Implementation of an Intuitive Eating Inspired Meal Planning Education Program in a Private Practice Setting

Hailey E. Bryski

Major Project/Report submitted to the faculty of the Virginia Polytechnic Institute and State University in partial fulfillment of the requirements for the degree of:

Online Master of Agricultural and Life Sciences

In Applied Nutrition and Physical Activity

Stella L. Volpe, PhD, RDN, ACSM-CEP, FACSM,

Department of Human Nutrition, Foods, and Exercise

Emily Myers, PhD, RDN,

Department of Human Nutrition, Foods, and Exercise

Carol Papillon, MPH, RD,

Department of Human Nutrition, Foods, and Exercise

August 1, 2024

Abstract

It is common for adults to struggle with eating healthfully whether it is due to busy schedules, budget constraints, or lack of nutrition knowledge. Diet quality is extremely important because it plays a key role in disease prevention and overall quality of life. Clients of a registered dietitian's private practice located in Blacksburg, Virginia have vocalized a desire to participate in healthier eating habits but feel unprepared to achieve their goals. A needs assessment distributed to individuals in the New River Valley area revealed that their most common barriers to eating healthfully included: lack of time, budget constraints, and absence of easy-to-prepare recipes that meet taste preferences. To address these needs, a live webinar educational program on meal planning and preparation was developed. The pilot program taught meal planning strategies through the lens of intuitive eating, specifically the principles of the satisfaction factor, body respect, and gentle nutrition. The program also covered topics such as food values, component cooking, the Rule of Three, and creating a supportive kitchen environment. Four out of the 11 program participants completed a post-session evaluation survey using a five-point Likert scale. Respondents felt that the topics covered were relevant to their concerns and they expressed an interest in learning more about intuitive eating. Lower scores illustrated that they did not feel as if they obtained a better understanding of certain concepts including component cooking and intuitive eating. Results revealed preliminary efficacy in the program's outline and foundation, and indications for revisions to meet the program's goals more effectively. Future program initiatives should elaborate on introduced topics to better educate the target population.

Keywords: Component Cooking, Diet Quality, Intuitive Eating, Meal Planning, The Rule of Three

Table of Contents

Acknowledgments

First, I would like to take this opportunity to thank my family and the Virginia Tech Internship in Nutrition and Dietetics team and interns for providing me with unwavering support and guidance throughout my journey to becoming a registered dietitian.

To my community nutrition preceptor Beth Richey, thank you for dedicating your time to mentor me and assist me in completing this project at your private practice.

Dr. Stella Volpe, thank you for taking the time out of your busy schedule to help me and act as my committee chair for this project.

Dr. Emily Myers, thank you so much for your consistent advice, encouragement and understanding throughout this experience.

Carol Papillon, thank you for being an outstanding program director throughout my time in the Online Master of Agricultural and Life Sciences (OMALS) program.

Introduction

Background & Setting

Food is responsible for fueling the body and supporting daily physiologic needs and functions. The three macronutrients, carbohydrates, proteins, and lipids, provide the energy and materials necessary for building biological structures required for daily cellular processes (Cena & Calder, 2020; Rattan & Kaur, 2022). The scientific relationship between nutrition and health illustrates that diet quality plays a key role in disease prevention and overall quality of life (Zeratsky et al., 2018). Beyond its functionality, food is also a source of pleasure for many, and the act of eating is complex and multifaceted. An individual typically makes over 200 decisions around food daily with taste, cost, convenience, nutrition, and weight concerns being common influences on consumption (de Ridder et al., 2017; Glanz et al., 1998). Eating plays an important role in culture, social scenarios, and personal satisfaction and enjoyment, which further complicates nutrition and eating behaviors (de Ridder et al., 2017). Therefore, it is common for adults to struggle with their eating habits due to common barriers such as time and budget constraints, lack of knowledge and low cooking confidence (Zeratsky et al., 2018).

In the United States, approximately three quarters of the population eat less than the recommended daily amounts of integral food groups including whole grains, fruits, vegetables, and dairy (Zeratsky et al., 2018). Simultaneously, Americans exceed recommendations for added sugars, sodium, and saturated and trans fats. This “Western style diet” is associated with increased risk for developing a variety of chronic diseases including cardiovascular disease, diabetes mellitus, and cancer (Rakhra et al., 2020). More often than not, body weight is faulted for the development of such health conditions, and dieting to achieve weight loss is recommended to improve one’s health (Bacon et al., 2005). Although higher body weights have

been associated with comorbidities, most attempts to lose body weight are met with an inability to maintain weight loss over the long term, a preoccupation with food and body image, reduced self-esteem, development of disordered eating, weight discrimination and stigmatization, distraction from other personal goals around health and wider health determinants, and weight cycling (Bacon & Aphramor, 2011). As a result, non-diet approaches have grown in popularity and emphasize improving health-related behaviors rather than meeting weight-centered goals. For example, intuitive eating is an effective weight-neutral approach that focuses on creating a healthy relationship with food, mind, and body (Tribole & Resch, 2012).

The amount of time spent cooking meals daily decreased from 1.63 hours per day in 1965 to 1966 to 58 minutes per day in 2006 to 2007 (Ducrot et al., 2017). As of 2022, the average amount of time spent preparing food and drink among individuals 15 years of age and older in the United States was 53 minutes per day (U.S. Bureau of Labor Statistics, 2024). Researchers have illustrated that meals eaten outside of the home are associated with poor diet quality, while home-prepared meals are associated with a variety of benefits including greater intake of fruits, vegetables, folate, vitamin A, and fiber, as well as better adherence to the recommended Dietary Guidelines for Americans (Ducrot et al., 2017; United States Department of Agriculture, 2020). This relationship exemplifies that the promotion of home cooking may help improve diet quality.

As of August 2021, rates of chronic diseases in the New River Valley community are variably higher compared to the state of Virginia, with Floyd, Giles, Pulaski, and Wythe counties possessing the highest rates. The diagnosis of coronary heart disease in adults within these counties is 8.8% or greater compared to 6.4% in the state of Virginia. Hypertension diagnoses are also high; 25% of adults in Radford City and 38.8% of adults in Pulaski county have been diagnosed with hypertension, whereas 34.4% of adults in the state of Virginia have been

diagnosed with hypertension (Carilion Clinic, 2021; Virginia Department of Health, 2021). Carilion Clinic's 2021 New River Valley Community Health Assessment reported that 45% of respondents consume fruits and vegetables less than once daily. The current Dietary Guidelines for Americans recommend that individuals consume at least two cups of fruit and two and a half cups of vegetables per day (Carilion Clinic, 2021; United States Department of Agriculture, 2020). Increasing the frequency of home cooking using the technique of meal planning would be a feasible approach to improving diet quality, and therefore, health outcomes.

A registered dietitian's private practice in Blacksburg, Virginia provides clients with individual nutrition counseling and education. Services include weight inclusive medical nutrition therapy and intuitive eating counseling sessions to help individuals discover self- trust, flexibility, and enjoyment with both food and physical activity. The philosophy behind the practice involves removing morality from foods, providing weight inclusive and client-centered care, recognizing that eating is complex, finding satisfaction in choices, and cultivating respect for one's current body. These values align with the 10-principle framework of intuitive eating which is a feasible alternative to traditional dieting.

Statement of Problem

Clients who participate in individual nutrition counseling at a private practice in Blacksburg, Virginia reported that they were interested in improving overall diet quality, but struggled with engaging in the behaviors that support this goal.

Significance of the Problem

Currently, there are no research studies around interventions that incorporate the principles of intuitive eating into a meal planning and preparation program. This project provided preliminary information for further research and development of nutrition education programs

that aim to improve diet quality. In the future, registered dietitians may utilize this information to inform their approach to nutrition counseling in the private practice setting.

Purpose of Project

The purpose of this project was to develop a meal planning and preparation education program for a local registered dietitian's private practice in the New River Valley area to address the nutrition-related needs of the community.

The main questions the research aimed to answer were:

- Is a live webinar nutrition education program a feasible approach to change intentions around meal planning and preparation practices?
- Is a live webinar nutrition education program a feasible approach to change individuals' understanding of intuitive eating and improve nutrition knowledge?

Project Objectives

Process Objective:

- The pilot program, The Art of Meal Planning and Prep: A Simplified Approach to Satisfying Meals, will be piloted on Tuesday, June 11th, 2024, at 12:00 noon to a group of adults, with a minimum of ten participants.

Outcome Objective:

- Upon completion of the pilot program on June 11th, 2024, 100% of participants will plan to implement the taught meal planning techniques in the future.

Definition of Keywords/Terms

- Intuitive Eating: A weight-inclusive evidence-based eating framework developed by two registered dietitians, Evelyn Tribole and Elyse Resch (1995). It includes ten principles

that cultivate attunement to physical sensations and removes disruptors and obstacles to achieving said attunement (Tribole, 2019).

- Meal Planning: Planning or deciding ahead the foods that will be eaten for the next few days (Ducrot et al., 2017).
- Diet Quality: "A diversified, balanced and healthy diet, which provides energy and all essential nutrients for growth and a healthy and active life" (*Diet Quality*, 2016).
- Component Cooking: A flexible meal planning and preparation technique that focuses on several base ingredients or components that can be incorporated into a variety of meal combinations.
- The Rule of Three: A meal plan method designed by registered dietitian Marcia Herrin for eating disorder treatment. It focuses on regularity of eating balanced meals and recommends individuals eat three meals and up to three snacks per day, include three to four food groups per meal and one to two per snack, and eat every three to four hours while awake (Herrin, 2024; Michel, 2023).

Review of the Literature

The purpose of the following review of literature is to summarize the body of scientific evidence as it relates to the efficacy of intuitive eating and meal planning based interventions.

Intuitive Eating

The concept of intuitive eating was developed by registered dietitians, Evelyn Tribole and Elyse Resch (1995). It offers a promising alternative to traditional dieting paradigms because there is substantial evidence that a focus on weight loss as a primary outcome is associated with diminished health (Tylka et al., 2014). It is defined as a "self-care eating framework, which integrates instinct, emotion, and rational thought." It includes 10 evidence-based weight-

inclusive principles that are rooted in the attunement to bodily cues, unconditional permission to eat, and the rejection of diet culture and the diet mentality (See Table 1).

Intuitive eating encourages individuals to develop a compassionate and holistic relationship with food (Tribole & Resch, 2012). Theoretical models, such as the restraint theory, hypothesize that dietary restraint reduces sensitivity to internal cues while increasing reliance on external cues and motivators, which is associated with weight gain and eating in the absence of hunger, emotional eating, and overeating (Denny et al., 2013; Hazzard et al., 2020). By avoiding restriction and prioritizing internal signals of hunger, fullness, and satisfaction, intuitive eating empowers individuals to make food choices that honor their physical and emotional well-being, rather than adhering to external rules or societal norms (Tribole & Resch, 2012).

Although evaluations of intervention-based studies on intuitive eating are still in their early stages, preliminary research has yielded promising results. Current research of approximately 216 studies has revealed that there are positive relationships between intuitive eating and physiological outcomes related to health and an inverse relationship between intuitive eating and poor psychological health (Babbott et al., 2022; Tribole, 2024). Among the many cross-sectional studies, intuitive eating has been steadily associated with higher levels of positive body image facets, self-esteem, social support, and overall quality of life and lower levels of psychological distress, body image concerns, and restrictive and disordered eating (Linardon et al., 2021). A pilot trial examined the preliminary efficacy of an intuitive eating intervention aimed to reduce disordered eating behaviors in college women. Both the group and guided self-help modality were acceptable and led to medium to large reductions in disordered eating behaviors, body dissatisfaction, weight-bias internalization, and improvements in body appreciation, intuitive eating, and satisfaction with life from pre- to post-session, which were

maintained at follow-up. The use of self-paced intuitive eating workbooks in the guided self-help group modality was modeled after prior successful body image related interventions that utilized workbooks in determining the efficacy of their interventions, which could be a useful tool in program development (Burnette & Mazzeo, 2020).

Several online interventions have been implemented as a more accessible approach to teach intuitive eating. Module-based programs for women such as “everyBody fit”, “Mind, Body, Food”, and a Chinese-based intervention aimed to promote intuitive eating practices as a means to combat the negative effects of diet culture such as yo-yo dieting, body dissatisfaction, and eating disorder development (Beintner et al., 2019; Boucher et al., 2016; Cheng et al., 2022). Evaluations of these programs have illustrated improvements in eating disorder behaviors including binge eating, restrictive eating, and body weight and shape concerns, and increased in intuitive eating practices, psychological flexibility, life satisfaction, self-esteem, general mental health, and short-term fruit and vegetable intake (Beintner et al., 2019; Boucher et al., 2016; Cheng et al., 2022). These results suggest that web-based interventions may be a useful tool having a greater reach when teaching intuitive eating.

Meal Planning

Meal planning, the act of planning in advance the foods that will be eaten over a short period of time, is a common tool utilized in nutrition counseling to help manage chronic conditions and dietary restraints. In the last decade, it has gained popularity as a time- and cost-effective method to improve dietary intake, facilitate family meals, and reduce stress around and during mealtimes (Abbot & Byrd-Bredbenner, 2010; Fernandez et al., 2020). Ducrot et al. (2017) revealed that adults who engaged in meal planning practices were more likely to have a healthier diet overall, including more variety in foods consumed as well as greater adherence to nutritional

guidelines. Meal planning in this population was also linked to lower levels of obesity in both men and women and overweight in women alone (Ducrot et al., 2017). Similarly, Laska et al. (2014) conducted a study among college students in the Minnesota metropolitan area and discovered that eating behaviors most associated with a healthy diet were related to home cooking and preparation, and routine consumption of meals. These data suggest that there is a prospective interest in developing resources that promote meal planning to improve diet quality and attitudes towards food. This could be developed to help address commonly identified barriers to meal preparation including time constraints and limited cooking skills.

Several meal planning programs and interventions have been implemented with the overarching goal of improving dietary behaviors. A mobile application-based intervention intended for parents and caregivers of young children acted as a tool to assist in meal planning and preparation with features based on important skills such as creating shopping lists, meal planning, and providing recipes (Garvin et al., 2019). The researchers reported that survey participants exhibited positive attitudes around self-efficacy and perceptions of the mobile application, as well as motivation to engage in the targeted health behaviors, which included cooking, use of recipes, shopping list development, and meal planning (Garvin et al., 2019). Zeratsky et al. (2018) developed a menu planning course at a workplace wellness center that aimed to identify and reduce barriers to healthy eating, improve eating habits, self-confidence, and nutrition-related knowledge in the population. Program participants displayed an increase in confidence, frequency of preparing healthy meals, fruit and vegetable intake, and reduction in perceived barriers and an improvement in nutritional knowledge upon completing the six-week course (Zeratsky et al., 2018). Mendez et al. (2021) conducted a group-based intervention program focused on practicing cooking and meal preparation skills. This experiential learning

approach led to improvements in cooking attitudes and cooking self-efficacy along with an increase in the proportion of overall home cooked meal consumption and home cooked dinner consumption (Mendez et al., 2021).

Summary

Overall, this literature review has been an all-encompassing evaluation into intuitive eating and meal planning interventions among a variety of populations. The studies included have yielded positive results regarding improving disordered eating behaviors, diet quality, relationships with the body, and maintaining long term lifestyle and behavior changes. There are no current research studies where interventions were conducted to incorporate the principles of intuitive eating into a meal planning and preparation program. It is also important to note that there is a lack of literature on key program concepts, such as component cooking and the Rule of Three. Although these approaches have not been identified in published research, many registered dietitians have utilized their methods when providing nutrition counseling and education. Further research is needed in this area; however, studies on the individual concepts of intuitive eating and meal planning show preliminary promising results.

Project Overview

Targeted Population

The target population for this project included current and potential clients identified as working adults, adults with families, and graduate students in the New River Valley area. Clients within these particular groups have reported the most barriers to improving overall diet quality.

Program Methodology & Design

Theoretical Framework

This research utilized the theoretical framework of intuitive eating to help inform the design of the live webinar nutrition education program. The weight-inclusive nature of the approach is aligned with the Health at Every Size® (HAES®) model which helps support individuals in achieving their health-related goals, such as improving eating habits, while simultaneously deemphasizing the importance of weight management (ASDAH, 2024; Tylka et al., 2014). Traditional methods of weight-centric medical care can overshadow a patients' health concerns and needs as well as reinforce negative judgements of higher weight individuals (Tylka et al., 2014). The intuitive eating framework offers an alternative to the weight-normative paradigm and highlights self-care behaviors including engaging in enjoyable physical activity, eating nutritious foods when hungry, and ceasing to eat when full (Tylka et al., 2014). The program focused on the principles of the satisfaction factor, body respect, and gentle nutrition. Principle six, discover the satisfaction factor, is considered the hub of intuitive eating. Finding satisfaction in food choices aids in the avoidance of deprivation and helps individuals maintain sustainable eating behaviors to improve overall diet quality. Principle eight of intuitive eating, respect your body, involves understanding one's needs and following through with supportive action. Body respect includes treating one's body with dignity and meeting its basic needs. It is crucial to practice body respect to improve dietary behaviors because nourishment is ultimately a form of self-care. The final principle of intuitive eating, gentle nutrition, focuses on honoring health, considering taste, and eating in a way that feels well. It emphasizes that healthy eating involves consuming a balance of foods combined with possessing a healthy relationship with

food, which helps make eating healthfully a pleasurable, maintainable experience (Tribole & Resch, 2012). The goal of including the intuitive eating framework in the program design was to present meal planning and preparation as a more realistic, sustainable approach that takes into consideration one's unique needs and preferences.

Program Methodology

The live webinar "lunch and learn" was developed as an educational presentation on meal planning and preparation strategies. Participants were provided with a variety of resources and handouts including an educational handout on component cooking (refer to Appendix 4), a family weekly meal plan outline (refer to Appendix 5), a culinary techniques video on knife skills, and a food values activity (refer to Appendix 3). The concept was taught through the lens of intuitive eating, specifically the principles of the satisfaction factor, body respect, and gentle nutrition. During the webinar, the participants completed the food values activity, which aimed to determine what factors around food and food choices are important to the individual. This activity allowed for self-reflection and connected the concept of food values to the satisfaction factor principle of intuitive eating. Meal planning skills were taught through the concepts of component cooking and the Rule of Three, with tips on how to optimize one's kitchen to create a more supportive environment for preparation. The idea of the Rule of Three has not been identified in any published research at this time; however, it is a meal plan method for eating disorder treatment developed by registered dietitian Marcia Herrin (Herrin, 2024). It encourages the regularity of eating balanced meals and identifies six food groups: complex carbohydrates, proteins, fruits/vegetables, fats, calcium-rich foods, and "fun foods" (Michel, 2023). The Rule of Three recommends that individuals consume three meals and up to three snacks per day, include three to four food groups per meal and one to two per snack, and eat every three to four hours

while awake. Although intended for individuals in eating disorder recovery, the Rule of Three is also a useful approach to help simplify and provide an outline for meal planning. The concept of component cooking also has not been identified in any published research studies at this time but has some commonalities with the United States Department of Agriculture (USDA) MyPlate (United States Department of Agriculture, 2020). This method focuses on preparing several base ingredients or components from the MyPlate or Rule of Three food groups that can be easily incorporated into a variety of meal combinations with different flavors. An example preparation day could include cooking proteins such as grilled shrimp and chicken, a complex carbohydrate such as brown rice, and vegetables such roasted broccoli and sauteed peppers and onions. Multiple meals can be created with these base ingredients along with additional pantry items to increase variety and satisfaction. Examples of potential meal combinations include shrimp fajita bowls, lemon chicken pasta, and shrimp fried rice.

Data Collection

Outcomes were measured through a post-session evaluation questionnaire. Questions were designed to evaluate the effectiveness of the concepts taught in terms of meeting the population's needs, increasing understanding of nutrition knowledge, and affecting behavioral intentions. The majority of questions utilized a five-point Likert scale to gather quantitative data for analyses (Table 2); however, two open-ended questions were included to gather more detailed qualitative feedback. Several questions were inspired by the exit questionnaire utilized in the intuitive eating study by Burnette and Mazzeo (2020).

Results

Community Needs Assessment Outcomes and Results

A needs assessment was conducted to determine food values and relationships with nutrition and body image within the New River Valley. The purpose of gathering these initial data was to help guide the development of the nutrition education program based on the community's specific experiences. The needs assessment questionnaire (refer to Appendix 1) was distributed via QuestionPro© to a parenting Facebook group, the second-year class at the Virginia-Maryland College of Veterinary Medicine, and the Virginia Tech Hokie Wellness April newsletter. These outreach methods were chosen due to their demographics aligning with the program's target audience, they were low cost, and easily accessible to participants. A raffle for a $50 Target gift card was used as an incentive for participation in the survey. 81 responses were received and compiled for data analyses.

Table 2 displays the results from the food choice questionnaire portion of the needs assessment. The food choice questionnaire, developed by Steptoe et al. (1995) was chosen due to its multidimensional nature and ability to measure motivations and values behind food choices. Participants were provided with the statement "It is important to me that the food I eat on a typical day…" and were asked to rank the provided statements using a five-point Likert scale. Most individuals agreed that health is an important factor to consider when making food choices. For example, 50.6% agreed that it is important to them that foods are nutritious which aligns with clients' reported desire to improve diet quality at the private practice. Many survey participants also expressed that the relationship between food and mood is important with 51.9% agreeing that it is important that foods make one feel good and 42% agreeing that foods elevate one's mood. Responses to convenience questions illustrated that 50.6% agreed that it is

important for foods to be easily accessible, and 49.4% agreed that it is important for foods to be easy-to-prepare and cooked very simply; however, it is not necessary for food to take no time to prepare at all. The majority of individuals, 61.7%, strongly agreed that taste is a key factor in their food consumption, indicating that basic sensory characteristics were relevant to the respondents when considering food.

Responses to other questions within the needs assessment revealed that the survey respondents felt that they possessed the culinary skills to be successful in cooking meals at home; 45.7% of individuals disagreed that it is difficult to eat vegetables because they do not know how to prepare them. This demonstrates competence in terms of meal preparation and demonstrates that nutrition education can act as a foundation. With respect to body weight, 56.79% of the respondents reported that they considered themselves to be overweight, 76.54% of respondents expressed that they would like to weigh less, and 42% of respondents felt that they take into account their body weight when making food choices in their daily lives. These particular questions around relationship with body weight and image suggest the presence of negative self-perceptions and attitudes within the population. This indicates that an intervention that addresses body image could be a useful and important focus of this nutrition education program, which aligns with the body respect principle of Tribole and Resch's (2012) intuitive eating approach. Program-related questions gave insight into preferred program modalities and scheduling. With respect to type of learning, 32.1% favored an online self-study course, whereas 24.7% favored a live webinar. Ultimately, a live webinar lunch and learn was chosen because the program design was meant to engage with participants. In addition, the potential for a lack of self-discipline to complete the program during an online self-study was taken into account.

Analyses of the data revealed that the participants valued nutrition and diet quality but needed meals to be easy-to-prepare without sacrificing taste. They felt they possessed the culinary skills to be successful in cooking meals at home, which indicates that an education program may not need to focus on teaching cooking techniques. Based on the responses received, an intuitive eating informed intervention was selected to best address the food values and concerns expressed amongst the survey participants. The importance of sensory appeal including taste, texture, smell, and appearance along with the importance of food's impact on mood indicates that satisfaction is a key factor in making food choices. An intuitive eating approach prioritizes pleasure which invites individuals to prepare meals that attract their senses, derive satisfaction from every possible eating experience, and therefore decrease total quantity of food consumed overall (Tribole & Resch, 2012). Intuitive eating also helps address the presence of body dissatisfaction among survey respondents. Based on the questions around relationship with body, the survey respondents appear to be influenced by diet culture and the "thin ideal," which supports the need for incorporating the ideology of intuitive eating into a nutrition education program. The weight-neutral framework and the Respect Your Body principle will help individuals reframe their goals to focus more on behavior-related changes rather than weight-centered goals found in traditional dieting paradigms.

The needs assessment data guided program development to ensure that the needs of the New River Valley community were met. Based on the responses received, the program was developed as a live webinar "lunch and learn" to cover topics such as body respect, satisfaction, and component cooking as a tool for meal planning and preparing. Handouts were created and distributed to participants to reference after attending. Overall, the goal of the program was to

function as a non-counseling source of nutrition education from a local registered dietitian who catered to the specific needs of the interested parties within the New River Valley.

Participating Audience

Initially, 19 individuals signed up through Practice Better, a practice management software for health and wellness professionals, to participate in the live webinar lunch and learn with 11 individuals attending on the day. Participants were a mix of current and potential clients recruited through a digital flyer (refer to Appendix 2) posted on the private practice's website as well as Virginia Tech's Hokie Wellness Listserv. Four of the 11 total participants completed the post-session evaluation survey.

Post-Session Outcomes and Results

Four out of 11 participants completed the post-session evaluation survey using a five-point Likert scale via QuestionPro©. Table 2 displays the results from the participants' responses to survey questions 1 through 14. The highest scoring statements were "I enjoyed attending the live webinar/lunch and learn" (4.75), "The topics covered were relevant to my concerns about meal planning and prepping" (4.50), "I would like to learn more about the intuitive eating approach" (4.25), and "I would recommend this webinar to others" (4.25). Several statements scored an average of 4.0 including, "I no longer feel as overwhelmed about meal planning and prepping because of this webinar", "This webinar has helped me respect my body more", "I feel that I have a better understanding of my own food values as a result of this webinar", "I believe that the intuitive eating approach is a legitimate way to improve eating habits and body image", "How likely are you to practice component cooking in the future". The lowest scoring statements were "This webinar has helped me find more satisfaction with food", "I feel that I have a better understanding of intuitive eating as a result of this webinar", "I feel

that I have a better understanding of component cooking as a result of this webinar", and "How confident do you feel about meal planning/prepping as a result of this webinar". The last survey question listed in Table 2 regarding future program modalities did not utilize a Likert scale but demonstrated that 75% of participants would prefer an online group program. The final two open-ended questions asked participants to list any other nutrition-related topics of interest for future programs as well as general additional comments and suggestions. Notable quotes pulled from the responses are displayed in Table 3.

Discussion

Project Outcomes and Results Analyses

The pilot program provided valuable insight into how to create an effective nutrition education program for the target population. The statements that scored the highest (4.25 to 4.75) within the post session evaluation survey demonstrate a level of acceptability among the participants. The majority of respondents reported that they enjoyed attending the live webinar, felt the topics covered were relevant to their concerns regarding meal planning and preparation, would recommend the live webinar to others, and expressed an interest in learning more about the intuitive eating approach. These responses indicate that the live webinar was successful in creating a pleasant environment and that the selected program content piqued their interest and addressed their needs. The statements that received an average score of 4.0 illustrate that participants generally agreed that the live webinar helped reduce reported feelings of overwhelm when it comes to meal planning and preparation, find more respect for their body, better understand their personal food values, believe that intuitive eating is a legitimate approach to improve eating habits and body image, and that they are likely to practice component cooking practices in the future.

The statements that scored the lowest (3.5 to 3.75) revealed less effective areas of the pilot program. For example, individuals felt more neutral when it came to rating their newfound understanding of intuitive eating and component cooking. They also expressed feeling more neutral with respect to confidence levels around meal planning and preparation as well as finding greater satisfaction with food post program. These responses demonstrated lower levels of efficacy and acceptability among participants and show that there is room for improvement regarding program planning and revisions. The open-ended questions at the end of the survey provided more descriptive information and insight on the thoughts of the participants. Topics of interest listed for potential future program development included addressing the myths of calorie counting, a more detailed continuation on meal planning and prep, providing easy and quick nutritious recipes, creating healthy habits and relationships with food, expansion on body respect and intuitive eating. Additional comments and suggestions included personal experiences and program feedback. See Table 4 for comments.

As previously mentioned, no current literature exists on interventions that incorporate the principles of intuitive eating into a meal planning and preparation program. The development, implementation, and outcomes of this program address the gaps between the research and lay a foundation for future initiatives. For example, the needs assessment responses demonstrated a significant interest in weight loss along with improving overall diet quality with simple, satisfying meals. Participants initially sought out the program to gain a better understanding of meal planning and preparation and upon attendance ultimately experienced an increased interest in learning more about intuitive eating, a weight-neutral framework that rejects the diet mentality. There was also an increase in body respect among the group as well as a personal statement that expressed a lack of previous knowledge around the

relationship between body respect and food in addition to a reported struggle with their own relationship with food. These results identified a latent need for an intuitive eating intervention among the population that individuals were not initially aware of. The concept of intuitive eating coupled with their decided need of meal planning and preparation education act as a more comprehensive approach to meeting their nutrition education needs.

Implications & Recommendations

The pilot program demonstrated preliminary efficacy in some areas with room for improvement in others. Although the program did not lead to high levels of confidence or understanding around component cooking, there were reported intentions to practice the method in the future which evaluates the outcome objective "upon completion of the pilot program on June 11th, 2024, 100% of participants will plan to implement the taught meal planning techniques in the future". These data also help to answer the research question "is a live webinar nutrition education program a feasible approach to change intentions around meal planning and preparation practices?". It should be noted that the advertisement for the program did not explicitly market the concept of intuitive eating and instead highlighted meal planning, component cooking, and the Rule of Three. This lack of specification could have contributed to the unclear understanding of intuitive eating among participants. The program will need to be modified to provide participants with a better understanding of intuitive eating, but the pilot run did pique their interest in the framework and help convince them of its legitimacy which addresses the second research question "is a live webinar nutrition education program a feasible approach to change individuals' understanding of intuitive eating and improve nutrition knowledge? It appears that a one-hour live webinar did not effectively teach all included program concepts but may lay a foundation for additional growth. Data from the pilot program

has provided great insight into the feasibility and effectiveness of potential methods as well as useful information to consider when attempting a larger scale project.

There are many considerations for revisions and future program development among this population. As noted from the survey feedback, one participant felt that the allotted time for the live webinar limited the full development and understanding of proposed ideas and concepts. Expansion of the single live webinar session into a multiple part series could be a strategy to better address the individual concepts and therefore increase efficacy, nutrition knowledge and confidence. It is relevant to note that the initial enjoyability of the live webinar and likelihood to recommend to others expressed from this pilot trial may help to change intentions and increase chances of attendance. Future data collection should include a pre- and post-survey to better understand changes in intentions and knowledge from baseline to post program as well as a further out follow up to observe implementation and maintenance of behaviors long term.

Limitations

Several limitations of the study exist. Within the needs assessment, 92% of respondents were females, and 90.67% of respondents were of white/Caucasian ethnicity, which could have skewed the results because the majority of answers were from the same demographic. In the future, a more diverse sample would be preferred to ensure that the collected data were representative of the entire community. Another limitation includes a small sample size. Initially, 19 individuals signed up to participate with 11 participants following through and attending on the day. Four out of the 11 present participants completed the post session evaluation survey which decreased the population and data collection further. In the future, it would be helpful to run the program with a larger sample size and develop strategies to increase likelihood of

attendance and survey completion. This may be achieved by utilizing the poll feature on Zoom to have participants complete the survey during the live session or with incentives such as a cancellation fee or gift card raffle. Lastly, a lack of previous studies on this particular type of intervention is a major limitation. Further research is needed in this area to better understand effective practices and methodologies.

Conclusion

Overall, the current literature and findings of this study indicate that there is preliminary efficacy in an intuitive eating inspired meal planning and preparation program. The program's outline lays a foundation for further development and provides considerations for revisions to meet the program's goals more effectively. Future program initiatives should elaborate on introduced topics to better educate the target population. Results from this study will provide useful information for the private practice as well as registered dietitians as a whole when designing nutrition education programs and providing one-on-one nutrition counseling.

Tables

Table 1. Principles of intuitive eating

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

From: Tribole, E., & Resch, E. (2012). Intuitive eating: a revolutionary program that works. St. Martin's Griffin.

Table 2. Food Choice Questionnaire (Steptoe et al., 1995) Outcomes from New River Valley Community Needs Assessment (n=81)

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
Contains a lot of vitamins and minerals	27.2% (n=22)	45.7% (n=37)	24.7% (n=20)	2.5% (n=2)	0.00% (n=0)
Keeps me healthy	37% (n=30)	48.2% (n=39)	12.4% (n=10)	2.5% (n=2)	0.00% (n=0)
Is nutritious	35.8% (n=29)	50.6% (n=41)	11.1% (n=9)	2.5% (n=2)	0.00% (n=0)
Is high in protein	19.8% (n=16)	44.4% (n=36)	30.9% (n=25)	4.9% (n=4)	0.00% (n=0)
Helps me to relax and cope with stress	8.6% (n=7)	38.3% (n=31)	35.8% (n=29)	14.8% (n=12)	2.5% (n=2)
Cheers me up	8.6% (n=7)	42% (n=34)	32.1% (n=26)	14.8% (n=12)	2.5% (n=2)
Makes me feel good	25.9% (n=21)	51.9% (n=42)	13.6% (n=11)	7.4% (n=6)	1.2% (n=1)
Is easy to prepare and can be cooked very simply	39.5% (n=32)	49.4% (n=40)	4.9% (n=4)	6.2% (n=5)	0.00% (n=0)
Takes no time to prepare	14.8% (n=12)	29.6% (n=24)	22.2% (n=18)	28.4% (n=23)	4.9% (n=4)
Is easily available in shops/supermarkets	33.3% (n=27)	50.6% (n=41)	8.6% (n=7)	6.2% (n=5)	1.2% (n=1)
Smells and looks nice	40.7% (n=33)	45.7% (n=37)	11.1% (n=9)	2.5% (n=2)	0.00% (n=0)
Has a pleasant texture	34.6% (n=28)	51.9% (n=42)	12.4% (n=10)	1.2% (n=1)	0.00% (n=0)
Tastes good	61.7% (n=50)	37% (n=30)	1.2% (n=1)	0.00% (n=0)	0.00% (n=0)
Contains natural ingredients	17.3% (n=14)	43.2% (n=35)	25.9% (n=21)	13.6% (n=11)	0.00% (n=0)
Contains no artificial ingredients	9.9% (n=8)	22.2% (n=18)	38.3% (n=31)	24.7% (n=20)	4.9% (n=4)
Is not expensive	28.4% (n=23)	49.4% (n=40)	16.1% (n=13)	4.9% (n=4)	1.2% (n=1)
Is cheap	16.1% (n=13)	34.6% (n=28)	25.9% (n=21)	22.2% (n=18)	1.2% (n=1)
Is good value for money	32.1% (n=26)	55.6% (n=45)	8.6% (n=7)	3.7% (n=3)	0.00% (n=0)
Is low in calories	2.5% (n=2)	28.4% (n=23)	43.2% (n=35)	21% (n=17)	4.9% (n=4)
Helps me control my weight	9.9% (n=8)	38.3% (n=31)	33.3% (n=27)	12.4% (n=10)	6.2% (n=5)
Is familiar	8.6% (n=7)	43.2% (n=35)	22.2% (n=18)	23.5% (n=19)	2.5% (n=2)
Is like the food I ate when I was a child	2.5% (n=2)	17.3% (n=14)	25.9% (n=21)	45.7% (n=37)	8.6% (n=7)
Is what I usually eat	7.4% (n=6)	28.4% (n=23)	30.9% (n=25)	32.1% (n=26)	1.2% (n=1)
Connects me to my culture	0.00% (n=0)	13.6% (n=11)	40.7% (n=33)	40.7% (n=33)	4.9% (n=4)
Comes from countries I approve of politically	0.00% (n=0)	2.5% (n=2)	39.5% (n=32)	37% (n=30)	21% (n=17)
Has the country origin clearly marked	1.2% (n=1)	13.6% (n=11)	34.6% (n=28)	40.7% (n=33)	9.9% (n=8)
Is packaged in an environmentally friendly way	7.4% (n=6)	44.4% (n=36)	32.1% (n=26)	11.1% (n=9)	4.9% (n=4)

The following table displays the results from the food choice questionnaire (Steptoe et al., 1995) portion of the needs assessment. Participants utilized a five-point Likert scale to rank the provided statements in order to measure motivations and values behind food choices.

Table 3. Quantitative results from post-session evaluation survey after participating in the "Art of Meal Planning" webinar (n=4)

Survey Question (n = number of responses)	5 Strongly Agree	4 Agree	3 Neither Agree Nor Disagree	2 Disagree	1 Strongly Disagree	Average Score
I enjoyed attending the live webinar/lunch and learn. (n=4)	75% (n=3)	25% (n=1)	0% (n=0)	0% (n=0)	0% (n=0)	4.75
The topics covered were relevant to my concerns about meal planning and prepping. (n=4)	50% (n=2)	50% (n=2)	0% (n=0)	0% (n=0)	0% (n=0)	4.5
I no longer feel as overwhelmed about meal planning and prepping because of this webinar. (n=4)	25% (n=1)	50% (n=2)	25% (n=1)	0% (n=0)	0% (n=0)	4
This webinar has helped me respect my body more. (n=4)	25% (n=1)	50% (n=2)	25% (n=1)	0% (n=0)	0% (n=0)	4
This webinar has helped me find more satisfaction with food. (n=4)	0% (n=0)	50% (n=2)	50% (n=2)	0% (n=0)	0% (n=0)	3.5
I feel that I have a better understanding of my own food values as a result of this webinar. (n=4)	0% (n=0)	100% (n=4)	0% (n=0)	0% (n=0)	0% (n=0)	4
I feel that I have a better understanding of intuitive eating as a result of this webinar. (n=4)	0% (n=0)	75% (n=3)	0% (n=0)	25% (n=1)	0% (n=0)	3.5
I believe that the intuitive eating approach is a legitimate way to improve eating habits and body image. (n=4)	25% (n=1)	50% (n=2)	25% (n=1)	0% (n=0)	0% (n=0)	4
I would like to learn more about the intuitive eating approach. (n=4)	25% (n=1)	75% (n=3)	0% (n=0)	0% (n=0)	0% (n=0)	4.25
I feel that I have a better understanding of component cooking as a result of this webinar. (n=4)	0% (n=0)	50% (n=2)	50% (n=2)	0% (n=0)	0% (n=0)	3.5
I would recommend this webinar to others. (n=4)	75% (n=3)	0% (n=0)	0% (n=0)	25% (n=1)	0% (n=0)	4.25
Survey Question (n = number of responses)	**5 Very Likely**	**4 Likely**	**3 Neutral**	**2 Unlikely**	**1 Very Unlikely**	**Average Score**

How likely are you to practice component cooking in the future? (n=4)	25% (n=1)	50% (n=2)	25% (n=1)	0% (n=0)	0% (n=0)	4
Survey Question (n = number of responses)	**5 Extremely Confident**	**4 Fairly Confident**	**3 Neutral**	**2 Slightly Confident**	**1 Not at all Confident**	**Average Score**
How confident do you feel about meal planning/prepping as a result of this webinar? (n=4)	25% (n=1)	50% (n=2)	0% (n=0)	25% (n=1)	0% (n=0)	3.75
Survey Question (n = number of responses)	**Online Group Program**	**In-person Group Program**	**Online Self Study**	**Other**		
If you were to participate in more nutrition-related programs, which modality would you prefer? (n=4)	75% (n=3)	0% (n=0)	25% (n=1)	0% (n=0)		

The following table displays the quantitative results from the post-session evaluation survey (questions 1 to 14). Participants utilized a five-point Likert scale to rank the provided statements in order to evaluate the feasibility and efficacy of the pilot live webinar nutrition education program.

Table 4. Examples of qualitative after participating in the “Art of Meal Planning” webinar

Theme	Quote
Food and Body Relationships	"I have never thought about respecting my body with food. Lately, I just eat to have something to eat as I have many food sensitivities and it has made everything surrounding food (shopping, prep, cooking, eating) that much more non-desirable."
Feedback	"There were a lot of ideas without full development and understanding. Like too much for the 45 minutes. I would like to learn more in depth information, not about kitchen tools, but about intuitive eating/ detailed planning."

The following table displays important quotes pulled from responses to the “Additional Comments/Suggestions” open-ended question in the post-session evaluation survey.

References

Abbot, J. M., & Byrd-Bredbenner, C. (2010). A Tool for Facilitating Meal Planning. *Journal of Nutrition Education and Behavior*, *42*(1), 66–68. https://doi.org/10.1016/j.jneb.2009.07.005

Babbott, K. M., Cavadino, A., Brenton-Peters, J., Consedine, N. S., & Roberts, M. (2022). Outcomes of intuitive eating interventions: a systematic review and meta-analysis. *Eating Disorders*, *31*(1), 1–31. https://doi.org/10.1080/10640266.2022.2030124

Bacon, L., & Aphramor, L. (2011). Weight Science: Evaluating the Evidence for a Paradigm Shift. *Nutrition Journal*, *10*(1). https://doi.org/10.1186/1475-2891-10-9

Bacon, L., Stern, J. S., Loan, M. D. V., & Keim, N. L. (2005). Size Acceptance and Intuitive Eating Improve Health for Obese, Female Chronic Dieters. *Journal of the American Dietetic Association*, *105*(6), 929–936. https://doi.org/10.1016/j.jada.2005.03.011

Beintner, I., Emmerich, O. L. M., Vollert, B., Taylor, C. B., & Jacobi, C. (2019). Promoting positive body image and intuitive eating in women with overweight and obesity via an online intervention: Results from a pilot feasibility study. *Eating Behaviors*, *34*, 101307. https://doi.org/10.1016/j.eatbeh.2019.101307

Boucher, S., Edwards, O., Gray, A., Nada-Raja, S., Lillis, J., Tylka, T. L., & Horwath, C. C. (2016). Teaching Intuitive Eating and Acceptance and Commitment Therapy Skills Via a Web-Based Intervention: A Pilot Single-Arm Intervention Study. *JMIR Research Protocols*, *5*(4), e180. https://doi.org/10.2196/resprot.5861

Burnette, C. B., & Mazzeo, S. E. (2020). An uncontrolled pilot feasibility trial of an intuitive eating intervention for college women with disordered eating delivered through group

and guided self-help modalities. *International Journal of Eating Disorders*. https://doi.org/10.1002/eat.23319

Carilion Clinic. (2021, August 31). *New River Valley Community Health Assessment - Final Report by Carilion Clinic - Issuu*. Issuu.com. https://issuu.com/carilionclinic/docs/2021_cnrv_cha_report_final

Cena, H., & Calder, P. C. (2020). Defining a Healthy diet: Evidence for the Role of Contemporary Dietary Patterns in Health and Disease. *Nutrients*, *12*(2), 1–15. https://doi.org/10.3390/nu12020334

Ceylana, H. H., Koseb, B., & Aydin, M. (2014). Value based Pricing: A Research on Service Sector Using Van Westendorp Price Sensitivity Scale. *Procedia - Social and Behavioral Sciences*, *148*(148), 1–6. https://doi.org/10.1016/j.sbspro.2014.07.013

Cheng, Z., Gao, X., Yang, C., Brytek-Matera, A., & He, J. (2022). Effects of Online and Face-to-Face Intuitive Eating Interventions on Body Image and Eating Behaviors among Women in China: A Feasibility Study. *Nutrients*, *14*(9), 1761. https://doi.org/10.3390/nu14091761

Chronic Disease. (2021). Virginia Department of Health Data. https://www.vdh.virginia.gov/data/chronic-disease-in-virginia/#:~:text=In%202021%2C%20there%20were%2053%2C285

de Ridder, D., Kroese, F., Evers, C., Adriaanse, M., & Gillebaart, M. (2017). Healthy diet: Health impact, prevalence, correlates, and Interventions. *Psychology & Health*, *32*(8), 907–941. https://doi.org/10.1080/08870446.2017.1316849

Denny, K. N., Loth, K., Eisenberg, M. E., & Neumark-Sztainer, D. (2013). Intuitive eating in young adults. Who is doing it, and how is it related to disordered eating behaviors? *Appetite*, *60*(1), 13–19. https://doi.org/10.1016/j.appet.2012.09.029

Diet quality. (2016, April 13). Www.iaea.org. https://www.iaea.org/topics/diet-quality#:~:text=Diet%20quality%20refers%20to%20a

Ducrot, P., Méjean, C., Aroumougame, V., Ibanez, G., Allès, B., Kesse-Guyot, E., Hercberg, S., & Péneau, S. (2017). Meal planning is associated with food variety, diet quality and body weight status in a large sample of French adults. *International Journal of Behavioral Nutrition and Physical Activity*, *14*(1). https://doi.org/10.1186/s12966-017-0461-7

Exploring time spent on cooking, reading, and other activities for National Hobby Month : The Economics Daily: U.S. Bureau of Labor Statistics. (2024, January 29). Bureau of Labor Statistics. https://www.bls.gov/opub/ted/2024/exploring-time-spent-on-cooking-reading-and-other-activities-for-national-hobby-month.htm#:~:text=For%20some%2C%20cooking%20is%20simply

Fernandez, M. A., Desroches, S., Marquis, M., & Provencher, V. (2020). Meal planning as a strategy to support healthy eating. *Nutrition Science En Évolution: La Revue de l'Ordre Professionnel Des Diététistes Du Québec*, *17*(3), 12. https://doi.org/10.7202/1068830ar

Garvin, T. M., Chiappone, A., Boyd, L., Stern, K., Panichelli, J., Edwards Hall, L. A., & Yaroch, A. L. (2019). Cooking Matters Mobile Application: a meal planning and preparation tool for low-income parents. *Public Health Nutrition*, *22*(12), 2220–2227. https://doi.org/10.1017/S1368980019001101

Glanz, K., Basil, M., Maibach, E., Goldberg, J., & Snyder, D. (1998). Why Americans Eat What They Do. *Journal of the American Dietetic Association*, *98*(10), 1118–1126. https://doi.org/10.1016/s0002-8223(98)00260-0

Hazzard, V. M., Telke, S. E., Simone, M., Anderson, L. M., Larson, N. I., & Neumark-Sztainer, D. (2020). Intuitive eating longitudinally predicts better psychological health and lower

use of disordered eating behaviors: findings from EAT 2010–2018. *Eating and Weight Disorders - Studies on Anorexia, Bulimia and Obesity*, *26*(1). https://doi.org/10.1007/s40519-020-00852-4

Herrin, M. (2024). *Rule of Three Food Plan*. Marcia Herrin. https://marciaherrin.com/rule-of-three-food-plan/

Laska, M. N., Hearst, M. O., Lust, K., Lytle, L. A., & Story, M. (2014). How we eat what we eat: identifying meal routines and practices most strongly associated with healthy and unhealthy dietary factors among young adults. *Public Health Nutrition*, *18*(12), 2135–2145. https://doi.org/10.1017/s1368980014002717

Linardon, J., Tylka, T. L., & Fuller-Tyszkiewicz, M. (2021). Intuitive eating and its psychological correlates: A meta-analysis. *International Journal of Eating Disorders*, *54*(7). https://doi.org/10.1002/eat.23509

Mendez, S., Kubota, J., Widaman, A. M., & Gieng, J. (2021). Advance Quantity Meal Preparation Pilot Program Improves Home-Cooked Meal Consumption, Cooking Attitudes, and Self-Efficacy. *Journal of Nutrition Education and Behavior*, *53*(7). https://doi.org/10.1016/j.jneb.2020.12.014

Michel, A. (2023, March 2). *When, Why, & How to Use Meal Plans in Eating Disorder Recovery*. The Emily Program. https://emilyprogram.com/blog/when-why-and-how-to-use-meal-plans-in-eating-disorder-recovery/#WhatIsTheRuleofthreesMealPlan

Rakhra, V., Galappaththy, S. L., Bulchandani, S., & Cabandugama, P. K. (2020). Obesity and the Western Diet: How We Got Here. *Missouri Medicine*, *117*(6), 536–538. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC7721435/

Rattan, S. I. S., & Kaur, G. (2022). Nutrition, Food and Diet in Health and Longevity: We Eat What We Are. *Nutrients*, *14*(24), 5376. https://doi.org/10.3390/nu14245376

Steptoe, A., Pollard, T. M., & Wardle, J. (1995). Development of a Measure of the Motives Underlying the Selection of Food: the Food Choice Questionnaire. *Appetite*, *25*(3), 267–284. https://doi.org/10.1006/appe.1995.0061

The Health at Every Size® (HAES®) Principles. (2024). ASDAH. https://asdah.org/haes/

Tribole, E. (2019, July 17). *Definition of Intuitive Eating*. Intuitive Eating. https://www.intuitiveeating.org/definition-of-intuitive-eating/

Tribole, E. (2024, January 10). *Intuitive Eating Studies*. Intuitive Eating. https://www.intuitiveeating.org/studies/

Tribole, E., & Resch, E. (1995). *Intuitive eating : a recovery book for the chronic dieter : rediscover the pleasures of eating and rebuild your body image*. St. Martin's Paperbacks.

Tribole, E., & Resch, E. (2012). *Intuitive eating : a revolutionary program that works*. St. Martin's Griffin.

Tylka, T. L., Annunziato, R. A., Burgard, D., Daníelsdóttir, S., Shuman, E., Davis, C., & Calogero, R. M. (2014). The Weight-Inclusive versus Weight-Normative Approach to Health: Evaluating the Evidence for Prioritizing Well-Being over Weight Loss. *Journal of Obesity*, *2014*, 1–18. https://doi.org/10.1155/2014/983495

United States Department of Agriculture. (2020). *Dietary Guidelines for Americans 2020 -2025* . USDA. https://www.dietaryguidelines.gov/sites/default/files/2020-12/Dietary_Guidelines_for_Americans_2020-2025.pdf

Values and Food Choices. (2024). Live.com; The University of Vermont. https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.uvm.edu%2Fsites%2Fdefault%2Ffiles%2FVermont-Agritourism-

Collaborative%2FGroup%2520Activity%2520Sheets%2FActivity_4-1_Values_and_Food_Choices.docx&wdOrigin=BROWSELINK

Zeratsky, K. A., McMahon, M. M., Jenkins, S. M., & Clark, M. M. (2018). Meal Planning Program to Reduce Barriers and Improve Diet Quality in Worksite Wellness Center Members. *Journal of Occupational and Environmental Medicine*, *60*(11), 998–1004. https://doi.org/10.1097/jom.0000000000001390

Appendix 1

Needs Assessment Questionnaire

Food Choice Questionnaire (Steptoe et al., 1995)

- Factor 1 - Health
- Factor 2 - Mood
- Factor 3 - Convenience
- Factor 4 - Sensory Appeal
- Factor 5 - Natural Content
- Factor 6 - Price
- Factor 7 - Weight Control
- Factor 8 - Familiarity
- Factor 9 - Ethical Concerns

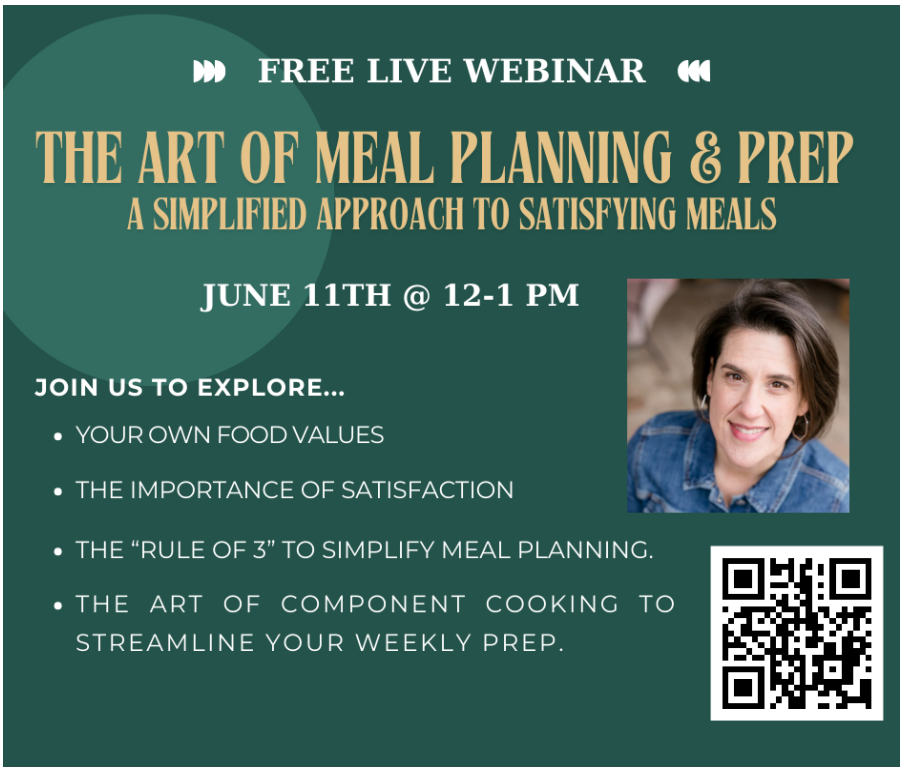
Meal Preparation & Weight/Body Relationship Questions

Program Questions

Van Westendorp's Price Sensitivity Model (Ceylana et al., 2014)

Appendix 2

Program Advertisement Flyer



Appendix 3

Food Values Activity

FOOD VALUES ACTIVITY

Take a minute to brainstorm and write down your top five values that you believe drive your food choices and preferences. Examples could include texture, familiarity, nutrient density, etc.

1. _____
2. _____
3. _____
4. _____
5. _____

Now, reflect on the foods that you normally eat as well as some of your favorite foods. Do they align with the values previously listed? Dive deep and think about foods that may contradict these initial top five values.

Some things to consider:

- Why do you eat these foods?
- Why do you enjoy these foods?
- What is important to you when it comes to these foods?

Complete a second round of brainstorming that takes into consideration foods that did not align with your first set of values. Write down your updated top five values.

1. _____
2. _____
3. _____
4. _____
5. _____

Food For Thought:

What were the major differences between your first and second list?

Are you surprised that your top five values changed from your first to second list?

How do you think your preferred top five values relate to your actual top five values?

References: https://www.uvm.edu/sites/default/files/Vermont-Agritourism-Collaborative/Group%20Activity%20Sheets/Activity_4-1_Values_and_Food_Choices.docx

From: *Values and Food Choices. (2024). Live.com; The University of Vermont. https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fwww.uvm.edu%2Fsites%2Fdefault%2Ffiles%2FVermont-Agritourism-Collaborative%2FGroup%2520Activity%2520Sheets%2FActivity_4-1_Values_and_Food_Choices.docx&wdOrigin=BROWSELINK*

Appendix 4

Component Cooking Handout

COMPONENT COOKING
THE EASY WAY TO MEAL PREP

What it is:

Component cooking is the easy and flexible way to meal prep, saving you time in the kitchen without sacrificing flavor! This method streamlines your meal prep by focusing on batches of several different "components" or base ingredients that can be used in different ways throughout the week. You can mix and match different prepped ingredients to create a variety of meal combinations with different flavors.

How to start:

Consider the categories of the Rule of 3 guide: protein, vegetables/fruits, and complex carbs. Pick a few ingredients from these categories that appeal to you. When it comes to your prep day, focus on the items that will take the longest. On the day that you prepare your meal, add healthy fats, sauces, calcium-rich foods, and other flavors to bring more satisfaction.

Examples of foods:

Protein
- Lean meats like white poultry, pork tenderloin, and lean cuts of beef
- Fish (Salmon, tuna, white fish)
- Shellfish
- Beans and legumes
- Tofu
- Eggs

Complex-Carbs
- Quinoa
- Brown Rice
- 100% whole wheat bread or pasta
- Tortilla
- Oats
- Legumes/beans
- Starchy vegetables (corn, potatoes, peas, winter squash)

Vegetables
- Greens
- Peppers
- Carrots
- Cucumbers
- Tomatoes
- Zucchini/Squash
- Green beans
- Broccoli
- Cauliflower
- Asparagus
- Brussel Sprouts

Sauces
- BBQ sauce
- Pesto
- Chimichurri
- Peanut sauce
- Teriyaki
- Salsa
- Buffalo sauce
- Dressings
- Pasta sauce

Fats
- Olive oil
- Avocado oil
- Nuts, Nut Butters
- Seeds
- Avocados
- Sauces
- Butter (use sparingly)

Fruits
- Berries, cherries
- Apples
- Stone fruit (peaches, plums, mangoes)
- Grapes
- Citrus
- Melons, Pineapples

INGREDIENT PREPPING
EXAMPLE WEEK

What to Cook:

Protein	Vegetables	Complex-Carbs
• Oven Baked Chicken • Pork Tenderloin	• Roasted Broccoli • Sautéed Peppers & Onions	• Roasted Potatoes

Meal Combinations:

Lemon Chicken Pasta	Prepped: Baked chicken breasts, roasted broccoli From Kitchen: Whole wheat pasta, olive oil, lemon zest, parmesan cheese, garlic
Chicken Tacos	Prepped: Baked chicken, sautéed peppers & onions From Kitchen: Black beans, taco seasoning, taco shells, cheese, or sour cream
BBQ Pork Sandwiches	Prepped: Pork tenderloin, roasted broccoli and roasted potatoes on the side From Kitchen: Whole wheat buns/bread, jarred BBQ sauce, coleslaw (optional)
Brunswick Stew	Prepped: Baked chicken, pulled pork, onions and peppers, roasted potatoes From Kitchen: Chicken broth, canned diced tomatoes, frozen lima beans, frozen corn, garlic, and a few dashes of Worcestershire sauce.
Loaded Omelet	Prepped: Leftover prepped vegetables, roasted potatoes on the side From Kitchen: Eggs, whole wheat toast. cheese (optional)
White Chicken Chili	Prepped: Leftover baked chicken, brown rice, onions and peppers From Kitchen: Chicken stock, canned white beans, salsa verde, cumin, chili powder and cream cheese.

Created by Hayley Miller- Virginia Tech Intern

Appendix 5

Family Weekly Meal Plan

Weekly Meal/Snack Plan:

Breakfast Ideas:

Adults: 1) _____ 2) _____

Kids: 1) _____ 2) _____

Lunch Ideas:

Adults: 1) _____ 2) _____

Kids: 1) _____ 2) _____

Snack Ideas:

Adults: 1) _____ 2) _____

Kids: 1) _____ 2) _____

Dinners:

Saturday: _____

Sunday: _____

Monday: _____

Tuesday: _____

Wednesday: _____

Thursday: _____

Friday: _____

Fun Food Ideas:

Adults: _____

Kids: _____

Prep Day: _____

Prep Plan:

Components: _____

Recipes: _____