approaches are not effective for weight loss. Carroll, Borkoles, & Polman (2007) found no significant weight or BMI change in either the non-diet group or the control group in their 12-week intervention. Ciliska (1998) also found no significant change in weight after a 12-week non-diet intervention. In contrast, Gagnon-Girouard et al. (2010) did find modest but significant weight loss among participants in a non-diet approach. Their intervention lasted 4 months with a follow up after 12 months for a total study time of 16 months. At the completion of the study, participants in their non-diet approach group had a modest but significant decrease in weight (78.84 ± 1.34 kg to 77.45 ± 1.34 kg, $p<0.01$) while the social support group (81.03 ± 1.39 kg to 80.39 ± 1.40 kg) and the control group (80.77 ± 1.37 kg to 80.59 ± 1.37 kg) did not see a significant weight loss (Gagnon-Girouard et al., 2010).

The studies by Anglin (2013), Carroll, Borkoles, & Polman (2007), and Ciliska (1998) provides an interesting comparison to the Gagnon-Girouard et al. (2010) study and the Madden et al. (2012) study, which was previously discussed. Madden et al. (2012) found that people who scored higher on the IES tended to have lower BMIs. This

is in comparison to the Anglin (2013), Carroll, Borkoles, & Polman (2007), and Ciliska (1998) studies that found teaching intuitive eating does not result in weight loss. Tribole and Resch (2012) do not promote intuitive eating to be a weight loss plan. Instead, they emphasize the reconnection with internal signaling to identify fullness and hunger and the enjoyment of all foods without diet rules. However, they also believe that intuitive eating will help weight fall into a naturally healthy range (Tribole & Resch, 2012).

Intuitive eating leads to reduction in health risk factors.

A 2005 study examined an intuitive eating type program versus a typical weight reduction program (Bacon, et al., 2005). The purpose of the study was to examine how anthropometric, psychological, and metabolic indicators differed between the two groups after completion of their respective programs and at a two-year follow up. Outcomes were obtained through monitoring of psychological, anthropometric, and metabolic indicators (Bacon et al., 2005).

The study was a six-month randomized clinical trial. The sample of 78 white, obese females, age 30-45 years were divided into quartiles based on personal characteristics (BMI, age, activity level, rigidity of eating) and then randomly assigned to either the diet or intuitive eating group. Each group attended 24 weekly 90-minute sessions. The basic guiding principles taught to the intuitive eating group (labeled "Health at Every Size" in this study) included: (a) accepting different body shapes; (b) health as multidimensional including social, spiritual, physical, etc.; (c) eating to balance hunger and taste preferences; and (d) promoting physical activity for enjoyment rather than weight loss. The traditional diet group was taught caloric restriction methods, food label reading, and fat counting techniques. Data on weight, lipid profiles, blood pressure,

as well as several psychological inventories for eating behaviors were collected at baseline, 12, 26, 52, and 104-weeks (Bacon et al., 2005).

At completion of the two-year study period, 19 participants (50%) from both groups returned for the follow-up analysis. Results of the study showed that participants in the diet group on average significantly reduced their weight during the treatment period and maintained the weight loss for the first year (-5.3 ± 6.7 kg from baseline; $p<0.05$). However, by the two-year follow up, they had regained the weight such that weight was not significantly different from baseline (-3.2 ± 7.2 kg from baseline; $p=0.068$). The Health at Every Size group maintained their weight and BMI without significant change throughout the study (0.3 ± 6.3 kg from baseline to the two-year follow-up; $p=.841$). For the Health at Every Size group, total cholesterol significantly decreased from baseline to two-year post treatment (4.61 ± 0.8 mmol/L and 4.07 ± 0.77 mmol/L, respectively; $p= 0.026$) whereas the diet group had no change (4.50 ± 0.74 mmol/L and 4.24 ± 0.72 mmol/L, respectively; $p= 0.222$). At one-year post treatment, both groups had significantly lower systolic blood pressure, but this was maintained to the second year follow-up only in the Health at Every Size group (Health at Every Size systolic blood pressure at baseline 125.8 ± 14.2 mm/Hg and at 2 year follow up 119.5 ± 11.7 mm/Hg; $p= 0.043$). There were positive physiologic benefits for the Health at Every Size group in total cholesterol and systolic blood pressure (Bacon et al., 2005).

There were additional benefits in the Health at Every Size approach in terms of mental health. The Rosenberg Self-Esteem Measure was used to assess self-esteem with increased scores correlates with higher self-esteem (Beck, Rush, Shaw, & Emery, 1979). Results initially showed increases in self-esteem in both groups, but again the increased

self-esteem was only maintained to the two-year measurement in the Health at Every Size group (baseline 30.9 ± 3.8 and at 2 year follow up 33.7 ± 4.5; p= 0.001). The diet group's self-esteem was significantly worse by the end of the two-year follow up (baseline 31.2 ± 5.5 and at 2 year follow up 29.1 ± 5.8; p=0.028). These results showed positive outcomes in those following the Health at Every Size approach not only in terms of physiologic health but also for mental health (Bacon et al, 2005).

The authors concluded that dieting produced positive short-term effects but these effects were not maintained long-term. The Health at Every Size education resulted in several long-term improved health indicators, even without a dramatic decline in weight or BMI. In summary, the researchers encouraged size acceptance and awareness of body signals because this appeared to reduce health risk factors in obese females (Bacon et al., 2005).

Limitations of the present study included the small sample size and high attrition rate at the two-year follow-up. Also, authors stated that the diet group's results might appear artificially inflated because those who were unsuccessful on the diet program may have dropped out before data could be collected. Finally, the researchers felt the two-year follow-up may have been too short a time period to fully view the long-term results. Therefore, they recommend a longer follow-up period in future studies (Bacon et al., 2005). It is also important to note a possible conflict of interest. Linda Bacon is the author of the book "Health at Every Size" so she has the possibility to gain professionally and personally from positive findings from this study.

There are also several strengths of the study to discuss. First, the researchers were able to conduct a randomized clinical trial, making the results of the study stronger in

terms of conclusions that can be drawn. Although the authors wanted a longer follow-up time, the two-year lag period after completion of the education program could also be viewed as a strength of the study because it followed the participants beyond the program conclusion.

While this study did not find a significant weight loss in those taught intuitive eating principals, it is intriguing that there were reductions in the health risk indicators associated with intuitive eating. The impact on self-esteem is also important; the intuitive eating group had a significant increase whereas the dieting group had a significant decrease (Bacon et al., 2005).

Other studies examining the non-diet approach or intuitive eating have reported similar psychological results. A randomized controlled study of 78 women found significant increases in self-esteem and significant decreases in feelings of inadequacy and body dissatisfaction associated with non-diet approaches (Ciliska, 1998). A different randomized controlled study of 31 women reported a significant increase in general wellbeing in the Health at Every Size group and a significant increase in body dissatisfaction in the control group (Carroll, Borkoles, & Polman, 2007).

Eating Behavior and Mindfulness

Mindfulness is a cognitive exercise that forces attention to be in the present moment with acceptance of all thoughts without judgment (Kabat-Zinn, 1990). A small but growing base of research suggests that mindfulness is related to lower disordered eating patterns (Tapper, Shaw, Ilsley, Hill, Bond, & Moore, 2009; Alberts, Mulkens, Smeets, & Thewissen, 2010; Kristeller & Hallett, 1999; Masuda & Wendell, 2010). A study conducted in 2012 was intended to extend this line of research through an

intervention with a mindfulness-based education program. Specifically, this randomized controlled trial examined a mindful-based education program's impact on BMI, eating behavior, dichotomous thinking, and body acceptance (Alberts, Thewissen & Raes, 2012).

This study included a total of 26 women, mean age 48.5 years (SD=7.9) and an average BMI of 32.7 kg/m^2 (SD=6.1). Inclusion criteria required participants to have experienced one or more of the following problematic eating behaviors: (a) emotional eating, (b) stress related eating, and/or (c) eating without awareness and/or overeating. Participants were excluded if they had an eating disorder, suicidality, substance abuse history, a mental disorder, or any other ongoing treatment. The 26 participants were randomly divided into a waiting-list control group and an intervention group. The intervention mindfulness training consisted of eight 150 minute weekly sessions.

The mindfulness course covered five main concepts: (a) mindful eating, (b) awareness of physical sensation, (c) awareness of thoughts and feelings related to eating, (d) acceptance and non-judgment of sensations, and (e) gradual change of daily eating patterns. Body weight as well as data on eating behavior, dichotomous thinking, and body acceptance was collected at baseline and after eight weeks with the use of several different validated measurement tools (Alberts, Thewissen & Raes, 2012).

Eating behaviors in this study were assessed using several validated measures including: (1) the Dutch Eating Behavior Questionnaire, (2) the Body Shape Questionnaire, (3) the Dichotomous Thinking Scale, and (4) the General Food Craving Questionnaire Trait (Van Strien, Frijters, Bergers, & Defares, 1986; Cooper, Taylor, Cooper & Fairburn, 1987; Byrne, Cooper & Fairburn, 2004; Nijs, Franken & Muris,

2007). With all the measures used for this study, higher scores indicate higher agreement. The intervention group showed significant reductions from pre-intervention to post-intervention in external eating habits, or eating for reasons other than hunger (3.32 ±0.49 and 3.03 ± 0.48, respectively; $p<0.05$), emotional eating (3.63 ± 0.92 and 3.19 ± 0.70, respectively; $p<0.05$), body image concerns (3.08 ± 0.20 and 2.42 ± 0.82, respectively; $p<0.05$), dichotomous thinking (2.48 ± 0.32 and 2.10 ± 0.57, respectively; $p<0.05$), and food cravings (3.73 ± 0.61 and 3.19 ± 0.20, respectively; $p<0.05$). Additionally, the intervention group had increases in mindfulness from baseline to post-intervention follow up (3.01 ±0.31 and 3.35 ± 0.30, respectively; $p<0.05$), as assessed by the Kentucky Inventory Mindfulness Skills Extended (Baer, Smith & Allen, 2004). These results supported the use of mindfulness to combat distorted and problematic eating habits (Alberts, Thewissen & Raes, 2012).

The rating for restrained eating significantly increased from pre to post treatment in both the control (2.71 ± 0.74 and 2.84 ± 0.71, respectively; $p<0.05$) and intervention groups (3.09 ± 0.39 and 3.30 ± 0.49, respectively; $p<0.05$). Researchers were not able to provide insight into what caused this increase. Also, BMI was significantly reduced in the control group (31.46 ± 5.37 kg/m^2 at baseline compared to 31.23 ± 5.54 kg/m^2 at follow-up; $p<0.05$) but not in the intervention group (34.23 ± 6.73 kg/m^2 at baseline compared to 33.85 ± 6.56 kg/m^2 at follow-up; $p>0.05$). In conclusion, this study suggests that mindfulness can be a beneficial way to enhance positive eating behaviors but does not promote weight loss, at least in the short term. Long-term practice of mindfulness may ultimately produce weight management or weight loss, but this study did not provide long-term monitoring to determine this hypothesis (Alberts, Thewissen & Raes, 2012).

The study design included both positive and negative aspects. As a randomized controlled study, researchers are generally able to conclude causative statements. This study included a small sample size over a relatively short study period, which makes the results less valuable in terms in causation. It is still important research as it contributes to the greater knowledge of mindfulness, but the study is exploratory in nature and further investigation on the topic is welcome. Also, the study relied on self-reports as the sole source of data. In further research, the use of a standard control group that receives education in current weight loss programming would help to determine if the mindfulness approach has valuable outcomes compared to standard dieting technique (Alberts, Thewissen & Raes, 2012).

Similar to studies on intuitive eating, results of mindfulness interventions show positive emotional outcomes related to disordered eating patterns (Alberts, Thewissen & Raes, 2012; Bacon et al, 2005; Madden et al., 2012). Both the intuitive eating and mindfulness programs showed a reduction in emotional eating and body concern issues. However, neither program was effective for weight loss and should not be considered as such. Instead, mindfulness and intuitive eating programs are intended to increase body awareness of physical and psychological determinants of hunger (Alberts, Thewissen & Raes, 2012; Tribole & Resch, 2012). The mindfulness training was successful in raising awareness of body signals as demonstrated by improvement in external eating and emotional eating (Alberts, Thewissen & Raes, 2012). In future mindfulness studies, it would interesting to see if there are improvements in health risk indicators as there are with intuitive eating (Bacon, et al., 2012). Additionally, the incorporation of mindfulness techniques may be beneficial in combination with intuitive eating as both methods show

improvements in disordered eating behaviors (Alberts, Thewissen & Raes, 2012; Bacon et al, 2005; Madden et al., 2012).

Sensory-based eating: a pilot intervention for women.

Mindfulness teaches people to stay focused in the moment with acceptance and awareness (Kabat-Zinn, 1990), which includes acknowledgement of specific sensory aspects of eating including taste, texture, and emotional response. A study published in 2013 showed the results of a pilot study for a sensory-based eating program, which focused on eating based on internal cues and regulation with attention to taste, texture, and emotional response (Gravel, Deslaurier, Watiez, Dumont, Dufour-Bouchard & Provencher, 2014). This specific eating program included six workshops that each lasted 90 minutes. Each workshop focused on a different topic including hunger and satiety cues and identification of flavors and textures in foods. The workshops also included taste testing with a following discussion on texture, taste, sensation, and emotions. The objective of this study was to determine whether this sensory-based eating program influenced eating-related attitudes and behaviors among women who historically were restrained eaters (Gravel, et al., 2014).

This randomized-controlled trial included 50 women, ages 25-60 years, who were classified as restrained eaters based on the Restraint Scale, a validated measure of restricted eating (Herman & Polivy, 1980). Participants were excluded if they were pregnant or lactating, smoked, had food allergies, or were on certain types of medication. Subjects were randomly assigned to the intervention group or a wait-list control group.

Measurements were taken at baseline, six-weeks (end of workshops), and 12-weeks using several validated scales including: (a) Restraint Scale, (b) Three-Factor Eating Questionnaire, (c) Mindful Eating Questionnaire, and (d) Intuitive Eating Scale (Herman & Polivy, 1980; Stunkard & Messick, 1985; Framson, Kristal, Schenk, Littman, Zeliadt, & Benitez, 2009; Tylka, 2006). Additionally, heights and weights were taken at baseline, 6-weeks, and 12-weeks (Gravel, et al., 2014).

Two validated measures were used to collect data on eating behaviors: (1) the Three-Factor Eating Questionnaire, (2) the Intuitive Eating Scale (Stunkard & Messick, 1985; Tylka, 2006). Women in the intervention group showed significant reductions in disinhibition (scale range 0-16), or the inability to stop eating even when full from baseline to the 12-week measurement (6.3 ± 2.7 to 5.0 ± 2.1, respectively; $p<0.05$). The intervention group also showed a significant increase in unconditional permission to eat (scale range 0-5) from baseline to the 6-weeks measurement (2.7 ± 0.8 to 3.2 ± 0.9, respectively; $p<0.05$). Unfortunately, the change in BMI was not reported in the published study. In conclusion, sensory based interventions are a promising type of intervention for promoting healthy eating behaviors (Gravel, et al., 2014).

Limitations of this study included the limited sample size of 50 participants who were a homogeneous sample from Quebec, Canada and mostly college educated, making the results of the study less generalizable to other populations. The study period was relatively short, only covering 12 weeks. It would be beneficial to follow the participants for a longer period after the study to determine if the effects lasted long-term. Finally, the study did not include changes in BMI as a printed result of the study (Gravel, et al., 2014). Authors noted that a future study on sensory-based intervention that included BMI

would be beneficial as the sensory-based intervention reduced disinhibition and previous research has shown high disinhibition is related to weight gain (Gravel, et al., 2014; Hays & Roberts, 2008).

The sensory-based nutrition program piloted in this study showed further support that awareness of body cues when eating is associated with improved eating behaviors. This particular study used taste testing and a discussion format to reinforce the ideas of sensory-based mindful eating. The results from this study revealed a reduction in disinhibition that was maintained for six weeks following the last workshop. This is in concordance with the Alberts, et al. (2008) study that concluded mindful eating decreases eating external eating habits. In sum, a sensory-based intervention that promotes mindfulness seems to be a promising method to improve eating behaviors in women.

Relaxation as part of successful intuitive eating.

A study from 2008 examined three non-diet interventions to determine components of a successful non-diet educational program. Specifically, the purpose of the study was to determine which intervention showed greatest improvements in lifestyle behaviors, psychological wellness, and medical risk factors after a two-year follow up period (Hawley et al., 2008). An initial study published results at the one year follow-up for the same parameters (Katzer et al., 2008). The current study builds off the prior design and methodology but reports the results from the two-year follow-up (Hawley et al., 2008).

The initial study by Katzer et al. (2008) was a randomized controlled trial that included 225 overweight or obese women with at least one cardiac risk factor. The risk factors that met inclusion criteria included elevated blood pressure, non-insulin

dependent type 2 diabetes, increased serum cholesterol, or a current smoker. The 225 study participants were randomly assigned to one of the three sample groups; all groups received 10 weeks of intervention. Group one received a group-based, non-diet intervention with relaxation response training and group two received a similar intervention without relaxation response training. Group three completed a self-lead, non-diet intervention without relaxation response training. Effectiveness of each program was determined by measures of (a) program attrition, (b) lifestyle behavior change, (c) psychological distress, (d) healthy eating self-efficacy, (e) medical symptoms, (f) blood pressure, and (g) BMI. Data on these factors were collected at baseline, after completion of the 10-week intervention, four months, one-year, and two-years. Results from the 24-month follow up were presented in the Hawley et al. (2008) paper.

A total of 107 participants dropped out of the study over the course of the two-year follow up period; a 47% attrition rate. There was not a significant difference in drop out among the three groups. At the two-year measurement, group one participants had significantly greater stress management behaviors as assessed by the stress management subscale of the Health-Promoting Lifestyle Profile Questionnaire (Walker, Sechrist & Pender, 1987). The Revised Symptom Checklist was used to assess participants in nine areas of psychological wellbeing, including depression (Derogatis, 1994). Group one and group two participants had significantly reduced depression indicators from baseline to the one-year measurement (-0.41 ± 0.52; $p>0.0001$ and -0.22 ± 0.41; $p> 0.001$, respectively), but only group one maintained these reduced scores to the two-year follow-up (-0.24 ± 0.52; $p=0.002$). Finally, at the two-year measurement, only group one maintained a significant reduction in frequency and discomfort from medical symptoms

(adjusted mean difference= -8, 95% CI [-15.7, -0.3]; *p*= 0.041). Unfortunately, the exact meaning of 'reduction in frequency and discomfort from medical symptoms' was not provided in the paper. All three groups maintained their weight over the course of the two-year follow up period (Hawley et al., 2008).

In conclusion, overweight or obese women who use relaxation response training along with a non-diet approach to health could improve their psychological health and medical symptoms (Hawley et al., 2008). As discussed in the study by Bacon et al. (2005), Anglin (2013), and Gravel, et al. (2014), mindfulness or intuitive eating techniques have shown to help overweight and obese women maintain weight, but did not seem to aid in weight loss. Instead, mindful eating approaches improve problematic eating behaviors (Gravel, et al., 2014; Alberts, Thewissen & Raes, 2012). In future research, the authors recommend investigating which personal characteristics would benefit most from relaxation response training along with intuitive eating techniques (Hawley et al., 2008).

Strengths of the study included the randomized design, the two-year follow-up and sample size. The limitations of the study included lack of a control group and use of self-reporting measures when filling out several of the psychological indicators. This type of format leads to the possibility of response bias related to social desirability (Hawley et al., 2008).

This study provides insight into the types of intuitive eating programs that are most effective in terms of psychological health and health risk indicators (Hawley et al., 2008). There is further evidence that a non-diet or intuitive eating lifestyle is helpful for reducing indicators of health risk (Madden et al., 2012; Bacon et al., 2005). Therefore, it

is important to gain better understanding of specific qualities of these programs that make them beneficial. From this study, it appears that non-diet techniques taught with relaxation techniques are related to physical and emotional improvements as well as promoting a healthy relationship with food (Hawley et al., 2008).

Curriculum Design: Review of Nutrition Education Courses

A review article from 2005 looked at six randomized controlled trials for type 2 diabetes education that included a social support component. The six randomized controlled trials ranged in length from 3 to 30 months and included participants with a mean age of 59.3 years. Based on this review article, educational programs were more effective if taught in a group setting compared to individual sessions. Social support groups also increased at least one measure of psychosocial and quality of life indicators. The authors concluded that inclusion of social support appeared to enhance improvements for type 2 diabetes outcomes (Van Dam, Van Der Horst, Knoops, Ryckman, Crebolder, & Van Den Borne, 2005). Thus, when creating other nutrition related curriculum, the use of social support could generate similar positive outcomes.

Active learning is an educational style that engages the students in the learning process through meaningful activities. These activities may include homework assignments or hands on activities that reinforce the main ideas being taught. Active learning is in contrast to the traditional lecture style of learning where students are passive recipients of the information. A review article examined the benefits of active learning and concluded that there is considerable evidence favoring the use of an active learning style by significantly improving recall (Prince, 2004). One study included in the review article examined two groups of students over two semesters. The first group of 72

students was allowed to take three breaks, each lasting two minutes, during a 45 minute lecture. During these breaks the students were encouraged to compare notes and clarify questions with classmates. The second group had a lecture of 45 minutes without breaks. When short-term and long-term recall was compared between groups one and two, group one scored significantly better in both long- and short-term recall. The author concluded that including these breaks where students could converse with classmates about the course topics resulted in better learning results because they had to think about what they were learning instead of passively receiving the information (Ruhl, Hughes, & Schloss, 1987). The use of active learning in all types of subject learning would likely have similar outcomes by promoting improved recall abilities.

Conclusion

The non-diet approach to health is a relatively new concept to the modernized world and is in contrast to the calorie restricted diet that is currently popular for weight loss. The research on intuitive eating and similar eating approaches has just emerged within the past 15-20 years. The articles provided above are a beginning to the growing scientific literature on the topic of intuitive eating.

The New Zealand survey study supports the idea that intuitive eating promotes a healthy BMI. The study's subjects who had higher intuitive eating scores on the IES also had lower BMI. However, this study failed to identify whether these individuals had always been intuitive eaters or whether this skill was retaught after years of dieting (Madden et al., 2012). It is a crucially important consideration because the Hawley et al. (2008), Bacon et al. (2005), Anglin (2013), Alberts, Thewissen, and Raes (2012), and Gravel, et al. (2014) studies indicate that BMI is not affected by the introduction of

intuitive eating type approaches. It could be speculated that being a natural intuitive eater from an early age promotes a healthy weight while learning the skill after years of dieting provides weight stability and decreased health risk indicators. It would be interesting to learn how intuitive eating can be promoted from birth and whether these lifelong intuitive eaters really do have a lower BMI as well as reduced health risk indicators.

Another note of comparison between the studies is the method of intuitive eating education. The Bacon et al. (2005) and Anglin (2013) studies provided education on the basic Health at Every Size approach whereas the Hawley et al. (2008) study delved in deeper to specific components of the educational material. The Hawley et al. (2008) study found that including relaxation training produced better intuitive eating outcomes. The Gravel et al. (2014) study included a sensory-based component that had participants focus on the tastes, textures, and emotional responses to the foods being consumed, and it allowed the participants to practice awareness of the sensory experience while eating (Gravel, et al. 2014). Awareness of the sensory experience is a part of mindfulness, but the study by Alberts, Thewissen, and Raes (2012) went further into mindfulness by teaching acceptance of feelings and thoughts in a non-judgmental manner.

The studies conducted by Bacon et al. (2005), Hawley et al. (2008), Gravel et al. (2014), and Alberts, Thewissen, and Raes (2012) all saw positive outcomes that resulted from non-diet type interventions. The Bacon et al. (2008) study saw improvements in health risk indicators, whereas Hawley et al. (2008), Gravel et al. (2014), and Alberts, Thewissen and Raes (2012) saw improvements in eating behaviors, measured as intuitive eating, disinhibition, dichotomous thinking, and body image. These studies provide support for the inclusion of mindfulness training with sensory-based experiences and

relaxation training in intuitive eating programs (Hawley et al., 2008; Gravel et al., 2014; Alberts, Thewissen and Raes, 2012).

Research is starting to find benefits associated with the non-diet approach that are not seen with traditional dieting plans. The twin study conducted by Pietilainen et al. (2012), provides support that calorie restricted dieting and yo-yo dieting does not promote long-term weight loss, and that these are actually associated with higher weight gain over time. Unfortunately, our society promotes restricted diets for weight loss and weight maintenance. The trend to use calorie restricted diets and external eating cues in westernized nations was demonstrated in the Hawks et al. (2004) study of the westernization of Asia. With the onset of westernization in Asia, so is an increase in western media, advertising, and fashion. The nations that had previously eaten based on internal cues and regulation are now subjected to external cues for eating including the media influence of body shape and pressures for extrinsic eating (Hawks et al., 2004). Even with literary support for the intuitive eating approach for health, eating based on internal cues is a difficult and often scary approach for many individuals as well as health care providers.

Intuitive eating may be a somewhat novel approach to health for the current population, but studies show beneficial effects in terms of physiological and psychological wellbeing (Madden et al., 2012; Bacon et al., 2005; Hawley et al., 2008; Gravel, et al. 2014; Alberts, Thewissen, & Raes 2012). Still, there should be further research done before definite recommendations can be added to our daily practice. Specifically, the relationship between intuitive eating and body weight must be fully understood. A link between body weight and intuitive eating is present in some instances

of intuitive eating but not others (Madden et al., 2012; Bacon et al., 2005; Anglin 2013; Alberts, Thewissen, & Raes, 2012). As research continues and information is acquired, intuitive eating could provide an exciting new method to promote weight maintenance and improved eating behaviors in the general American population.

Chapter 3: Methods

Introduction

Intuitive eating is a non-diet approach for a healthy lifestyle that focuses on recognizing and honoring internal hunger and satiety cues. This method of eating is in contrast to calorie-restricted diets, which emphasizes dietary restriction to promote weight loss. Research has shown that calorie-restricted diets are not successful in long-term weight loss or maintenance (Pietilainen, Saarni, Kaprio, & Rissanen, 2012). The purpose of this project was to create an accessible curriculum for dietitians or health care professionals to use in the outpatient setting that teaches the principles of intuitive eating to overweight or obese middle aged women as an alternative option to the typical calorie-restricted eating patterns for weight management and health promotion.

The intuitive eating curriculum is divided into five sessions, each lasting between 45-60 minutes. Each session will cover two or three of the ten intuitive eating principles described in "Intuitive Eating: A Revolutionary Program that Works" (Tribole & Resch, 2012). In the first and final session, facilitators will administer the Intuitive Eating Scale-2 (IES-2) to assess the changes in intuitive eating behaviors from the start of the course to its completion (Tylka & Van Diest, 2013).

Curriculum Design

A thorough examination of current literature was completed prior to the creation of this intuitive eating curriculum. A list of peer-reviewed studies was obtained from IntuitiveEating.org, under the resources tab. PubMed was also used to search for relevant

peer-reviewed articles. Keywords such as intuitive eating, mindfulness, mindful eating, and nutrition education were used as part of the search. There was not a restriction for publication date, but most of the studies used in creation of the curriculum were from the year 2000 until 2014. Studies that included children under the age of 16 and eating disorder patients were excluded from the reviewed literature. In total, ten peer-reviewed studies were included in the literature review, seven of which were randomized controlled trials. Prior to designing the curriculum, "Intuitive Eating: A Revolutionary Program that Works" by Evelyn Tribole and Elyse Resch was also reviewed in detail (2012).

To help determine layout and design of this curriculum, a web search was done to review other related curricula (Texas Department of State Health Services, 2014; NYC Health, 2012; CDC, 2002). Most of the reviewed curricula included a table of contents, suggested time allowance for each section, and key objectives at the beginning of each session. Several used italics or bold font to indicate facilitator script. Also, some used completely narrated scripts for the facilitators while others used bullet points to highlight main points for the facilitator to cover. In the intuitive eating curriculum, facilitators will have a fully narrated script because it is unclear how familiar the facilitators will be with intuitive eating and it was felt crucial to include as much detailed information in the curriculum as possible.

The curriculum was organized based on the 10 principles of intuitive eating described by Tribole and Resch. The first course introduces intuitive eating to the group and covers the first principle: Reject the Diet Mentality. The subsequent classes cover two or three of each of the following topics: (a) Honor Your Hunger, (b) Make Peace

with Food, (c) Challenge the Food Police, (d) Respect Your Fullness, (e) Discover the Satisfaction Factor, (f) Honor Your Feelings Without Using Food, (g) Respect Your Body, (h) Exercise- Feel the Difference, and (i) Honor Your Health (Tribole & Resch, 2012).

Each of the five sessions opens with a short 5-10 minute discussion by group members on challenges or successes they faced in the prior week. In review of recent literature, several studies found that peer support provided improved outcomes in behavior change. A review paper on several diabetes intervention studies summarized that group consultation and social support groups were two of several support systems that improved diabetes control outcomes (Van Dam, Van Der Horst, Knoops, Ryckman, Crebolder, & Van Den Borne, 2005). Based on the review of literature on social support and behavior change, it is believed to be beneficial to include a social support aspect to this curriculum.

The next 30-36 minutes of the session consists of an introduction of the new principles for the week and a facilitator led discussion. This is followed by a 10-15 minute activity, such as a taste test or analysis of hunger and satiety feelings. These two sections of the curriculum were designed to incorporate an active learning style. Active learning requires that the learner participate in the instructional method through meaningful activities. Including the brief activity will help the learner with recall and promote a collaborative learning environment. Additionally, discussion will promote retention and enhance learning (Prince, 2004).

Each session concludes with a 5-10 minute relaxation period or quiet time. In one study, participants who practiced relaxation along with a non-diet approach had improved

outcomes related to psychological and physiological symptoms (Hawley, et al., 2008). Including several minutes of relaxation at the end of each session may allow the participants to identify or address personal reasons for unhealthy eating behaviors.

The individual who facilitates the sessions will be provided with the curriculum packet that includes detailed instructions for each week, discussion questions, a list of materials needed for activities, and instructions for relaxation techniques. Ideally, the facilitator will be a health professional and have a moderate understanding of intuitive eating, but all materials will be provided so a background in intuitive eating is not completely necessary. The suggested group size for this intuitive eating class is less than 15 participants. The intent is to promote discussion and intimacy within the group. Smaller groups have shown in studies to promote higher quality discussion and higher satisfaction with the group (Kim, 2013; Shaw, 2013).

The draft of the intuitive eating curriculum was reviewed by Christina Johnson, R.D., C.D., M.Ed. prior to the final draft editing. Ms. Johnson was able to provide suggestions from a nutrition and educational perspective, given her education in both areas. Suggestions provided by Ms. Johnson were included in the final manuscript.

A pre and post-assessment is included in the curriculum. The pre and post-assessment is the IES-2, which is a validated measure of intuitive eating (Tylka & Van Diest, 2013). The IES-2 uses a five point Likert-scale to assess the extent to which an individual can be classified as an intuitive eater. Scores closer to five indicate greater occurrence of intuitive eating behaviors. The pre and post- assessment will replace the activity time in sessions one and five.

Target Demographic

The curriculum is designed for overweight and obese middle aged women who are in generally good health. Women interested in learning about intuitive eating will typically have a dieting background with a desire to learn about alternatives to calorie-restricted diets.

Conclusion

The development of the intuitive eating curriculum was based on review of several sources of information. Previously designed curriculums were reviewed for design and layout. Educational literature was reviewed to determine how this curriculum could be best designed to promote the understanding of intuitive eating. Finally, the drafted manuscript was reviewed by Ms. Christina Johnson, R.D., C.D., M.Ed. with her edits and comments incorporated into the final manuscript.

Chapter 4: Intuitive Eating Curriculum

Intuitive Eating Curriculum

Based on “Intuitive Eating: A Revolutionary Program that Works” by Evelyn Tribole M.S., R.D. and Elyse Resch, M.S., R.D., F.A.D.A., C.E.D.R.D.

By: Kaylee Frazier, R.D., C.D.

Spring, 2015

Course Goals & Objectives

Course Goal: To promote healthy eating habits in overweight and obese women with intuitive eating strategies.

Course Objectives:

- Reduce the number of chronic dieters.
- Improve participants' relationship with food.
- Enable participants to eat based on hunger and fullness cues.
- Promote positive body image and respect for each body shape.
- Encourage physical activity and body movement that is enjoyable.

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Facilitator Introduction

Intuitive eating is an exciting new approach that offers an alternative to diets. This course is aimed at middle age women with a BMI that classifies as overweight or obese, with a body mass index (BMI) of >25 mg/kg^2. However, any woman with a history of dieting may benefit from this course. The course is not designed for people with eating disorders or severe emotional connections to food. Individuals with these conditions are advised to seek professional counseling for resolution of their food related issues.

This course is based on the book “Intuitive Eating: A Revolutionary Program that Works” by Elyse Resch and Evelyn Tribole. All additional citations are included at the end of the curriculum for reference by you or any participants.

Discussion is a very important component of this course. Therefore, it is formatted to include many discussion questions throughout. As the facilitator, you will be responsible for guiding the discussion for the participants as they learn to become intuitive eaters. The course will be most beneficial to all participants if there is active conversation. Ideally, you as the facilitator will have experience guiding discussion for a group class.

The *italicized words* are the script for you, as the facilitator, to use as a guide. There are sections of non-italicized words throughout the manual, which are suggestions for discussion questions or comments you may wish to include as the facilitator. Each section ends with a recap that will help participants draw main points from each session.

It is suggested that the maximum level of participants for this course is 15 individuals. The course is designed to promote intimacy and sharing between participants and it is felt that a group beyond 15 individuals would begin to feel impersonal and inhibit the ability for the group to interact as a whole. Before starting each of the course sessions, you may wish to set the chairs in a circle to promote conversation.

At the end of this guide you will find all included worksheets, handouts, and the pre- and post-tests. Please make sure you have plenty of copies for each session.

Session 1

Supplies

- Intuitive Eating Scale (IES-2) copies
- Extra paper and pens for notes
- Music for relaxation

Session Goal: To orient participants to intuitive eating as an alternative to traditional calorie restricted dieting techniques.

Upon completion of this session, the participants will be able to:

- Compare the differences between traditional dieting and intuitive eating.
- Name potential risks associated with weight cycling and long-term dieting.
- Describe the five stages of intuitive eating.
- Describe the dieting cycle.
- Apply the four steps to rejecting the diet mentality.
- Identify ways to reject the diet mentality in the coming week.

Welcome & Introductions (10 minutes)

Welcome to all and thank you for participating in our program! I am sure that many of you are here because you have been frustrated by dieting in the past and hopefully are looking for an alternative to restrictive eating. Throughout the next 5 weeks, we will walk through the principles of Intuitive Eating and hopefully you will discover that eating can be free of guilt and 100% enjoyable!

As we start on this journey, it will be important that we become comfortable with one another in this group. The process we are starting includes examination of not only the body's needs for food, but also emotional and social aspects of eating. Much of this class will be based on group discussion, insight sharing, and peer-offered support. Let's take the next several minutes to get to know each other.

Ask the participants to go around the room and share name, occupation, hesitations with intuitive eating, and favorite food. After each participant has shared their information, share your educational background and/or personal history that brought you to facilitate an intuitive eating group.

Now that we all have gotten to know each other briefly, I would like to emphasize how important it is that the disclosed information remains confidential. I look forward to working with all of you and helping you through the journey of intuitive eating.

Activity: Intuitive Eating Scale (10 minutes)

Next, we are going to do a brief questionnaire to assess your current level of intuitive eating. This questionnaire is a validated measure of intuitive eating.[1] There are no right or wrong answers to these questions. Please answer the questions truthfully based on your current thinking and habits. You will also take the same questionnaire at the completion of this course. The information will be used to determine how much progress you made during the course.

Provide each participant with one IES-2 and a pencil if they do not have one. After everyone has completed their IES-2 collect them and store in a safe place. You will give this back to the participants in session 5.

Topic: Introduction to Intuitive Eating (15 minutes)

Ask participants to share their knowledge of intuitive eating and the non-diet approach to health (allow all participants who would like to share time to do so).

Thank you for sharing. Information for this program is based on recent peer-reviewed literature and the book "Intuitive Eating: A Revolutionary Program that Works" by Evelyn Tribole and Elyse Resch. The tag line for the book by Tribole and Resch is "Make peace with food, free yourself from chronic dieting forever, rediscover the pleasures of eating". Their tagline summarizes the goals of this program as well.

To start, let's review what intuitive eating means. Intuitive eating, or the non-diet approach to health encourages freedom from diet rules that sort foods into good or bad categories. Instead, intuitive eating promotes internal regulation of hunger and fullness by listening to the body's cues to eat and stop eating. Simply: eat the food you want when you are hungry and stop eating when you are full. Sounds easy, right? Unfortunately, this presumably simple task of eating has become distorted by messages from outside sources such as media, well-meaning loved ones, or health campaigns. As a result of these outside messages, many people feel that dieting is their only hope to living a healthy life. Numerous diets have been proposed as the cure to this dilemma including Atkins diet, Grapefruit diet, South Beach diet, The Zone diet, Weight Watchers, and the list continues.

Ask the group if anyone feels comfortable sharing their dieting history and results they have seen from dieting. Encourage participants to share how they felt physically and emotionally while dieting as well as any social changes they noticed while engaging in dieting activity. Also ask participants how they measured success when on a diet and whether those successes were maintained long –term?

Tribole and Resch list several "diet backlashes" that may sound familiar to you if you were a chronic dieter. The " last supper" phenomenon commonly occurs before embarking on the next diet endeavor and results in over-indulging in all the foods you assume will be off-limits once the diet starts. Other chronic dieters may have experienced binges on "sinful" foods either during a diet or directly following the completion of a diet. Some chronic dieters may have become socially withdrawn while on a diet because many social events center on the presence of food. While other dieters may accept social invitations only to binge on the rich food present at such gatherings. The fact is none of these situations are normal eating and choosing what food to put into our bodies does not have to be this difficult!

Ask participants if any of these situations sound familiar. Participants do not have to share specific details or examples if they do not feel comfortable sharing this information.

Thank you for sharing. The "diet backlashes" are only some of the negative consequences from dieting. Dieting also takes a toll on your body, both physically and mentally. Recent literature has found that dieting is actually a predictor of weight gain and that most people who lost weight through dieting regained all the weight plus more. [2] There are also health risks associated with weight cycling from yo-yo dieting including increased risk of heart attack or heart disease, higher blood pressure, poor cholesterol levels, and more.[3,4,5,6] In fact, a group who reviewed the articles on dieting and weight loss concluded "The benefits of dieting are simply too small and the potential harms of dieting are too large for it to be recommended as a safe and effective treatment for obesity".[2]To illustrate some of the physical and mental downfalls of dieting, let's take a look at an excerpt from "Intuitive Eating: A Revolutionary Program That Works"

> *"Sandra had hit diet bottom. By now, however, she was more obsessed about food and her body than ever. She felt silly. 'I should have had this dealt with and controlled long ago'. What she didn't realize was that it was the process of dieting that had done this to her. Dieting had made her more preoccupied with food. Dieting had made food the enemy. Dieting had made her feel guilty when she wasn't eating diet-types of foods (even when she wasn't officially dieting). Dieting had slowed her metabolism…"*
>
> *"…By the age of thirty, Sandra felt stuck—she still wanted to lose weight and was uncomfortable in her body. While Sandra couldn't bear the thought of another diet, she didn't realize that most of her food issues were actually caused by her dieting. Sandra was also frustrated and angry—'I know everything about diets'. Indeed, she could recite calories and fat grams like a walking nutritional database."*
>
> *(Tribole & Resch, 2012)*

Ask the participants to respond to this excerpt? Does anything sound familiar or different from what they experienced when on a diet?

Here some other physical results of dieting and starvation:

- *A reduction in the metabolism rate. When living in calorie depravation, the body adapts to be more efficient with the energy it is given and therefore actually lowers the body's calorie/energy needs.*
- *Increased binges and cravings. When the body is restricted in food quantity or type, you are more likely to overeat or binge when food is present.*
- *Accumulation of abdominal fat. Dieters tend to regain weight in the stomach or abdomen. Abdominal fat is highly associated with heart disease risk.*

Beyond physical risks, dieting is potentially harmful to one's psychological and emotional wellbeing. Possible outcomes from unsuccessful dieting attempts include:

- *Eating disorders.*
- *Increased feelings of anxiety.*
- *Reduced self-esteem, self-trust, and confidence.*

We were all born as natural intuitive eaters but as mentioned earlier, outside influences have impeded our natural ability to regulate intake. Researchers have examined the intake of children and determined that they are able to regulate their food intake depending on their body's need for growth and development. When examining only a meal at a time, the intake of children may look horrendous. But researchers found that children are able to make selections that balance out over time to meet nutrient and energy needs. [7] Pretty amazing! This provides evidence that we are (or at one time were able to) regulate food intake without diet rules to meet nutrient needs. The goal of intuitive eating is to recapture that ability.

I would like to briefly outline the 10 principles of intuitive eating. Over the course of this program, we will discuss each of the principles.

1. *Reject the Diet Mentality.*
2. *Honor Your Hunger.*
3. *Make Peace With Food.*
4. *Challenge the Food Police.*
5. *Feel Your Fullness.*
6. *Discover the Satisfaction Factor.*
7. *Cope With Your Emotions Without Using Food.*
8. *Respect Your Body.*
9. *Exercise- Feel the Difference.*
10. *Honor Your Health- Gentle Nutrition.*

Tribole and Resch define the intuitive eating process into five stages. Each of these stages will last different lengths of time for each individual. In the first stage, individuals accept that they are ready to lose the diet mentality and are aware that dieting does not work as an eating method.

In the second stage, the individual begins to make peace with food through unconditional permission to eat anything that sounds appetizing; there are no diet rules with the intent of eliminating the internal "good/bad" food list. In this stage there will likely be periods of overeating and under-eating, both of which are important to learn how to feel the body's internal cueing. In this second stage, the foods consumed are generally high calorie, high fat, high sugar foods. The body is craving these foods because they have been viewed as a sinful indulgence for so long. But not to worry, the eating pattern experienced during this phase will not last long-term! It is important during this phase that you continue to trust your body and follow internal cueing for when, what, and how much to eat.

In the third phase, individuals are able to begin eating based on hunger and satiety cues. At this point, food rules have been eliminated. The individual may still be choosing high calorie, high fat, high sugar foods but they are able to determine when they have had enough and stop instead of going into a binge.

In the fourth stage of intuitive eating, the individual has made peace with food. There are not diet rules and all foods are allowed equally. The individual often starts to choose "healthier" foods, but not out of obligation. They choose these foods because they feel better when eating healthier items.

And finally, the fifth stage of intuitive eating occurs when the individual is able to full rely on internal cues to eat food they desire.

Now would also be an important time to mention weight control in intuitive eating. Intuitive eating is not a weight loss program; but it helps weight to settle naturally. For some individuals, they may see slight weight loss and for others slight weight gain. Intuitive eating will make you feel better physically and emotionally and likely make you feel more energized. However, focusing on weight during this program will only hinder the experience and your ability to become an intuitive eater. Please ditch the scale.

Does anyone have any questions before we begin talking about the first topic of intuitive eating, Rejecting the Diet Mentality?

Allow time for questions if needed.

Topic: Reject the Diet Mentality (15 minutes)

As mentioned earlier, rejecting the diet mentality is the first step to becoming an intuitive eater. Let me read to you the description for this principle provided by Tribole and Resch: "Throw out the diet books and magazine articles that offer you false hope of losing weight quickly, easily, and permanently. Get angry at the lies that have led you to feel as if you were a failure every time a new diet stopped working and you gained back all of the weight. If you allow even one small hope to linger that a new and better diet might be lurking around the corner, it will prevent you from being free to rediscover intuitive eating."

Ask the group to discuss fears they have regarding letting go of the diet mentality. If they are not ready to offer discussion to the group, suggest the common fears that are described by Tribole and Resch.

- "If I stop dieting, I won't stop eating".
- "I don't know how to eat when I'm not dieting".
- "I will be out of control".

One of the largest challenges for people learning to eat intuitively is to stop internal diet talk. A few examples of diet talk include telling yourself not to eat something unless you plan to work out after; avoiding dessert because it has too many calories and you tell yourself it will make you fat; or repeating negative comments about your body such as my thighs are too big or my stomach is not flat. It is important to stop diet talk because it perpetuates the diet mentality and a continued diet mentality will lead to continued dieting behaviors and continue the cycle of dieting.

The cycle of dieting is quiet simple. [8] Let's walk through it and see if it is familiar to anyone.

1. *A person has a desire to be thin, lose weight, or somehow enhance their perceived personal appearance with regards to weight or physical standard.*
2. *This desire results in dieting of some form in attempt to reach this physical standard.*
3. *Dieting deprives the body of certain quantities of food or eliminates certain food groups all together. This leads to cravings for the banned foods because we all want what we can't have.*
4. *When exposed to the food item that was banned, the dieter will over-indulge and ultimately over eat.*
5. *Not only does this binge result in negative self-talk but also promotes weight gain. Any weight that had been lost by calorie depravation has likely been regained because of the binge or continuous acts of binging.*
6. *The person returns to step one: a desire to be thin.*

This cycle is extremely common in dieting and the reason diets do not work! Our bodies crave what is banned and this results in a binge on the restricted foods either during the diet or after the diet.

Ask the group if during dieting anyone has ever experienced this cycle or seen a friend/ family member experience this cycle.

Hopefully by now you are wondering how to break-free from the dieting mentality and start your process to become and intuitive eater. Let's walk through the four steps proposed by Tribole and Resch for rejecting the diet mentality.

Step 1: Recognize and acknowledge the damage that dieting causes. Earlier, we discussed the physiologic and psychological or emotional effects of dieting. When you come to terms that dieting is not a solution for weight management and it is actually hurting you more than helping, you will be taking the first step towards becoming an intuitive eater.

Step 2: Be aware of diet mentality traits and thinking. After completing step 1 and making a conscious decision to eliminate dieting, you must work to remove the dieting mentality from your thought process. Willpower is a trait that is usually presented in a positive context such as having "the willpower to get through a difficult situation". Willpower is also common in the dieting mentality, with phrases such as "having the willpower to pass up dessert". In the later context, willpower should not exist; forget willpower in relationship to eating. You do not have to have the willpower to skip meals, pass on desserts, or avoid a total food group. Eating should be about giving the body what it asks for, not suppressing desires for certain food items in the name of 'strong willpower'.

Similarly, eating should not require you to be obedient to a set of rules; forget obedience. You do not have to be told when to eat, how much to eat, or what to eat. Instead of the diet rules telling you these things, you should be making those decisions.

And finally, forget failure. Often dieters feel like they are constantly failing because they cannot adhere to the diet rules. You do not need to feel like a failure for eating a piece of cake and enjoying it!

Step 3: Get rid of the dieter's tools. You will rely on yourself for knowing how much to eat, when to eat, and what to eat. You do not need books, magazines, or a list of "eat this, not that". A good cleaning will be in order to clear your home of all the diet tools you used in the past. And as mentioned prior, this includes the scale!

Step 4: Be compassionate toward yourself. Just remember, you will stumble and the process is not always easy.

Dropping the rules of dieting is the first step to becoming an intuitive eater and making peace with food. Following these four steps will help to break the diet mentality. In the following

weeks, we will discuss the tools you will need to learn the skills of intuitive eating, but for now it is crucially important that you begin to loosen the diet mentality.

Let's sum up to main points of "Reject the Diet Mentality".

- *Dieting is a cycle that begins with a desire to be thin or lose weight and perpetuates when strict diet rules cannot be maintained long term.*
- *Tribole and Resch name four steps for rejecting the diet mentality:*
    - *Make a conscious decision to give up dieting.*
    - *Be aware of diet mentality traits and thinking (willpower, obedience, and failure).*
    - *Get rid of diet tools.*
    - *Be compassionate to yourself.*

Ask the group if there are any questions or thoughts they would like to share with the group.

Ask the group what specifically they could do during the next week to break their specific diet mentality. If no one feels comfortable sharing, prompt participants with suggestions based on the four steps described in the lesson (ie: get rid of diet books, write a list of perceived good/bad foods and symbolically rip it up, think about why they are making certain food selections, stop weighing self).

Introduction to Relaxation and Mindfulness (10 minutes)

Turn on relaxing music. Ask participants to take 3-4 minutes to journal on takeaway points from today's meeting and write 1-2 goals for the next week.

For the last 6-7 minutes of class, ask participants to close their eyes and clear their minds. Allow the music to play quietly in the background while participants sit quietly.

Session 2

Supplies

- "Hunger/Fullness Discovery Scale" copies
- Extra paper and pens for notes
- Music for relaxation

Session Goal: To instruct participants on the presence of negative internal thoughts that regulate food intake and help participants become aware of how to abolish these negative internal thoughts and eat based on internal hunger and fullness cueing.

Upon completion of this session, the participants will be able to:

- Describe how diet rules impact the body's natural ability to regulate food intake.
- Describe method for relearning subtle hunger and fullness cues using the Hunger/Fullness Discovery Scale.
- Describe reasons satiety following a meal or snack may last for a longer or shorter time.
- Identify "Food Police" thinking and become aware of the disguises of the "Food Police".
- Apply methods to challenge "Food Police" thinking.

Welcome & Group Reflection (10 minutes)

Welcome back everyone. You have all had a week to process the information about intuitive eating and hopefully have had the opportunity to try "Rejecting the Diet Mentality". Today we are going to review three more principles of intuitive eating, "Challenge the Food Police", "Honor Your Hunger", and "Feel Your Fullness".

Before we start in with the new topics, let's start this session out by sharing and reflecting on any challenges or successes you encountered over the past week. The other participants in the class may have experienced the same concerns as you or have advice on how to conquer the challenges you faced. Similarly, it is wonderful to be able to share successes with peers and offer support to someone else in a like situation. Intuitive eating is a process and this time is intended to share your journey with others who are setting out on the same path.

Ask the group to please start sharing experiences, questions, concerns, or victories from the week. If no one volunteers, prompt the participants by asking:

- Did anyone find they have a good/bad food list after talking last week? Anyone willing to give up the good/bad food list? If not, what are your hesitations?

- You may remember that diet talk is often one of the most difficult parts of the diet mentality to stop, can anyone share if they continue to have diet talk and how they are working to stop it?
- Has anyone identified "diet tools" in your household and either got rid of them or made a plan to get rid of these things?

Topic: Challenge the Food Police (12 minutes)

The feelings of guilt are commonly associated with eating foods that are on the "bad" list.[1]

Ask the group if they have ever felt guilty after eating certain food items. Try to probe the participants to share what types of thoughts they had after eating something on the "bad" list. Ask if they had any compensatory behaviors (ie: exercising, not eating the rest of the day) or if the guilt lead to an all out binge.

Did you know that research has found that feelings of guilt surrounding food choices do not result in healthier eating habit? In fact, people who reported more guilt when eating forbidden food actually had a more difficult time maintaining their weigh or losing weight.[1]

Tribole and Resch call internal negative talk about food "the Food Police". These are the negative thoughts that are on "patrol" after you eat something that is on the banned food list. Some common "Food Police" thoughts include:

- *Don't eat at night.*
- *Don't eat too many carbs because they are fattening.*
- *You didn't exercise today so you should skip dinner.*
- *You ate too much today.*

Tribole and Resch write the following about challenging the food police, "Scream a loud 'No' to thoughts in your head that declare you're 'good' for eating minimal calories or 'bad' because you ate a piece of chocolate cake. The Food Police monitor the unreasonable rules that dieting has created. The police station is housed deep in your psyche and its loudspeaker shouts negative barbs, hopeless phrases, and guilt-provoking indictments. Chasing the Food Police away is a critical step in returning to Intuitive Eating."

Media and advertising give ammunition to our Food Police with the words and slogans they use to sell their products. Ever heard of a food be advertised as "guilt-less" or what about a product be described as "sinful". These marketing words make the item appear either good or bad. Remember, food does not have to be divided into good and bad lists; food can just be food!

Ask the group to discuss the use of guilt in advertising. How does it make people feel when they eat something "guiltless"? Do these advertising keywords impact the foods they purchase?

The "Food Police" thought process starts at different times for all people. For some people, it may have developed at a young age when you were constantly told by well-meaning parents to not eat so much or to only eat certain foods. For others, the thoughts may not have developed until you were older and started to learn about dieting as a method to control weight. Either way, the "Food Police" thrive on diet rules and love to make you feel guilty when you break one of the rules. But, the good news is that the "Food Police" can be quieted and you can become a guilt-free eater!

The key to silencing the "Food Police" is positive self-talk. Many studies have demonstrated that a positive change in beliefs or thought processes can result in a positive change in actions and feelings.[2,3,4] In fact, an entire theory of therapy, called cognitive behavioral therapy, is based on the ideas of thought reformation and behaviors change. So, let's talk about how to change the negative "Food Police" thoughts into positive self-talk.

The first step is to notice the irrational statements that relate to eating, your body image, or your hunger and fullness. Your internal "Food Police" may have these statements carefully disguised, so close monitoring to your internal thoughts and perceptions surrounding eating are important.

As you start to challenge the "Food Police", it may be helpful to be aware of different disguises that the "Food Police" can hide under. Let's go through these disguises:

1. *Dichotomous Thinking, also called black-or-white thinking, provides only two possible outcomes. One of the outcomes is preferred and desired while the other leads to complete failure. To break free of dichotomous thinking, allow yourself to have restricted foods, challenge the guilt associated with breaking the rules, and rationalize your feelings of failure for breaking the diet with feelings of success for honoring your hunger.*

-Here is an example: At Joseph's office they were having a birthday celebration for his boss with cake in the break room. Joseph knows that cake is not in his diet plan but could not resist having a piece. After eating the cake, he feels like a failure and decides to eat three more pieces because he already messed up his diet plan for the day. Instead of overeating on the cake, Joseph could have eaten the one piece of cake and reassured himself that he enjoyed the one piece and he is glad he can celebrate with friends on their birthdays.

2. *Absolutist Thinking assumes that one behaviors will cause a chain reaction to an outcome automatically. The best way to abolish absolutist thinking is to watch out for "absolute" words such as: have to, should, must, need. When you start to hear these words rumble around in your self-talk, stop and think about whether the perceived outcome is really the only or best outcome available.*

-Here is an example: Cindy went out to breakfast with a friend. She planned to only eat only half of her order of pancakes but when they came she could not stop and ate the entire plate. Cindy feels that she <u>must</u> work out at the gym twice as long as usual to make up for overeating at breakfast. Cindy should identify the absolute word "must" and consider whether a punishment for eating all her breakfast is truly the best option.

3. *Catastrophic Thinking is an exaggerated way of thinking where the only positive outcome is either unobtainable or far from accurate. When suffering from catastrophic thinking, a person must diligently acknowledge these thoughts as unrealistic and challenge them with accurate information.*

-Here is an example: Renee feels that she will only be happy if she loses 15 pounds to reach her goal weight. In this situation, Renee must acknowledge that she can be happy at any weight and may review the things in her life that she is thankful for (ie: family, job, housing, etc.).

4. *Pessimistic Thinking causes people to see the worst possible outcome for a situation. When a person recognizes that they are thinking negatively, they should take a moment to reframe the thought into a positive light.*

-Here is an example: Benjamin has been working out at the gym five times per week and really enjoys exercise as a method to relieve stress. However, he is disappointed that he has not lost any weight since starting to exercise 3 months ago and is considering stopping the exercise regimen. Instead of being upset that he has not lost any weight, Benjamin should try to focus on the other positive benefits of exercise.

5. *Linear Thinking focuses on the end result rather than the process of getting to the end result. It is important that you try to focus on the entire process, rather than just obtaining the end result. Have you ever heard the saying, "enjoy the ride"?*

-Here is an example: Christian is working to become an intuitive eater. There are days when he overeats while in the process of honoring his hunger. Christian is trying not to feel discouraged when he overeats because he knows it is part of the entire journey to becoming an intuitive eater!

Have the participants break into groups of 3-4 people and discuss if they have experienced any of these "Food Police" statements. After a 3-5 minute discussion, come back together as a group and share what the small groups discussed.

Try to recognize these negative self-talk examples in your week. And when you do recognize negative self-talk, try to stop it and reframe your thoughts. After time, you will start to notice your "Food Police" thoughts are not as frequent or intrusive!

Before moving onto the next topic, let's sum up the main points from "Challenge the Food Police"

- *Guilt is commonly associated with eating, especially when we break the perceived diet rules.*
- *The "Food Police" are housed deep in our psyche and lead to negative self-talk regarding food, body image, and hunger or fullness.*
- *The "Food Police" are often disguised in five different ways. Can you name the five disguises?*
- *The best way to overcome the "Food Police" is to first identify the irrational thought and then replace it with positive self-talk.*

Ask the group if anyone has any questions before moving onto the next topic of discussion.

Topic: Honor Your Hunger (12 minutes)

Next, we will cover "Honor Your Hunger". Tribole and Resch describe honoring your hunger as follows: "Keep your body biologically fed with adequate energy and carbohydrates. Otherwise you can trigger a primal drive to overeat. Once you reach the moment of excessive hunger, all intentions of moderate, conscious eating are fleeting and irrelevant. Learning to honor this first biological signal sets the stage for rebuilding trust with yourself and food."

Dieting puts the body into a state of starvation and when the body is starving, it adapts to preserve itself. When starving (or dieting) the metabolism slows to conserve all calories that enter the system. This means a dieting person's metabolism is more efficient and needs fewer calories to sustain life's functions. Starvation also makes the mind think obsessively about food. This was demonstrated by the landmark semi-starvation study conducted by Ancel Keys during World War II.[5] A group of men were intentionally starved for six months, eating roughly half of their estimated calorie needs daily. The results of this study are incredibly similar to the effects of dieting.

- *Reduced metabolic rate.*
- *Increased food cravings and obsessive food thoughts.*
- *Binges on banned foods.*
- *Personality changes such as increased irritability, moodiness, and depression.*

Ask group if they have experienced any of these behavior changes while on a diet or after stopping a diet.

Thanks for sharing. Physically, our bodies need food and these types of behavior changes are evidence that the body is not getting enough energy from food. When the body is in a state of calorie deprivation, a string of hormones are released that not only make a person hungry, but also affect mood, physical energy, and sex drive. This is why low energy intake impacts the body not only physically but also psychologically.

In a recent study, psychological impacts of a non-diet approach program were compared to a conventional dieting program. The results showed participants who learned the non-diet approach had improved self-esteem ratings compared to those who followed the conventional diet. Even more, 100% of the non-diet approach participants reported their involvement in this program as the reason for the improved self-esteem. That is a pretty impressive result for non-diet approach's impact psychological well-being. [6] It also demonstrates how low calorie dieting can negatively impact one's psychological health.

Our bodies are designed to tell us when they need energy from food; that is why we get the feeling of hunger. Subtle feelings of hunger may include a slight hunger pang or stomach growling. As hunger progresses, you may feel light headed, have a headache, or get shaky. It is best to start noticing hunger when you have subtle feelings of hunger instead of waiting for your hunger signals to become more severe.

Unfortunately, diets tell us that we can't trust our bodies and we have to follow their rules instead. Has anyone ever heard the diet rule "don't eat after 6:00 pm"? Dieters may also eat based on what they have eaten previously in the day by asking "do I deserve to eat anymore today". Or they may eat only certain foods, such as fat-free or low-carb, or high-fiber.

When eating by diet rules, hunger gets ignored. And there are negative consequences to ignoring hunger signals. We have previously discussed the calorie-deprived binge. Another negative consequence of prolonged dieting is the lessened ability to feel subtle hunger and fullness cues and only the extreme feelings of hunger are experienced. This means a person is no longer able to tell when they are a little hungry. But not to worry, identifying those quieted hunger and satiety cues can be accomplished by becoming an intuitive eater and honoring your hunger.

Ask the participants to think about how they feel when they are hungry or full. Ask if they wait until they are ravenously hungry to eat or if they can detect subtle hunger cues? Ask about whether they are able to stop eating when they are comfortable full or if they find themselves constantly overeating at meals.

Next, let's talk about how you can learn to honor your hunger. The first step is to acknowledge that food will always be available when and if you need it. Like we discussed last week, you need to "rid yourself of the diet mentality" and the diet rules that say certain foods are off limits at certain times. Tribole and Resch give the example of a starving child. If you give this child a plate of cookies and tell him or her to eat just one, the child will likely eat the entire plate and lick the plate clean of crumbs. But, if that child knew the plate of cookies would always be around, they may choose to only have one or two with the understanding they can have more later. The same is true of adults who are free of the diet mentality; they know that food will always be around and there is no need to over-indulge when something tasty is present. In sum, make food accessible for you so you know you can eat when you're hungry.

You also need to start listening for your hunger and fullness cues; they may be silenced, but they are still present! In order to start hearing your hunger and fullness, we will be filling out a "hunger/fullness discovery scale" for the next couple of weeks. Before and after you eat, you will assess how hungry/full you feel, what you stomach feels like, and so on. The goal of the scale is to help you begin to re-identify those subtle hunger and fullness cues. We will be looking more closely at the "hunger/fullness discovery scale" later in this session.

Intuitive eating encourages people to eat based on hunger and fullness cues, not diet rules or external cues for eating. However, for chronic dieters "only eat when you're hungry" can easily become a diet rule. Be careful of slipping back into the diet mentality. There will be times when you eat for reasons other than hunger and that is perfectly normal and acceptable. Let's review some of these reasons:

- *Eating because something sounds good or because a certain event calls for it. Think about holidays or events with friends when there are food items present that are tradition or just are delicious. At that particular moment, you may not feel overly hungry, but enjoying these food items in moderation are an enjoyable part of a social gathering.*
- *You may also find yourself in situations where you have to plan ahead to avoid becoming ravenously hungry. Say you have a meeting scheduled over the lunch hour and you know you will not be able to take your usual lunch break at 11:30 am. It may be a better option to eat your lunch early, when you aren't hungry yet, instead of becoming overly hungry during the meeting.*

Before we move on to the next topic, let's briefly review the main ideas from this session "Honor your Hunger"

- *All people react to low-energy intake in similar ways, as demonstrated by Ancel Keys' study. Can anyone name some of the ways our bodies react?* (decreased metabolism, obsession with food, changes in mood, overeating)
- *After a prolonged period of ignoring subtle hunger and fullness cues, it becomes difficult to feel anything less than famished or gorged. Learning intuitive eating will help you to re-identify those quieted hunger and fullness cues.*
- *There are 3 main steps to honoring your hunger. First, getting rid of the diet mentality and making food available when you're hungry. Second, learn to identify hunger and fullness with the "hunger/fullness discovery scale". And third, not allowing yourself to fall back into the diet rule trap.*

Does anyone have any questions or comments before we move onto the next topic of the day, "Feel Your Fullness"?

Topic: Feel Your Fullness (12 minutes)

Similar to "honoring your hunger" is "feeling your fullness". Tribole and Resch write, "Listen for the body signals that tell you that you are no longer hungry. Observe the signs that show that you're comfortably full. Pause in the middle of eating to ask yourself how the food tastes and what your current hunger level is."

The first thing any chronic dieter must remember is food will always be available. If someone believed that at the end of a meal certain food items would be off limits, it is understandable

why they would overeat. They truly believe they may never eat this item again! But with intuitive eating, you are freed from this diet mentality and are reassured that all foods will be available when and if you desire them.

Ask participants to share their experience with overeating. Is anyone a member of the "clean you plate club"? Can anyone explain how they feel when they are comfortably full instead of stuffed?

A recent study found that women trained in a non-diet approach to health rated their desire to continue eating following a meal lower than women not trained in a non-diet approach to health. The researchers believed that these women were able to experience their fullness more accurately and stop eating when they had reached a satisfied level of fullness. [7] Learning to feel satisfied fullness is an important skill in becoming an intuitive eater. Similar to honoring your hunger, the use of the "hunger/fullness discovery scale" will be helpful to determine fullness after a meal. We will talk more about this later in the class.

Tribole and Resch suggest pausing in the middle of a meal to check in on your fullness. During meal time, it is easy to go into auto-pilot until the entire serving is gone. Set down your fork sporadically throughout the meal to determine where your fullness is ranked. Ask yourself if you are satisfied and if the food still tastes good. If you are not yet satisfied, continue to eat but when you have reached a comfortable satiety level, put down the fork!

There are times when a meal or snack will keep you satisfied for a long period of time. Other times, you will feel hungry quite quickly following the previous meal. There are several reasons that fullness may not last as long. First is an increased amount of physical activity. Increases in physical activity burns more energy, and more energy burned means you will need to eat more energy. You may notice that on days you exercise, you are a little hungrier than days when you are lounging around.

The food items you ate in the meal prior also may contribute to your fullness level. All food is made of three main macronutrients: protein, fat, and carbohydrates. Our bodies need all three macronutrients in the diet for different functions and to provide energy to body activities. Carbohydrates are the main source of energy in the body and are usually digested quite quickly so you may get hungry after eating a snack of only carbohydrates. Examples of carbohydrates are fruit, pretzels, and bread. Protein is used to build muscles, enzymes, and transporters in the body. Protein items are digested slower, so usually will keep you full over a longer time. Examples of protein include meats, eggs, and dairy products. Fat is also more slowly digested and will provide a longer period of satiety. Examples of fats are oils, nuts, and cheese. Meals and snacks that include protein, fat, and carbohydrates do tend to keep you feeling full for longest.

While exploring your unconditional permission to eat, you may occasionally overeat too. This will not last forever and with practice you will learn to stop eating when you are satisfied. But

remember, it does take a considerable amount of hyper-consciousness to your fullness level to learn what a satisfied fullness feels like for you. And this is achieved through monitoring with the "hunger/ fullness discovery scale". If you find that you continue to overeat even past the fullness point time and time again, you may be using food as a coping mechanism. We will talk more about this in the future in the section "Cope with Your Emotions Without Using Food".

As I mentioned earlier, we will be going over the "hunger/fullness discovery scale" later in this session. It is a good tool to use while getting reacquainted with your individual feelings of hunger and fullness.

Before we move onto the next section, let's review the main points of "Feel your Fullness"

- *The feeling of a satisfied fullness is individual and often needs to be rediscovered when people have chronically ate to the point of extreme fullness. This can be done with tools such as the "hunger/fullness discovery scale".*
- *Fullness lasts for different lengths of time. The amount of time someone feels full following a meal and snack depends on how much physical activity they have been performing and what types of foods they ate last.*

Ask participants if they have any questions or comments before we move onto the activity for the day.

Activity: The Hunger Discovery Scale Introduction (7 minutes)

Begin by passing out a scale to every participant.

As part of this program, it is encouraged for you to use this scale for the next two weeks to get in touch with your hunger and fullness feelings. For some people it may take more than two weeks and for others less than two weeks. At the bottom of the scale, you will see a number continuum from 0-10. Let's go through what the number on the continuum represents in terms of your hunger. The lower the numbers mean greater hunger. A zero represents extreme hunger that may include light headed feelings or shakiness. Between one and two represent ravenous feelings with a grumbling stomach and you may be feeling a bit irritable. A three indicates the times when the stomach rumbling really begins. You clearly know you are hungry. Between a three and five are the more subtle hunger feelings where maybe you start to get an urge to eat. Five is neutral, meaning you can't say you are either hungry or full. The six and seven range represents a satisfied feeling where hunger has been removed. As the scale increases beyond eight, fullness has reached beyond comfort and represents a stuffed or sick feeling from overeating.

With a scale such as this, it is important to remember that it is subjective. That means the real meanings of these numbers as determined by you! The goal of the scale is to help you get in touch with your ability to eat intuitively by feeling the hunger and fullness cues before and after meal times.

The scale is very easy to use! Record the time that you eat and a brief description of the food items. Before you eat, take a moment to assess where you are on the scale and record this number in the upper half of the box by using a check mark. After the meal, take another moment to assess your fullness and record with a check mark on the bottom half of the box. This process will help you become aware of what your hunger and fullness are before and after the meals. Often, we go into automatic mode when eating and finish everything on the plate without considering if it was too much for our hunger levels. You will likely start to notice trends or habits you have when it comes to eating.

Please try to fill out this scale for the next week and bring it back next week! Try to see if you notice any trends or habits in regards to your eating.

Reflection and Relaxation Training: (7 minutes)

Turn on relaxing music.

Ask participants to take 3-4 minutes to journal on takeaway points from today's meeting and write 1-2 goals for the next week.

For the last 3-4 minutes of class, ask participants to close their eyes and clear their minds. Allow the music to play quietly in the background while participants sit quietly.

Session 3

Supplies

- Food samples for taste testing activity
- "Food Sampling Evaluation Form" copies
- Extra paper and pens for notes
- Music for relaxation

Session Goal: To encourage participants to find enjoyment in all types of foods without guilt while eating to satisfy through sensory awareness.

Upon completion of this session, the participants will be able to:

- Describe the "what-the-hell effect" and how it relates to chronic dieting.
- Understand how unconditional permission to eat will help in ending the overeating cycle.
- Review and discuss common fears when starting intuitive eating.

Welcome & Group Reflection (10 minutes)

Welcome back everyone. You have all had a week to process the information about intuitive eating and hopefully have had the opportunity to try to use your hunger/fullness discovery scale to better understand your own hunger and fullness cues. Today we will be covering two more of the intuitive eating principles, "Make Peace with Food" and "Discover the Satisfaction Factor". Before we start in with the new topics, let's start this session by sharing and reflecting on any challenges or successes you encountered over the past week.

Ask the group to please start sharing experiences, questions, concerns, or victories from the week. If no one volunteers, prompt the participants by asking:

- Would anyone be willing to share whether they started using the hunger/fullness discovery scale? Have you noticed any patterns in your eating? Or have been able to pick up on more subtle hunger signals or fullness cues?
- We discussed how "eating only when hungry" can become a diet rule. In the past week, how have you battled your diet mentality to keep this concept from becoming a diet rule?
- After learning about the "food police" has anyone been more aware of their internal conversation regarding food? What types of diet rules have you come to believe and how are you overcoming these diet rules?

- Last week, we discussed several disguises for the food police (dichotomous thinking, absolutist thinking, catastrophic thinking, pessimistic thinking, and linear thinking). Does anyone find any of these categories of thoughts to be especially intrusive?

Topic: Make Peace with Food (15 minutes)

Tribole and Resch say, "Call a truce, stop the food fight! Give yourself unconditional permission to eat. If you tell yourself that you can't or shouldn't have a particular food, it can lead to intense feelings of deprivation that build into uncontrollable cravings and often, binging. When you finally "give in" to your forbidden foods, eating will be experienced with such intensity, it usually results in Last Supper overeating and overwhelming guilt."

Has anyone ever heard of the what-the-hell effect? This was described by Janet Polivy, Ph.D, and C. Peter Herman, Ph.D. from the University of Toronto.[1] The effect is noticed when chronic dieters break a cardinal rule. Maybe a dieter took a bite of a rich dessert they promised they would not try or chose the cheeseburger at dinner instead of the baked chicken. In response to the rule breech, the dieter loses all restraint and massively overeats.

A recent study illustrated the what-the-hell effect. In the study, restrained eaters (ie: dieters) who felt they over-ate on a provided meal then went on to eat the most cookies following the meal. The researchers conclude that those "dieters" felt they blew their diet so continued to overeat on the unlimited supply of cookies following the meal.[2]

Ask the group if anyone has ever experienced the what-the-hell effect. How did it make them feel afterwards? What happened when they realized they had overeaten?

In a previous discussion, we reviewed the cycle of dieting, and how restricting food sets a person up for a potential session of overeating. But even before food restriction starts, dieters may overeat in anticipation of food restriction. We have briefly touched on the "last supper phenomenon" in previous discussions. As dieters prepare for the next diet, they often overeat because they believe that all "sinful" foods will be off limits once the diet begins.

What is the best solution for overeating in response to anticipated or actual food depravation? How about stopping food deprivation, make peace with food and end the war! Give yourself unconditional permission to eat the foods you enjoy in the quantity that makes you feel satisfied. There are no good or bad foods; specifically, no food will make you lose or gain weight alone.

You must also stop those food police thoughts that tell you, "if you eat this then you will have to…" The whole premise of intuitive eating is that if you allow yourself to eat the foods you want, when you want, and how much you want, then the desire to overeat will be eliminated. You will have the peace of mind knowing that you can eat the foods you enjoy now, stop when you are satisfied, and eat them again in the future. When this is truly achieved, a banana will be equal to a piece of cheesecake. You will know you can have either whenever you would like! After time,

you may find that some of the foods you craved and restricted for so long are not as appealing as you once thought.

Ask the group what types of fears they have while learning about intuitive eating? Does anyone fear they will not be able to stop eating? Or that they will never again make healthful choices when eating?

Learning to become an intuitive eater can be a very scary process for someone who has always monitored their food intake, but the rewards and benefits are well worth it! Let's go through some of the fears that are common when starting intuitive eating and while making peace with food.

1. *I won't stop eating my favorite foods. As we discussed earlier, knowing that food is no longer forbidden will help to lessen the desire to keep eating. By allowing yourself to try food and eat all foods, you will come to realize that you can and will stop eating your favorite foods. But remember, it is a process and there will be mess ups along the way! Do not expect 100% success at intuitive eating immediately.*
2. *I've tried it before. Many people say they have gotten rid of forbidden foods before. But during that time, were there still diet thoughts telling you not to eat more. Tribole and Resch call this pseudo-permission because many people say they allowed themselves to eat forbidden foods but were still actively engaged in the diet thought process.*
3. *Self-fulfilling prophecy. Sometimes people expect to overeat on a certain food item and become a self-fulfilling prophecy when their expectation is met. Tribole and Resch give the example of a young woman who believed that she would always binge when she ate products made with white flour. After many exposures and positive eating experiences with white flour, she rarely binges on these items anymore.*
4. *I won't eat healthfully. In the beginning of learning intuitive eating, it is common for people to choose their forbidden foods more often. But, as you progress in the process, your eating habits will even out to include foods that fuel your body best.*
5. *Lack of self-trust. It is common for people to feel that the intuitive eating process has worked for others, but it couldn't possibly work for them. By practicing and allowing yourself to eat the foods you want without diet rules, you will become an intuitive eater. Remember, it is a process and each positive eating experience will help you become closer to regaining the ability to eat intuitively.*

Before we move onto the next topic for today, let's review the main points of "Make Peace with Food"

- *The what-the-hell effect describes how dieters will dramatically overeat when they feel their diet plan has been blown. It may only be one bite of a dessert or an entire bag of chips. But once the dieters feel they have disobeyed one of their diet rules, they say "what-the-hell" and continue to eat.*

- *Dieters are primed to overeat either with anticipated food restriction or after a period of dieting/ energy depravation. The best way to stop this cycle is to give yourself unconditional permission to eat the foods you enjoy in the quantity that makes you feel satisfied.*
- *Many people have fears when starting out in intuitive eating. We talked about five common fears and it is likely that there are more.*

Ask the participants if anyone would like to add a comment or ask a question to the group before moving on.

Before truly being able to proceed with making peace with food, it is important that you are honoring your hunger. Remember, you can learn to honor your hunger by using the hunger/fullness discovery scale you were given last week. As we discussed prior, a ravenously hungry person will overeat. Learning to make peace with food will be much more productive if you are not in a ravenously hungry state. Also, while making peace with foods continue to honor your hunger and fullness.

Tribole and Resch encourage the intuitive eater students to make a list of all the foods that you desire but have restricted or limited. At your own pace, obtain a food on that list and try it out. After eating that food, take some time to reflect on how it tasted, felt in your mouth, made your body feel, etc. Continue to purchase this item if it is something that you found enjoyable. Keep it available for you to have as often as you would like while still honoring your hunger and fullness. Then, continue working through your list of restricted foods at your own pace!

Ask the group if anyone feels ready to start making peace with foods. Does anyone know what food they would like to start with? What type of feelings do they have towards the making peace with food process?

Later in this session, we will experiment with taste, texture, and mouth feel. But now we are going to move onto the next topic of the day.

Topic: Discover the Satisfaction Factor (15 minutes)

Biologically, eating covers the basic need for energy to sustain life, but eating is also an enjoyable process. Tribole and Resch talk about the satisfaction factor in this way, "The Japanese have the wisdom to promote pleasure as one of their goals of healthy living. In our fury to be thin and healthy, we overlook one of the most basic gifts of existence – the pleasure and satisfaction that can be found in the eating experience. When you eat what you really want, in an environment that is inviting, the pleasure you derive will be a powerful force in helping your feel satisfied and content. By providing this experience for yourself, you will find that it takes much less food to decide you've had enough."

When dieting, satisfaction at meals is not important. Diets want food selections to be based on rules, not simply what sounds good. Because we have become so fixated on following external eating rules, we usually do not allow ourselves to savor foods we are craving. That is, until those cravings are unbearable and results in a massive binge.

Ask the participants to think about a time when they wanted a forbidden food. Maybe it was a chocolate bar, French fries, or a piece of pie. Ask the participants to share how they reacted to being instructed by diet rules to avoid this food. What did they eat instead? How much of that item did they eat? Did anyone find that they overate on safe foods?

When someone is craving a sweet and creamy piece of milk chocolate, 100 tangy and crisp apples will not fill the desire. Often, people will overeat on safe foods in order to avoid the forbidden food they are craving. What if we learned to give into our cravings and learn to discover satisfaction in eating without overeating? That is the goal of discovering your satisfaction factor! Let's go through the five steps to discovering your satisfaction factor:

Step 1: Before you dive into an unsatisfying meal, take a second to think about what you would really like to eat. Then, allow yourself to eat that food item!

Step 2: Take the time to use your senses to enjoy your foods. This includes taste, texture, smell, appearance, and temperature. Often, when people allow themselves to eat their forbidden foods, they shovel it in so quickly they do not even get a chance to really experience the nuances of the food item. After taking time to really experience the taste, texture, smell, appearance, and temperature of the forbidden food item, you may find that this item is not as desirable as you once thought.

Step 3: The setting of a meal will can impact how satisfied you feel at its completion. So, make your dining environment as enjoyable as possible. Try to eat without distractions. Turn off the TV, set down that report from work and concentrate on the food you are eating instead of mindlessly eating. Also, try to sit at a table and relax for the duration of your meal. Even if this only 15 minutes, sit down and devote that time to eating.

Step 4: Love what you eat. Resch and Tribole offer the motto, "If you don't love it, don't eat it and if you love it, savor it." After you complete step 2, you should be aware of how your food tastes in your mouth and if it is enjoyable. If you find the meal isn't as satisfying as you hoped, stop! You did not sign a contract to finish the food on your plate!

Step 5: After eating a portion of your meal, take a break. Ask yourself if the food still tastes good to you. Check in on your fullness level. Will you have to eat the entire portion to be satisfied or do you think you could stop part way through and have enough? Just remember, that if you do decide to stop eating now, you can have this food item again in the future when you are feeling hungry again.

Ask the group if they have ever mindlessly ate a portion of something larger than expected. Does anyone know an eating habit they have to change now (ie: eating in front of TV or eating in the car)?

Before moving onto the next topic, let's sum up the main points from "Discover the Satisfaction Factor"

- *Diets do not emphasize satisfaction and instead encourage eating by external diet rules.*
- *Often, people will overeat on safe foods in order to avoid the forbidden food they are craving.*
- *There are 5 steps to "Discover the Satisfaction Factor". Can you name them?*
    - Take a moment to think about what you want to eat.
    - Use your sense while eating to enjoy taste, smell, and texture.
    - Make your dining environment enjoyable.
    - If you don't love it, don't eat it.
    - Check in with yourself during the meal to see if the food still tastes good.

Ask the group if there are any questions or comments before moving onto the activity.

Activity: Taste Testing (15 minutes)

When was the last time you actually tasted your food? Many people think they taste food every time they eat. But most people do not notice the subtle flavors or textures of the foods they eat. We are going to take some time today to truly taste our foods. We have several samples of food items available that we will sample while taking note of the specifics of how that food tastes and feels in your mouth.

Handout a "Food Sampling Evaluation Form" to all participants and explain the directions at the top of the sheet. Ask if anyone has any questions. Also verify that there are not any food allergies that could be problematic for the foods provided.

Guide the participants through sampling the five food items. Make sure that the participants are eating the food slowly and chewing well. Probe them to take note of subtle food qualities by asking about the mouth feel of the food, what the texture is like, how it feels in their mouth, what specific tastes and smells are present, and if they noticed anything different from when they usually eat this food item.

Reflection and Relaxation Training (5 minutes)

Turn on relaxing music.

Ask participants to take 3-4 minutes to journal on takeaway points from today's meeting and write 1-2 goals for the next week.

For the last 2-3 minutes of class, ask participants to close their eyes and clear their minds. Allow the music to play quietly in the background while participants sit quietly.

Session 4

Supplies

- "Reframing Negative Statements Form" copies
- Extra paper and pens for notes
- Music for relaxation

Session Goal: To help participants identify their emotions that may be contributing to non-nutritive eating and to increase respect for their body through loving acknowledgement of all it does for them.

Upon completion of this session, the participants will be able to:

- Describe the continuum of emotional eating and when emotional eating is harmful.
- State several emotional triggers for overeating.
- Identify difference between hunger and emotional eating.
- Describe Set-Point Theory.
- Identify strategies to respect body without harsh criticism.

Welcome & Group Reflection (10 minutes)

Welcome back everyone. I hope you all had a chance to start working on making peace with food and identifying your satisfaction factor. Like the weeks prior, we will start our time together with a brief reflection and discussion time. After our group discussion, we will dive into our next topics, "Cope with Your Emotions without Using Food" and "Respect Your Body".

Ask the group to please start sharing experiences, questions, concerns, or victories from the week. If no one volunteers, prompt the participants by asking:

- Did anyone experiment with "making peace with food" this week? What were your successes? What were your challenges? Did anyone make a list of their forbidden foods and try one of these foods?
- Last week, we discussed the fears associated with "making peace with food". Did anyone experience one of the fears as they started allowing themselves access to their forbidden foods? How did you handle these fears and what was the outcome?
- Did anyone practice their ability to detect satisfaction during meals or snacks? Did food taste different after a while? Was anyone able to stop eating earlier because they recognized their satisfaction level or when food stopped tasting as good?

- Would anyone be willing to share how the hunger/fullness discovery scale has been going? Have you noticed any patterns in your eating? Or have been able to pick up on more subtle hunger signals or fullness cues?

Topic: Cope with Your Emotions without Using Food (15 minutes)

Eating for reasons other than hunger is extremely common and can at times be a normal part of the eating process. Other times, it can be a very unhealthy mechanism to cover or avoid difficult situations or feelings. Tribole and Resch write, "Find ways to comfort, nurture, distract, and resolve your issues without using food. Anxiety, loneliness, boredom, and anger are emotions we all experience throughout life. Each has its own trigger, and each has its own appeasement. Food won't fix any of these feelings. It may numb you into a food hangover. But food won't solve the problem. If anything, eating for an emotional hunger will only make you feel worse in the long run. You'll ultimately have to deal with the source of the emotion, as well as the discomfort of overeating."

If you think you don't eat for emotional reasons, just think about the advertising food companies use to sell their products. Most advertisements play into your emotions, even if you do not realize they are doing it! Think about the ads that show the perfect family dinner gathered around a bucket of fried chicken, mashed potatoes, and biscuits. In the ad, everyone is so happy and enjoying each other's company. The result of this advertisement: eating a meal of fried chicken, mashed potatoes, and biscuits will bring the family closer together for an enjoyable family dinner.

Another common area of unrecognized emotional eating is celebratory events or special rewards for a job well done. Think about the most common way you or your family celebrates a happy event. It probably involves some type of food. Just one example is birthdays. A birthday celebration would not be complete without a birthday cake, right? What about celebrating a retirement or a new job? Most often these celebrations center around food as well. Now, there is nothing wrong with having birthday cake on your birthday or celebrating a happy occasion with food, but it is just an example of how often food and eating is involved in emotional parts of our lives.

Ask the group if they consider these activities to be emotional eating? Can anyone think of other examples of emotional eating that are common in everyday life?

Tribole and Resch suggest a continuum of emotional eating. On the mildest end of the continuum is sensory gratification, or eating for pleasure. Sensory gratification is common and in most cases not harmful. In fact, eating is supposed to be a satisfying activity, as we discussed last week in "discover the satisfaction factor". It is perfectly normal to search for satisfaction in eating and to truly enjoy the foods you are eating.

Next on the continuum of emotional eating is eating for comfort. Again, comfort eating can be a normal and enjoyable part of the eating process if closely monitored. People tend to search for comfort in food during times of stress or hardship. For example, when someone is feeling sick they may desire homemade chicken noodle soup because this is what their mother would prepare for them when they were younger. It is completely normal to search for comfort in food at times as long as you continue to honor your fullness level and do not let guilt enter your thoughts after eating your comfort foods. However, this can become a problem if food is your only coping mechanism in times of discomfort or sadness.

Distraction is the next level of emotional eating on the continuum. People will use food as a way to distract themselves from something that needs to be dealt with or emotionally processed. Tribole and Resch give the example of a teenager mindlessly eating in front of the TV to distract themselves from the upcoming boredom of having to complete their homework. Using food to delay or avoid a less then desirable situation will only provide temporary relief.

Further along on the continuum of emotional eating is sedation, or using food as a numbing agent. Using food in this manner is especially harmful because it suppresses your natural intuitive eating abilities to sense hunger and fullness. In addition, it does not allow you to handle your emotions so the issue at hand will never be resolved. People who have used food to sedate their feelings report that their overeating sent them into a "food coma" or a "food hangover". Most often people who eat this way do not enjoy food or even recognize what their food tastes like because they are only searching for the numbing effect they receive from eating copious amounts of food.

The final spot on the emotional eating continuum is punishment, which is the most severe and most dangerous. Eating for punishment results in reduced self-esteem, self-hatred, and extreme overeating with little to no enjoyment in food or eating.

Ask the participants if anyone feels comfortable sharing their experience with emotional eating and if anyone feels that they land on the emotional eating continuum.

Most people will land on the emotional eating continuum at some point in their lives. As we talked about earlier, emotions and food are closely related in our culture and likely to influence one another. Let's take a few moments to talk about some emotional triggers that may lead to overeating. Being aware of the emotions that can result in eating may help you to stop the binge before it happens.

Ask the participants to name any emotions that cause them to eat without hunger? Has anyone tried to challenge these emotions in the past? What was the outcome of challenging the emotions without using food?

Boredom is an obvious trigger to overeating. At some point in our lives, all of us have picked up a bag of chips or a box of cookies to help fight boredom.

Previously, we talked about how common it is to use food as a reward or for celebration. How often do you allow yourself a "treat" to celebrate a success or for completing a task? Although it is not harmful to have celebratory food occasionally, it is also good idea to "treat" yourself with other rewards too. Maybe you could get a massage, or take a night off from housework. Try to reward yourself with things other than food.

Even love has become intertwined with food. Going back to the use of advertising to hit on emotions, think about all the commercials you see around Valentine's Day that show lovers buying chocolate or going out for an expensive dinner. We use food frequently to demonstrate love for someone.

Many people cite stress as a reason for overeating. Interestingly, the natural response to stress is a suppressed appetite. Adrenaline is released during a period of stressful events. Adrenaline prepares the person from the fight or flight response by releasing blood sugar from body stores and slowing digestion. Still, food has become a common coping mechanism for stressful situations. Additionally, stress releases another hormone called cortisol, which overtime leads to fat build up in the abdominal area. Recent studies have shown that abdominal fat is linked to a number of health concerns including increased cholesterol levels and increased chance of developing diabetes.[1] Using food to cope with stress is neither natural nor healthy as it can ultimately lead to further health problems down the road.

These listed emotional reasons for overeating are just a few of many. You may be experiencing other emotional responses that result in overeating. But when you are faced with a situation where you are tempted to eat in response to emotions, take time to think it through and decide if eating will really help you feel better. Here are a few steps to help you walk through the decision if your desire to eat is based on emotions.

First, ask yourself if you are actually hungry. If you are feeling biologically hungry, find something to eat that will be satisfying and enjoyable for you. Make sure you are honoring your hunger and feeling your fullness!

If you asked yourself if you were biologically hungry and the answer is that you are not currently feeling hungry, ask yourself what you are emotionally feeling. This may seem simple, but sorting out emotional feelings can sometimes be challenging because you have spent a lot of time suppressing them with ineffective coping mechanisms such as eating. You may find it helpful to write down your feelings or talk to a friend about what has been going on in your life. Seeking out professional help may also be beneficial if you are unable to sort out your emotions on your own.

After you have taken some time to reflect on your feelings, consider what you need to deal with your current emotional status. And when you have decided what you need to do with your current emotions, ask for help if necessary.

Let's go through an example of these steps: Pretend you are a working mother and feel pulled between managing your house work with your professional work. You feel unable to meet the demands of both home and work and you have been using food to manage your emotions. After you have assessed your current emotional status and decided you are not biologically hungry, consider what would help you manage your home and professional work load. You decide it may be helpful for your children to start taking on more household chores and you ask your children to complete a series of chores each week. This is only an example, but it illustrates how to work through the steps to determine how to identify the underlying emotions and come to a solution that will help manage the stressful circumstance.

Working through emotional baggage can be a daunting task and often something that people have never done. If this process becomes overwhelming for you, I encourage you to seek professional help from a trained counselor. There are many available practitioners or phone-lines available throughout the country with individuals who can help you sort through emotional and psychological pain.

Before moving onto the next topic, let's sum up the main points from "Cope with Your Emotions without Using Food"

- *Emotional eating is very common and can be viewed on a continuum from a harmless sensory gratification to a dangerous numbing agent or punishment.*
- *There are many emotional triggers for overeating includes: boredom, celebration, love, stress, and more.*
- *Before eating, take a second to decide if you are really hungry or have an emotional need. Occasionally professional help is needed to sort through difficult emotional issues.*

Ask the group if anyone has questions or comments before moving onto the next section of the class.

Topic: Respect Your Body (15 minutes)

The human body is incredibly amazing. But still, many men and women harshly criticize their bodies for not fitting into their body ideal. Tribole and Resch write, "Accept your genetic blueprint. Just as a person with a shoe size eight would not expect to realistically squeeze into a size six, it is equally futile (and uncomfortable) to have the same expectation about body size. But mostly, respect your body, so you can feel better about who you are. It's hard to reject the diet mentality if you are unrealistic and overly critical about your body shape."

Ask the group if anyone would be willing to share their body image thoughts? Is anyone satisfied with the appearance of their body? Are there any features that you really like (even eyes, smile, freckles)?

Images of thin or muscular men and women are broadcast all over our worlds. From advertisers to the entertainment industry, slim is in. But the fact is that this body ideal is not realistic, obtainable, or healthy for most of the population. So, why do we continue to beat ourselves up about the inability to achieve it? This principle of intuitive eating will help you to overcome the negative body talk and hopefully help you to respect and love your body for what it does for you, rather than how it looks.

Every person has a unique set of genetics that maps out every detail of their body, including body frame. People have varying sizes of body frame and individual body weights where their body functions best. In the book "Health at Every Size", author Karen Bacon discusses the idea of set-point theory. She encourages readers to think of weight as the temperature of a room. The furnace in the house will work to ensure that the house stays heated to that chosen temperature, regardless of the outdoor conditions. Similarly, your body works to maintain weight as best as possible at its unique "set point". This is the weight where the body will function the best.

Still, through dieting and calorie restriction, weight loss below one's set point can be achieved. But often this weight loss is short lived and ultimately results in weight gain greater than what was initially lost. Looking at how our bodies were designed to fight off famine, weight gain beyond the set point makes sense. Dieting is a form a fasting or famine, so when the body is exposed to these conditions it turns into survival mode. This means metabolism is slowed and energy utilization becomes more efficient as to not waste any calories. When food is reintroduced (after the diet has ended), the body starts to prepare for the possibility of another famine by storing extra energy in the form of extra body fat. Hence, the predisposition to gain weight back following a calorie restricted diet.

In intuitive eating, weight loss is not the main goal. In fact, some intuitive eaters may find that they do not lose any weight and some may actually gain weight to return to their set point weight. But that is ok! If you are eating less than 500 calories to maintain your "desired" body weight, it is probably not a healthy weight for you. By freeing yourself of the diet mentality and honoring hunger and fullness cues, you can find your set point weight and allow your body to function at the weight it was designed to be at.

Learning to respect your body is important in letting go of the unrealistic body ideals. So, you may be asking how do I respect my body? Tribole and Resch write "respecting your body means treating it with dignity and meeting its basic needs". Let's go through several examples of how you can start respecting your body.

1. Allowing yourself to dress in clothing that makes you feel comfortable and express who you are as a person. Many women purchase clothing for the size they want to be or hold off on buying new outfits until they have lost a certain amount of weight. Tribole and Resch say to "dress for the here-and-now body" instead of waiting for those 10 pounds to come off. You will

likely feel more confident about yourself at any shape if you are wearing clothing that you like and feel comfortable in.

2. Comparing your body and weight to others is a dangerous game that only results in feelings of inadequacy and failure. Remember, we all have a unique genetic code that makes our bodies function best a different weight. Comparing your body to any other body will continue the vicious cycle of body dissatisfaction and depressed self-esteem.

3. Weight is only a number that does not represent your self-worth or ability to be loved. Throw away your scale and stop stressing about the number it is showing! Stop body checking and comparing yourself to all the others in the room and instead focus on traits you know are special about you.

4. Negative body talk does nothing to boost your self-esteem. When you are constantly telling yourself that you look gross or are fat it is no surprise that they feel awful about your body. Try replacing these negative body statements with more positive ones. Here are some examples from Tribole and Resch:

- *"I can't stand my cellulite-dimpled legs" replace with "I'm lucky I have legs that can move my body"*
- *"My thighs are too big" replace with "I like my muscular calves"*

After some time of repeating positive statements to yourself, you will start to notice a difference in the way you think about your body.

Ask the group to try brainstorming some negative self-talk statements they have used in the past. If the group does not feel comfortable sharing aloud, allow some time for participants to write down their thoughts on paper.

Before moving onto the next topic, let's sum up the main points from "Respect Your Body"

- *The slim body ideal is everywhere. However, this ideal is not possible or healthy for much of the population.*
- *Set point theory describes how your body has a weight where it functions best and that your body tries to keep you at that weight.*
- *Learn how to respect your body for all it does for you. Stop comparing your body to others, stop worrying about weight (it's just a number), and stop negative body talk!*

Does anyone have any questions or comments before moving onto the activity for today?

Activity: Statement Reframing (10 minutes)

Negative self-talk happens to everyone. We will take this time to become prepared for a fight with negative self-talk. Tribole and Resch talked about reframing negative statements about yourself into positive ones.

Handout out the "Reframing Negative Statements Form".

On this sheet you will write down some negative statements you tell yourself and a reframed statement that can replace the negative one. In the coming week, you can practice replacing the negative statement with the reframed one and see how your attitude improves. Remember, your body is more than appearance; it gets you from place to place and allows you to do the things you enjoy!

Allow some time for participants to fill out this form.

Reflection and Relaxation Training (10 minutes)

Turn on relaxing music.

Ask participants to take 3-4 minutes to journal on takeaway points from today's meeting and write 1-2 goals for the next week.

For the last 6-7 minutes of class, ask participants to close their eyes and clear their minds. Allow the music to play quietly in the background while participants sit quietly.

Session 5

Supplies

- Intuitive Eating Scale (IES-2) copies
- Intuitive Eating Scale (IES-2) from first class
- Extra paper and pens for notes
- Music for relaxation

Session Goal: To enable participants to use physical activity and good nutrition in their daily routine to honor their health instead of punish their bodies.

Upon completion of this session, participants will be able to:

- Name the benefits of exercise.
- Describe the four "exercise mind-traps" that prevent people from exercising.
- Describe the French Paradox and how it related to intuitive eating.
- Explain that a single day of eating will not impact overall health.
- Describe "play foods".

Welcome & Group Reflection (10 minutes)

Welcome back everyone. Last week we covered the Intuitive Eating Principles "Respect Your Body" and "Cope with Your Emotions without Using Food". Hopefully over the past week, you have had a chance to practice these two principles as well as continue to work on developing previous intuitive eating principles. Like weeks prior, let's start this session by discussing any victories, concerns, or questions from last week.

Ask the group to please start sharing experiences, questions, concerns, or victories from the week. If no one volunteers, prompt the participants by asking:

- Last week we talked about the emotional eating continuum that ranges from sensory gratification to punishment. As we mentioned last week, almost everyone eats for emotional reasons at some point in their lives. Over the past week, has anyone noticed any specific examples of when they were eating for emotional reasons? Did you change the way you ate because you were aware your urge to eat was for emotional reasons?
- Negative self-talk is hurtful and harmful but also very common. Did anyone notice their negative self-talk over the past week? How did you overcome the negative statements that you were telling yourself?

- After a week of processing the information on unrealistic body ideals, has anyone changed the way they view their body? How has that changed the way you feel from day to day?

Topic: Exercise – Feel the Difference (15 minutes)

For a lot of people, exercise is not an enjoyable activity. Either it is a dreaded time of movement in the day or it is done because of an obsessive fear of gaining weight. But in actuality, exercise can be a delightful process for stress relief and mood boosting. Tribole and Resch say, "Forget militant exercise. Just get active and feel the difference. Shift your focus to how it feels to move your body, rather than the calorie-burning effect of exercise. If you focus on how you feel from working out, such as energized, it can make the difference between rolling out of bed for a brisk morning walk or hitting the snooze alarm. If when you wake up, your only goal is to lose weight, it's usually not a motivating factor in that moment of time."

Ask the participants what motivates them to exercise and what is their goal with exercise? How do they feel before a workout? How do they feel after completing a workout?

Thank you everyone for sharing. Many people loathe exercising and physical activity and cite numerous reasons for their distaste. Tribole and Resch name two main reasons they have found for people to hate exercise. First, many people start diets at the same time they start an exercise regimen. Their diets call for a reduction in calorie intake to a point where there is simply not enough energy to support the increase in physical activity. Carbohydrates, found in grains, potatoes, fruit, and pasta are the main source of energy for your muscles. Anytime someone follows a diet that restricts carbohydrates, the body has to scramble to find another energy source. Typically, that alternative energy source is muscle. With exercise, people are often looking to gain muscle, so it is very counterproductive to burn muscle during a workout.

The second reason why many people dislike exercise is they try to push too hard from the beginning, which can result in injury or exhaustion from too high of expectations. People start hard with a goal to fit into a certain dress or reach a certain weight. They go all out for a time but are unable to maintain the frequency or intensity. Tribole and Resch call this "crash exercising" because this type of exercise typically does not last very long.

But when exercise is done in a healthy and self-appreciating way, it is extremely beneficial for physical and mental health. Before anyone can reap the benefits of a healthy exercise plan, they need to learn how to enjoy it!

Movement and exercise have a myriad of health benefits beyond weight loss. Additional benefits include increased bone strength, decreased blood pressure, improved blood lipid levels, and a reduction in possibility of developing chronic disease. Focusing on these types of health benefits will likely result in an improved attitude towards exercising when compared to only focusing on

weight loss. Also take note of how you feel after exercising. Specifically, take note of your stress level, energy level, attitude, and sleep pattern. Often all these areas improve with regular physical activity. Even if weight does not budge, you will still be receiving all these health and wellness benefits! And knowing your exercise routine is producing positive results will be more motivating than hoping a few pounds slip off. Throw away the scale; weight is only a number!

Ask the group what is their biggest obstacle to exercise? What prevents them from including physical activity into their daily lives?

Tribole and Resch talk about four different "exercise mind traps" that prevent people from exercising. The first is the "it's not worth it" trap. Many people think that if they can't get in a full work out, it is not worth the effort to get in any activity. Tribole and Resch debunk this myth by calculating that if a person takes the stairs twice daily for five days per week, this will add up to 43 hours of physical activity in one year. This proves that a little effort can equal big results!

The second trap is "couch-potato denial", or when someone's busy life is confused for being active. Think of a person who is running around all day between work, appointments, and a small amount of leisure time in the evening. Yes, this individual is very busy, but all their activity did not include any physical movement. Their work involves sitting behind a desk pushing papers, they drive their car between appointments, and their evening activity is reading or watching TV. They may not fit the definition of a couch potato, but their physical activity level is the same as one.

The third trap is the "no time to spare" mentality. Most people jam pack their days with many activities; there is no denying that we live in a culture where busy schedules are the norm. Unfortunately, with our busy lives, physical exercise is often kicked to the curb as the lowest priority on our to-do list. But, physical activity is one of the best stress relievers and is known to improve mood and energy levels. Also, we know that physical activity reduces the risk of the development of chronic disease. Finding a way to make exercise a priority in our busy lifestyles is crucially important not only for your present health, but also for future health. You could try scheduling an "appointment" with yourself daily and honor this appointment as you would with anyone else.

The final trap that Tribole and Resch talk about is the "if I don't sweat it doesn't count" trap. Any activity counts, not just high intensity cardio workouts such as running, biking, or swimming. Taking a walk with friends is a good way to catch up with someone you don't often see and is a fun way to get active! You may also try breaking up activity throughout the day. You could spend 15 minutes at lunch walking and another 15 minutes when you get home. If you can't imagine yourself going to the gym for a vigorous workout, find a way to incorporate purposeful activity into your day, such as gardening, yard work, or house work. You may even enjoy dancing or yoga as alternatives to more typical exercise regimens. Try to find some kind of movement that is fun and enjoyable to you!

Before moving onto the next topic, let's sum up the main points from "Exercise—Feel the Difference"

- *Many people hate exercise because either they aren't eating enough to support the activity or they start too hard and get burned out.*
- *There are many benefits to physical activity including increased bone strength, decreased blood pressure and blood lipids, improved mood and sleep, and better managed stress.*
- *There are four main "mind-traps" that hold people back from exercising. Can you name them?*
    - "it's not worth it"—small changes add up!
    - "couch potato denial"—busy day does not equal active lifestyle!
    - "no time to spare"—make time for your health; schedule a daily exercise appointment!
    - "don't sweat, it doesn't count"—all activity counts!

Does anyone have any questions or comments before moving onto the next topic?

Topic: Honor Your Health with Gentle Nutrition (15 minutes)

Throughout the entire Intuitive Eating process, the emphasis has been on regaining a healthy relationship with food and eating based on hunger and fullness cues instead of diet rules. In this section, we are going to cover nutrition. Many new intuitive eaters feel panicked when learning that nutrition is the final topic of the learning experience. As Tribole and Resch say, everyone worries that "the food party is over". The nutrition section of the intuitive eating learning process is placed at the end for a reason. The discussion of nutrition in intuitive eating should be reserved for after a healthy relationship with food has been re-established. A discussion on nutrition prior to this could result in a new set of diet rules instead of peaceful eating.

In terms of healthful eating, Tribole and Resch say, "Make food choices that honor your health and taste buds while making you feel well. Remember that you don't have to eat perfectly to be healthy. You will not suddenly get a nutrient deficiency or gain weight for one snack, one meal, or one day of eating. It's what you eat consistently over time that matters—progress not perfection is what counts."

The media portrays food as either a killer or healer, fattening or slimming, but never as just food. Think of all the crazy diet ideas that people have tried: raspberry ketones, green coffee bean extract, and the list continues. What if after the searching for the perfect way to eat, we found that there was not a magic solution to our eating concerns? What if there was no perfect way to eat?

The French are known for their fantastically delicious cuisine including creamy sauces and rich desserts. However, they are not known for their expanding waist lines. Americans (who are searching for the magic diet solution) are the ones with the obesity crisis, not the French who regularly indulge in full fat, rich, delicious foods. This perplexity is called the French paradox. How could their seemingly "unhealthy" diet result in a lower incidence of obesity, lower incidence of health disease, and increased life expectancy than that diet obsessed Americans?

The answer: the French enjoy their food and pay more attention to their food's tastes, textures, and the body's physiologic response. This ultimately results in lower calorie intake even though the foods are considerably higher in fat and calories.[1]

Intuitive eating has hopefully taught you to be more aware of your food when eating, which includes the taste, textures, and satisfaction factor. During the "Reject the Diet Mentality" and "Make Peace with Food" processes, you were asked to experiment with food: to eat the foods that appealed to you and forget the diet rules. During this time, you were told that you will likely over eat and feel physically uncomfortable. We also debunked the popular myth that you would never eat healthfully again. After time, your body craves food that makes it feel good and these are naturally nutritious foods.

Ask the group if they experienced any changes in their food desires since learning about intuitive eating. Is the chocolate sundae less appealing if they can have it every day? Does anyone actually desire "healthy" foods? How does eating make your body feel after becoming an intuitive eater compared to before learning about intuitive eating?

So, now that you are beginning to trust your body to make choices for health let's review three nutrition considerations: taste, quantity, and quality.

Thinking back to your dieting days, remember the horribly bland food combinations that you choked down in the name of health. You may remember the fat-free or diet products that only somewhat resembled the real full-fat product you craved. The taste of foods you eat is very important. With intuitive eating, you have learned to taste the foods you desire and enjoy them. Tribole and Resch call this gentle nutrition; honoring health without guilt and enjoying the foods you eat.

Quantity is a huge issue in our "super-sized" culture. Now that you are an intuitive eater, quantity concerns can fade into the background. You are attuned to your hunger and fullness cues and know you can stop eating when full and completely satisfied.

The quality and types of food you consume is the last consideration for health. By quality of foods, we mean the type of nutrients you obtain from the foods eaten. It is very important to remember that the nutrition recommendations presented are not intended to be diet rules. So, here is the disclaimer: Take this information about quality of different food and incorporate it into your lifestyle how you wish while honoring your hunger and satiety cues.

Fruits and vegetables are loaded with fiber, vitamins, minerals, and antioxidants as well as phytochemicals. There are many ways to prepare fruits and vegetables that are very appealing. You can mix up fruit smoothies, add veggies to lasagna, cook Mexican dishes with bell peppers, or top your cereal with fruit. Whatever you do to incorporate fruits and veggies, make it appealing and desirable to your taste buds.

Protein, fat, and carbohydrates are components of the diet that provide nutrition for our bodies. Protein maintains muscle and provides the building blocks for many enzymes and structures in the body. Protein is found in meats, poultry, fish, eggs, and dairy products. There are also vegetarian sources of protein such as beans, nuts, and soy. Fats are necessary for the absorption of several vitamins and also provide a satisfying taste to food. Examples of quality dietary fats include nuts, avocados, seeds, olive oil, and canola oil.

But remember, there are no forbidden foods! And also remember that some days you may not eat any vegetables. That's ok because your nutrition balances out over time. A single day of eating will not impact your health. There will be days where you crave nutritionally void foods (aka: junk food), and that's ok too. Tribole and Resch call these nutritionally void foods "play foods" instead of "junk food". Including "play foods" is not only a healthy part of eating, it is also important. Listening to your body cues and cravings and allowing all foods to be part of your diet will prevent overeating episodes.

Enjoy all foods, listen to your body cues, and live free of food-related guilt! You are an intuitive eater!

Before moving onto the activity, let's sum up the main points from "Honor Your Health with Gentle Nutrition"

- *The media portrays food as either a killer or healer, fattening or slimming, but never as just food.*
- *The French enjoy high fat, rich foods but interestingly have a lower rate of obesity and heart disease than American; this is called the French Paradox.*
- *There are no forbidden foods and a single day of eating will not impact overall health.*
- *Play foods are those that do not add a lot of nutritional value but are an enjoyable part of the diet.*

Does anyone have any questions or comments before moving onto the activity for today?

Activity: Intuitive Eating Scale Post Test (15 minutes)

At the start of the class you may remember taking the Intuitive Eating Scale pre-test. Today, you will be retaking the same test to assess how your view of intuitive eating has changed during the duration of this course. Please answer all questions honestly. After everyone has finished, you

will have an opportunity to compare your pre-test scores with your post-test scores to see if you have made any changes.

Provide each participant with one IES-2 and a pencil if they do not have one.

After everyone has finished the test, return the pre-tests to the participants. Give the participants a few minutes to review their pre- and post- test scores. Then proceed to the following discussion questions:

Was anyone surprised by their pre- and post- test scores? Would anyone like to share how their results changed over the past 5 weeks?

Today is the last class, how do you think your eating habits and the way you view food have changed over the duration of this course? Do you think you will maintain any changes long-term? What tools will you need to maintain your positive changes?

What feedback do you have for this course? What was helpful? Did you enjoy the format with activities and relaxation training? Any suggestions for improvement?

Reflection and Relaxation Training (5 minutes)

Turn on relaxing music.

Ask participants to take 3-4 minutes to journal on takeaway points from today's meeting and write any long-term goals.

For the last 2-3 minutes of class, ask participants to close their eyes and clear their minds. Allow the music to play quietly in the background while participants sit quietly.

Appendix A: Intuitive Eating Pre & Post Test (IES-2)

Directions for Participants: For each item please check the answer that best characterizes your attitudes or behaviors.

Question	1 = strongly disagree	2 = disagree	3 = neutral	4 = agree	5 = strongly agree	Score
1. I try to avoid certain foods high in fat, carbohydrates, or calories.						*
2. I find myself eating when I'm feeling emotional (e.g., anxious, depressed, sad), even when I'm not physically hungry.						*
3. If I am craving a certain food, I allow myself to have it.						
4. I get mad at myself for eating something unhealthy.						*
5. I find myself eating when I am lonely, even when I'm not physically hungry.						*
6. I trust my body to tell me when to eat.						
7. I trust my body to tell me what to eat.						
8. I trust my body to tell me how much to eat.						
9. I have forbidden foods that I don't allow myself to eat.						*
10. I use food to help me sooth my negative emotions.						*
11. I find myself eating when I am stressed out, even when I'm not physically hungry.						*
12. I am able to cope with my negative emotions (e.g., anxiety, sadness) without turning to food for comfort.						
13. When I am bored, I do NOT eat just for something to do.						

14. When I am lonely, I do NOT turn to food for comfort.						
15. I find other ways to cope with stress and anxiety than by eating.						
16. I allow myself to eat what foods I desire at the moment.						
17. I do NOT follow eating rules or dieting plans that dictate what, when, and/or how much to eat.						
18. Most of the time, I desire to eat nutritious foods.						
19. I mostly eat foods that make my body perform efficiently (well).						
20. I mostly eat foods that give my body energy and stamina.						
21. I rely on my hunger signals to tell me when to eat.						
22. I rely on my fullness (satiety) signals to tell me when to stop eating.						
23. I trust my body to tell me when to stop eating.						

Average Score: _____

*Indicates Reverse Score Question

Appendix B: Scoring Procedure for Intuitive Eating Pre & Post Test (IES-2)

Facilitator Instructions: The class facilitator will guide participants through scoring their pre and post test by walking participants through the following 2 step procedure:

Question	1 = strongly disagree	2 = disagree	3 = neutral	4 = agree	5 = strongly agree	Score
1. I try to avoid certain foods high in fat, carbohydrates, or calories.						*

1. Reverse the score on items 1, 2, 4, 5, 9, 10, and 11. For example if you scored a "2" on question 1, this will equal "4". These questions are negative responses so their answer must be inverted so all responses are in positives. This ensures accuracy in the IES-2.

Quick Reference for scoring reverse items on IES-2:

Initial Score	Reversed Score Value
1	5
2	4
3	3
4	2
5	1

2. Total IES-2 scale score: Add together all items and divide by 23 to create an average score.

Appendix C: Hunger/Fullness Discovery Scale

Time	**Food**	**Hunger/ Fullness Scale**										
		0	1	2	3	4	5	6	7	8	9	10

Appendix D: Taste Testing Activity

Facilitator's Instructions: Provide samples to all participants as listed below. Verify if there are any food allergies before providing samples. When sampling ask participants to chew slowly and allow the food to hold in the mouth for a few seconds before swallowing. Ask participants to take special note of taste, mouth feel, texture, and smell.

After completion, review the following discussion questions with participants:

- Did anyone notice any qualities of food that they would like to share?
- What was it like to take time to eat the food slowly? Did you find it difficult to slow down when eating?
- How do you think your eating habits would be different if you always noticed the subtle qualities of foods?
- What changes in your lifestyle would you have to make in order to eat at a slower pace?

Appendix E: Food Sampling Evaluation Form

Food Item	Flavor	Mouth Feel	Texture	Smell
Twix Candy Bar				
Potato Chips				
Grapes				
Almonds				

Cherry Tomatoes				

Appendix F: Reframing Negative Statements Activity

Facilitator's Instructions: Ask participants to write down the negative statements they tell themselves that are related to your body image or eating habits. In the "Reframed Body Statement" column, ask participants how they could change these negative statements into positive statements. See example on form.

After giving all participants 5 minutes to complete this activity independently, review the following discussion questions with the group:

- How difficult was it to reframe the negative statements you often tell yourself about your body and food habits?
- What would you tell a friend who was harshly criticizing their body or eating habits? How would you help them to respect their body and their body's needs to eat?
- Using these reframed negative statements instead of the negative self-talk will help you respect your body more fully. What else can you do to continue to respect your body?

Appendix G: Reframing Negative Statements Form

Negative Body or Food Statement	Reframed Body or Food Statement
1. "I feel like such a pig for eating that fatty dessert"	*1. That dessert was very rich and very filling. I enjoyed eating it; I am full and done with the meal.*
2.	
3.	

Title	**Artist**
Watermark	Enya
Out of Time	Liz Story
Zen Garden	Shastro & Nadama
The Enchantment	David Lanz
Reflection	George Winston
Clouds on Mountain	Dean Evenson
4.	
5.	

Appendix H: Relaxation Music Suggestions

Citations

Session 1

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Chapter 5: Discussion

Introduction

The development of this intuitive eating curriculum was inspired by the current lack of successful approaches for weight management. Intuitive eating is gaining popularity as a non-diet approach to health that helps participants to rebuild a healthy relationship with food. Numerous universities and county health departments have started offering intuitive eating or mindfulness seminars and classes (Harvard University Health Services, 2015; Utah County Health Department, 2012; University of Missouri, n.d.), most of which are based on the "Intuitive Eating: A Revolutionary Program that Works" (Tribole & Resch, 2012). However, to the best of my knowledge, there is not a standardized curriculum that can be obtained and used for instruction of these types of courses.

The intuitive eating curriculum that was created is intended to be used as a standardized instructional manual for healthcare professionals interested in teaching the principles of intuitive eating. The course work is based on the book "Intuitive Eating: A Revolutionary Program That Works" by Elise Resch and Evelyn Tribole (2012).

Strengths of the Curriculum

The intuitive eating curriculum has several strengths, which will make it a valuable contribution to the intuitive eating and non-diet movement. First, the curriculum was designed to incorporate evidenced-based techniques that have had positive results in other non-diet education programs. For example, this curriculum included a sensory based component, which was shown in a randomized controlled trial to improve eating

related behaviors and attitudes (Gravel, Deslauriers, Watiez, Dumont, Bouchard, & Provencher, 2014).

This curriculum was reviewed by Christina Johnson, a registered dietitian with a master's degree in education, who was able to provide valuable advice on structure and education techniques within the context of nutrition-based education. This insight from an education professional provided important insight into effective education techniques.

The curriculum was designed with the goal of being user-friendly for the class facilitator. The curriculum provides a script for the facilitator and discussion questions to promote conversation among the participants. All worksheets and activity descriptions are provided in the appendix of the curriculum. The class preparation for the course facilitator will be very minimal because of the comprehensiveness of the curriculum.

With the realization that most people are very busy, it was also important that this intuitive eating class demanded a minimal time commitment. The class is designed for five weekly 60 minute sessions. Because of this short time commitment, good retention and attendance is expected for this course.

Weaknesses of the Curriculum

The primary weakness of this intuitive eating curriculum is that it has not been trialed. A future pilot of this program is necessary to determine any needed adjustments to format or content.

Another weakness to this curriculum is the limited target population. The studies that were reviewed and incorporated into this curriculum involved adult women, most of whom were overweight but otherwise healthy. None of the studies included in the literature review examined eating disorders, adolescents, or children and the impact of

intuitive eating training on these populations. Therefore, this curriculum is not designed for people in these categories. If the intention would be to expand this curriculum to populations outside the current intended audience, a full review of literature on that population must be completed to ensure that the intuitive eating information is presented in an appropriate and sensitive manner.

Challenges

The intention with this intuitive eating curriculum was to make a course that could be used for any organization, clinical or community-based, health department, or health care provider that was interested in offering a course on intuitive eating. Several attempts were made to reach IntuitiveEating.org for their support, but no response was obtained. There are tentative plans for this intuitive eating program to be trialed at the St. Clare Healthy Living Center in Baraboo, Wisconsin.

Future Recommendations

In the future, a trial of this intuitive eating curriculum could be completed to determine the effectiveness in changing troubled eating behaviors. It would also be interesting to measure participant satisfaction for this intuitive eating program verses a traditional weight loss program. Future work on this intuitive eating program may also include the development of a participant workbook that includes a place for course notes and course worksheets. This participant workbook would help participants remember what they learned in their intuitive eating course.

The intuitive eating curriculum has two objectives that are not adequately measured by the IES-2 pre- and post-test. In the future, a validated questionnaire that assesses how this intuitive eating program impacts participation and enjoyment in

meaningful physical activity would help to fully assess whether the objective, "Encourage physical activity and body movement that is enjoyable" was met. Additionally, future work on this curriculum may include a follow-up time period that assesses whether participants in this program had long term elimination of chronic dieting behaviors. This follow-up data would help to assess whether the objective, "Reduce the number of chronic dieters" was met.

Future work may also include alterations to this intuitive eating curriculum to reach other demographics and populations. In eating disorder patients, the innate ability to eat based on hunger and fullness cues are silenced. Asking these patients to eat based on hunger and fullness cues too early in their treatment will result confusion and non-beneficial outcomes. As their treatment progresses and they begin to reach a healthier state, the eating disorder patient can start to work on trusting their bodies to dictate hunger and fullness. The intuitive eating curriculum must be revised in such a way to encompass the slow transition from healthy weight gain to appropriate weight maintenance (Tribole & Resch, 2012).

For young children, the goal of an intuitive eating program would be to sustain their innate ability to normalize food intake instead of relearning how to regulate hunger and satiety. A complete different curriculum would need to be designed for young children. As children grow older, the focus would have to include both the child and parents with appropriate changes to the curriculum layout and wording to communicate effectively to the family setting (Tribole & Resch, 2012).

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