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Positive Pathways 4-Week Self-Paced Virtual Nutrition and Lifestyle Program

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ABSTRACT

Objective: To evaluate the effectiveness of joining a four-week self-paced nutrition and lifestyle program with weekly meetings led by nutrition experts alongside other adults seeking a comprehensive approach to developing substantial healthy habits.

Methods: The effectiveness of the program was assessed via pre- and post-survey and analyzed using the Wilcoxon test via SPSS Statistics software.

Setting: Virtual (synchronous and asynchronous)

Participants: In March of 2024, 4 adults enrolled in the program.

Intervention: The participants completed the virtual program over 4 weeks in 2024.

Results: The primary findings of this study were that a 4-week virtual nutrition and lifestyle program did not elicit a statistically significant change in the nutrition confidence in individuals

Conclusion: In conclusion, results from the present study indicated the 4-week self-paced nutrition and lifestyle program impacted participants' behavioral confidence but not significantly enough to know if changes in sustainable habits will follow.

INTRODUCTION

As nations grow and become more industrialized, chronic diseases like neoplasms, obesity, hypertension, cardiovascular disease, type 2 diabetes, and many others become increasingly common.¹ The CDC (Center of Disease and Control) promotes that the integration of healthy habits into your daily routine can help you avoid illnesses like obesity and high blood pressure, which can increase your risk of contracting the most prevalent and dangerous chronic diseases.³ Contrary to prior belief, staying healthy is more complex than simply eating vegetables and maintaining a certain number on the scale. Prioritizing a combination of improved sleeping patterns, managing stress, physical activity, daily movement, and consuming a diet that will sustain internal well-being, is an effective multi-action approach to maintaining good health. The CDC associates consuming a balanced diet, physical activity, and sufficient sleep with beneficial management and avoidance of heart disease, type 2 diabetes, and other chronic illnesses.³ Unfortunately, every individual's access to the various tools necessary to optimize their own health and wellness goals varies.

Isn't it ironic? There is a direct relationship between age and the importance of prioritizing your well-being. This is because an individual's likelihood of developing chronic diseases increases, while the luxury of having the time to devote to their health decreases. Adulthood comes with an abundance of professional and personal responsibilities that can be difficult to manage. Everyday tasks interfere with the attention that individuals' physical health deserves. Some may even consider taking care of themselves to be a burden in addition to their

other daily stressors. After assessing the nutritional needs of adults at Candid Apple, results showed that the adults would benefit from a self-paced nutrition program that combines evidenced-based nutritional education focusing on multiple components of health and application skills with the help of a Registered Dietitian.

While this is still a fairly new approach, studies show that combining synchronous and asynchronous online nutrition programs is typically more affordable, accessible, and statistically leads to greater long-term weight loss outcomes compared to typical methods or solely the asynchronous program.¹ Significant improvements in health, including weight loss in obese persons, were observed in a research study in 2022. These improvements were attributed to behavioral modification strategies made possible by individual live monitoring. The research employed a telehealth lifestyle-coaching approach that included asynchronous telehealth coaching after a one-hour motivational face-to-face interview.⁴ This study also emphasized how crucial it is for healthcare professionals who use telehealth to build an empathetic relationship with their patients so they to maintain weight loss and lifestyle changes.⁴

However, the effect of completing a self-paced lifestyle program with community support remains unclear. The combination of a self-paced program and live weekly meetings could create a strong, empathetic support system for individuals trying to better their health outcomes can easily be incorporated into their daily lives. This study aims to assess the effectiveness of joining a four-week self-paced lifestyle program with weekly meetings led by nutrition experts alongside other adults seeking a comprehensive approach to developing substantial healthy habits. The study hypothesizes if a group of adults join and complete a virtual four-week self-paced lifestyle program, then they will develop confidence in their nutrition and lifestyle knowledge and ability to continue making sustainable changes toward a healthier lifestyle.

METHODS

STUDY DESIGN

The intervention was entirely virtual with a combination of synchronous and asynchronous guidance from nutrition experts over 4 weeks. This study received approval from the SUNY Oneonta Institutional Review Board.

RECRUITMENT

Nutrition professionals collected information from 4 adults, between the ages of 22 and 27 who signed up for the Positive Pathways program after viewing the recruitment flyer posted on the social media accounts of the virtual private practice, Candid Apple. The post briefly granted the viewers the opportunity to join the Positive Pathways Program. Viewers of the post were advised to reach out to the Registered Dietitian, and owner of Candid Apple, Kerri Rachelle. Out of the 6 participants enrolled in the Positive Pathways program, 4 chose to enter the study during the first week. All participants of the study signed a consent form.

INTERVENTION

A small group of adults (n=4) who shared similar nutrition and wellness goals were guided through a comprehensive program meticulously crafted based on the health belief model by an integrative doctor, registered dietitian, and functional medicine practitioner. The program was also co-led by a dietetic intern from SUNY Oneonta, providing compassionate guidance every step of the way. The group began the program during the week of 4/4/24 but completed it at their own pace. The program was created so that everyone's goal would be obtainable even

with each busy schedule and daily obligations. The 4-week program consisted of 4 modules. Each module contained nutrition education with paired activities. The 4 modules covered grocery shopping, meal planning, tips for following the meal plan, sleep, stress, and physical activity. More specific objectives for the subjects were to cut through the noise of dietary myths and fads by providing evidence-based solutions, learn the transformative role of sleep-in boosting energy levels and improving overall well-being, master stress reduction techniques, provide tips for movement routines that can improve overall vitality and health, all while joining a community of individuals. Lastly, a one-hour group session hosted by a dietetic intern on Zoom was hosted each Sunday at 6 pm during the intervention period along with an active Facebook group between the nutrition experts and the members for reminders, questions, goals, advice, and encouragement.

TOOLS

The effectiveness of the program was assessed via pre- and post-survey (Appendix A). The subjects completed a 9-question qualitative multiple-choice survey, entirely written and created by SUNY Oneonta Graduate Student. The pre-test was included in the first module of the program, along with an overview of the program and the other forms that are crucial to the first stage of the program. The same 9 multiple-choice questions were offered in the last module at the end of the study, which fell on the week of 4/25/24.

DATA ANALYSIS

For the data scoring and interpretation of this study, the pre-test and post-test were assigned a scoring system for questions 1-9 based on the answers they chose. The scoring system was again created by SUNY Oneonta Graduate Student. “Very Confident” or “Very Good” was 3 points, “Confident” or “Good” was 2 points, “Somewhat Confident” or “Somewhat Good” was

1 point, “Not Confident” or “Not Good” was 0 points. The highest total score possible was 27. Each participant's total scores were compared to determine if difference between their total scores in the pre- and post-tests. To assess the effectiveness of the positive pathways program on the subject's confidence in their nutrition and lifestyle knowledge and ability to continue making sustainable changes toward a healthier lifestyle, the pre- and post-total scores were entered into the SPSS Statistics software and analyzed using the Wilcoxon test with the p-value 0.05. Question 10 of the pre- and post-test surveys was a fill-in-blank for the participants to enter their weight before and after completing the program and was not included in the statistical analysis.

RESULTS

The participants' (n=4) answers to the multiple-choice questions in the pre and post-test were collected and analyzed to determine if there was an improvement in the participant's ability to make sustainable nutrition-related habits after completing the program. The results were determined based on the participants' answers to questions about their ability to grocery shop, meal prep, manage sleep & stress, reach physical activity goals, improve their relationship with food, etc.

Total Confidence Scores

Pre & Post Test Results

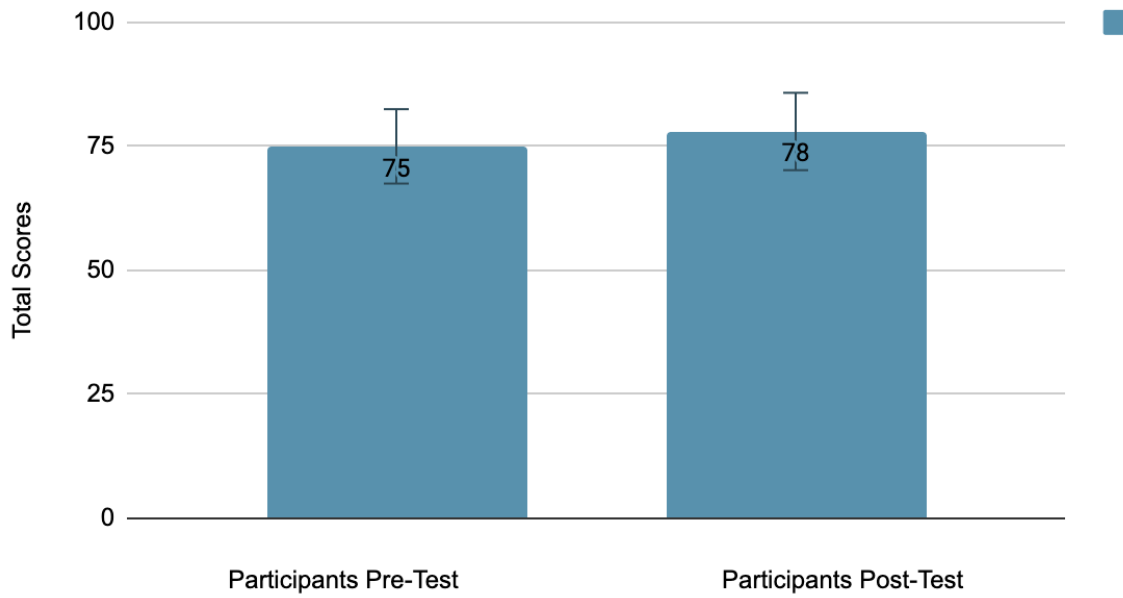


Figure 1. The participant's (n=4) total confidence score before beginning the program was 75. After completing the program, the total confidence score increased to 78. This was not statistically significant ($p>0.05$).

Mean Total Confidence Scores

Pre & Post Test Results

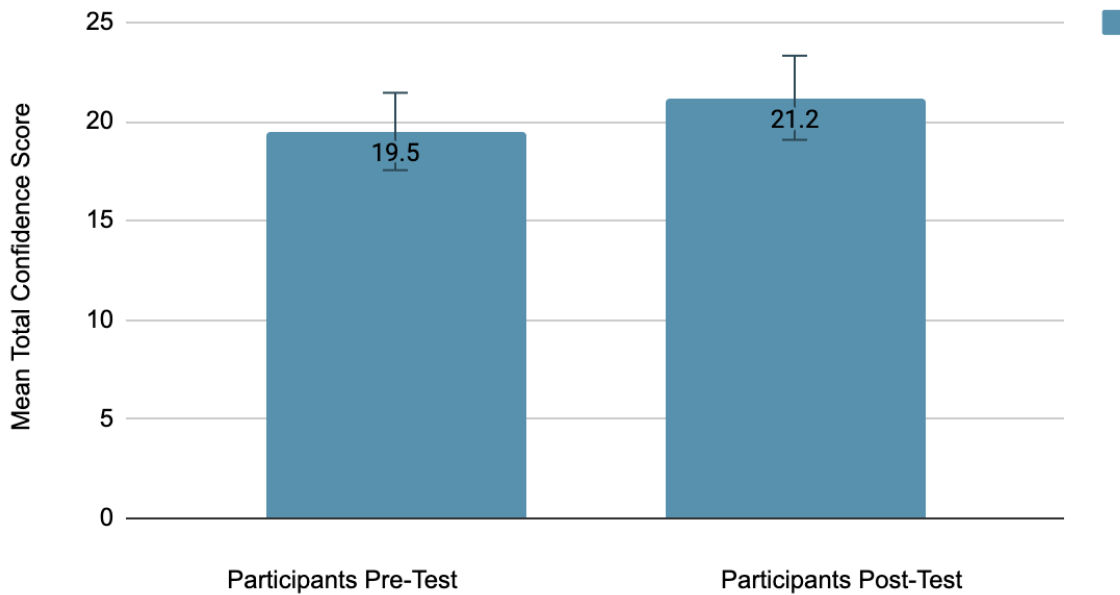


Figure 2. The participant's (n=4) mean total confidence score before beginning the program was 19.5. After completing the program, the mean total confidence score increased to 21.2. This was not statistically significant ($p>0.05$).

Standard Deviation of Total Confidence Scores

Pre & Post Test Results

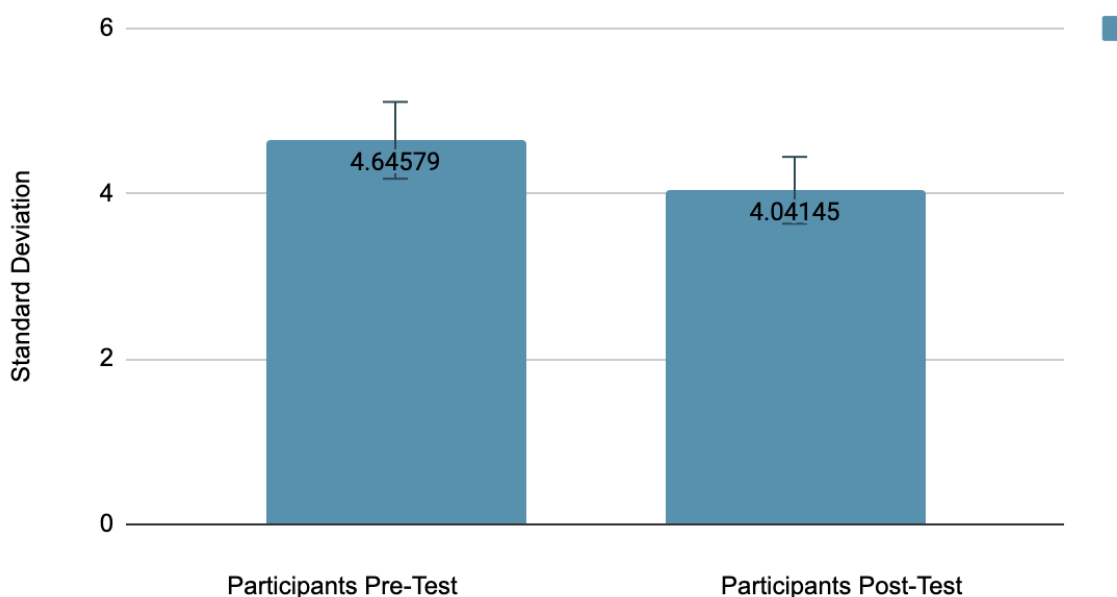


Figure 3. The participant's (n=4) standard deviation of their total confidence score before beginning the program was 4.64579. After completing the program, the standard deviation of their total confidence score was 4.04145. This was not statistically significant ($p > 0.05$).

DATA ANALYSIS

A Wilcoxon signed-rank test showed that a 4-week virtual nutrition and lifestyle program did not elicit a statistically significant change in the nutrition confidence in individuals ($Z = -0.552$, $p = 0.581$). The figures above show the participants' confidence scores before and after the 4-week nutrition and lifestyle program. Both the pre- and post-survey had a total of four participants (n=4). After completing the 4-week program, the total confidence score between the participants increased by 3 points (Figure 1), the mean total confidence score increased by 1.7 points (Figure 2), the lowest total score increased by 3 points, the maximum total confidence score increased by 4 points, the total confidence increased by 2 points in the 25th percentile, and the total confidence

increased by 3.3 points in the 75th percentile. The median total score stayed the same in both the pre and post-tests. These results provide evidence that the participant's nutritional behaviors and confidence did not change pre to post. The standard deviation of their total confidence score decreasing from 4.64579 to 4.04145 (Figure 3) showed that the variance in the participant's answers decreased in the post-test.²

DISCUSSION

The primary findings of this study were that a 4-week virtual nutrition and lifestyle program did not elicit a statistically significant change in the nutrition confidence in adults. Although this study cannot claim significance in the effectiveness of joining a four-week self-paced nutrition and lifestyle program with weekly meetings led by nutrition experts alongside other adults seeking a comprehensive approach to developing substantial healthy habits, the data collected from the pre, and post-tests did provide evidence of improvements in the participants' total confidence in their nutrition and lifestyle knowledge after completing the program.

In addition, the primary findings of this study agree with the current literature. This study agrees with two randomized control trials, *The Long-term Effectiveness of a Smartphone App Combined With a Smart Band on Weight Loss, Physical Activity, and Caloric Intake in a Population With Overweight and Obesity* by Lugones-Sanchez, C. et al and *The Effect of a mHealth Intervention Using a Pedometer App With Full In-Person Counseling on Body Composition of Overweight Adults* by Hernández-Reyes, A. et al, in that nutrition interventions that combine the tools of technology, face-to-face meetings, brief counseling, and self-monitoring can potentially benefit adults in reaching their nutrition-related goals but there is room for more research^{7,8}

It is important to note that none of the participants chose “not confident” to any question in the pre or post-test survey implying that all participants had a baseline of at least “somewhat confident” in various nutrition and lifestyle categories before starting the program. In addition, most answers were declared “Confident,” “Good,” or higher to any of the pre- or post-survey questions. Lastly, half of the participants chose to answer question 10, where they were asked to fill in the blanks to assess if there were any changes in weight before and after completing the program. The other half left this question blank. The participants who answered question 10 both lost at least 4 lbs. after completing the program.

STRENGTHS AND WEAKNESSES

Strengths of the study include the closeness between ages of the participants. All participants were between 22 and 26 years old. Other strengths include the intervention's length (4 weeks), the ability to complete the program at their own pace, and the access to support from nutrition experts at any point along the way. A major weakness of this study is the lack of participants who joined the study (n=4). The length of time granted for recruitment for the study was not enough to recruit adults to dedicate 4 weeks of their time to an intervention. Studies with small numbers of participants like this fail to present a strong representation of the population and intervention. Another major weakness of the study was the lack of attendance during the weekly Zoom meetings, which fails to answer the question of whether the combination of a self-paced program and live weekly meetings could create a strong, empathetic support system for individuals trying to better their health outcomes can easily be incorporated into their daily lives. Other weaknesses are the lack of distribution between genders with n=3 women compared to n=1 men, knowledge of how well each participant followed the program, and half of the members leaving the fill-in-the-blank question blank. Furthermore, while the CDC associates

consuming a balanced diet, physical activity, and sufficient sleep with beneficial management and avoidance of heart disease, type 2 diabetes, and other chronic illnesses, further research is needed to evaluate whether a group of adults join and complete a virtual four-week self-paced lifestyle program, they will develop confidence in their nutrition and lifestyle knowledge and ability to continue making sustainable changes toward a healthier lifestyle.¹

CONCLUSION

In conclusion, results from the present study indicated the 4-week self-paced nutrition and lifestyle program impacted participants' behavioral confidence but not significantly enough to know if changes in sustainable habits will follow. In future research, it is important to recruit a larger sample size and documentation of how well they followed the program intervention.

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APPENDIX

Appendix A: Pre and Post-Test Survey Questionnaire:

- 1) How confident are you in your ability to reach your nutrition-related goals?
 - Very confident
 - Confident
 - Somewhat confident
 - Not confident
- 2) How confident are you in your ability to reach your physical activity goals?
 - Very confident
 - Confident
 - Somewhat confident
 - Not confident
- 3) How would you describe the support you have in reaching your nutrition-related goals?
 - Very Good
 - Good
 - Somewhat Good
 - Not Good
- 4) How would you describe your relationship with food?
 - Very Good
 - Good
 - Somewhat Good
 - Not Good
- 5) How confident are you in your ability to use tools to better your sleeping habits?
 - Very Confident

- Confident
- Somewhat confident
- Confident

6) How confident are you in your ability to manage your stress levels?

- Very confident
- Confident
- Somewhat confident
- Not confident

7) How confident are you in your ability to grocery shop

- Very confident
- Confident
- Somewhat confident
- Not confident

8) How confident are you in your ability to differentiate between diet culture myths/beliefs/attitudes and evidence-based nutrition education?

- Very confident
- Confident
- Somewhat confident
- Not confident

9) How confident are you in your ability to follow a diet

- Very confident
- Confident
- Somewhat confident

- Not confident

10) Please enter your current weight