

EFFECTIVENESS OF A NUTRITION INTERVENTION IN OLDER ADULTS AGED 55+



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ABSTRACT

Objective: To evaluate the effectiveness of an intervention designed to improve behaviors, knowledge, and self-efficacy around chronic disease management in older adults.

Design: Quasi-experimental design with one intervention group of older adults

Methods: Participants were recruited for this study via an email from facility director, Joan Scotti and other marketing tactics. Effectiveness of the study was evaluated based on changes in pre and post survey questionnaires.

Setting: Slingerlands, NY

Participants: 18 participants completed the study

Intervention: The intervention included two days of instruction. Topics discussed included adequate intake to combat malnutrition and easy ways to prepare nutritious foods. The second day included a cooking demonstration. The intervention was conducted over two days one week apart. Participants completed pre and post survey questionnaires which included questions related to general nutrition knowledge, confidence reading nutrition fact labels, and preparing fruits and vegetables to assess the effectiveness of the intervention.

Results: Quantitative data was analyzed using Mann-Whitney U tests in SPSS. Participant confidence in using and interpreting food labels, confidence including fruits and vegetables in meals and snacks, and familiarity with different methods of cooking fruits and vegetables significantly increased ($p < 0.05$).

Conclusions and Implications: A hands-on nutrition intervention and cooking demonstration can be effective at increasing nutrition-related knowledge and self-efficacy in older adults living at an independent senior living center.

INTRODUCTION

- People are living longer due to recent advances in healthcare and technology.
- Between 2015 and 2020, the percentage of people over 60 nearly doubled from 12% to 22%.
- Older adults are not free from morbidity.
- Approximately 85% of older adults have at least one chronic health condition, and 60% have at least two chronic conditions.
- The purpose of this study was to evaluate the effectiveness of an intervention designed to improve behaviors, knowledge, and self-efficacy around chronic disease management in older adults.

METHODS

- This study was conducted at the Summit at Mill Hill in Slingerlands, NY from September 2021 to February 2022.
- 18 participants completed the study.
- This intervention was based on the adult learning theory.
- The tool used was created by the researchers. The tool was a pre and post survey questionnaire consisting of 10 multiple choice, short response, and Likert scale questions related to general nutrition knowledge, confidence in using and interpreting food labels, and confidence with preparing fruits and vegetables.
- Data analysis evaluated whether there was a significant change in nutrition-related knowledge and cooking confidence/skills among participants.
- Quantitative data was analyzed using nonparametric versions of independent t-tests using Mann-Whitney U tests in SPSS
- $P < 0.05$ was considered statistically significant
- Content analysis was used to analyze qualitative data

RESULTS

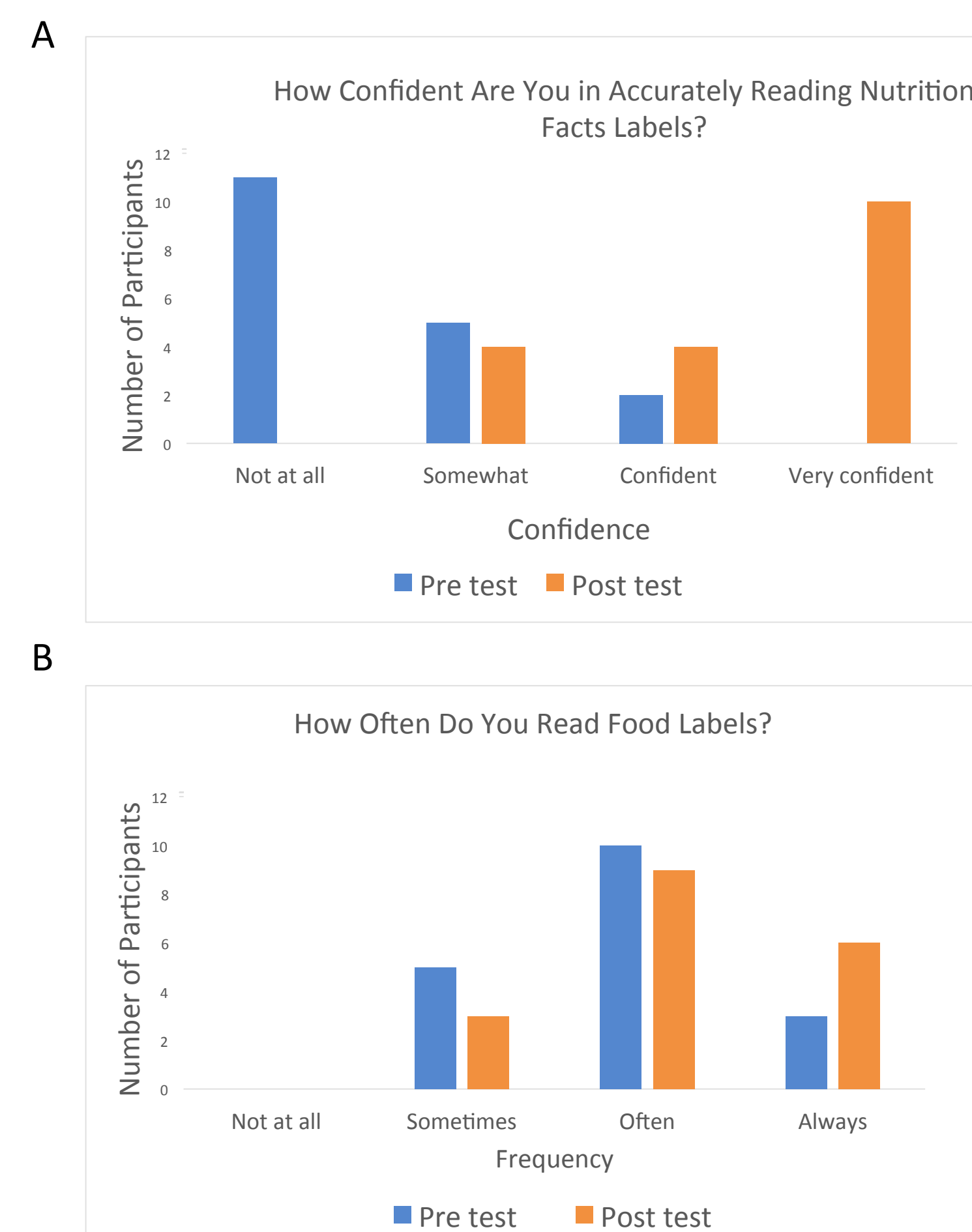


Figure 1. Reading nutrition fact labels (n=18). A) Participant confidence in accurately reading food labels increased significantly from baseline to post-intervention ($p < .001$). B) Participant frequency in reading food labels was not significantly different between baseline and post-intervention ($p = .230$). Mann-Whitney U tests were conducted via SPSS.

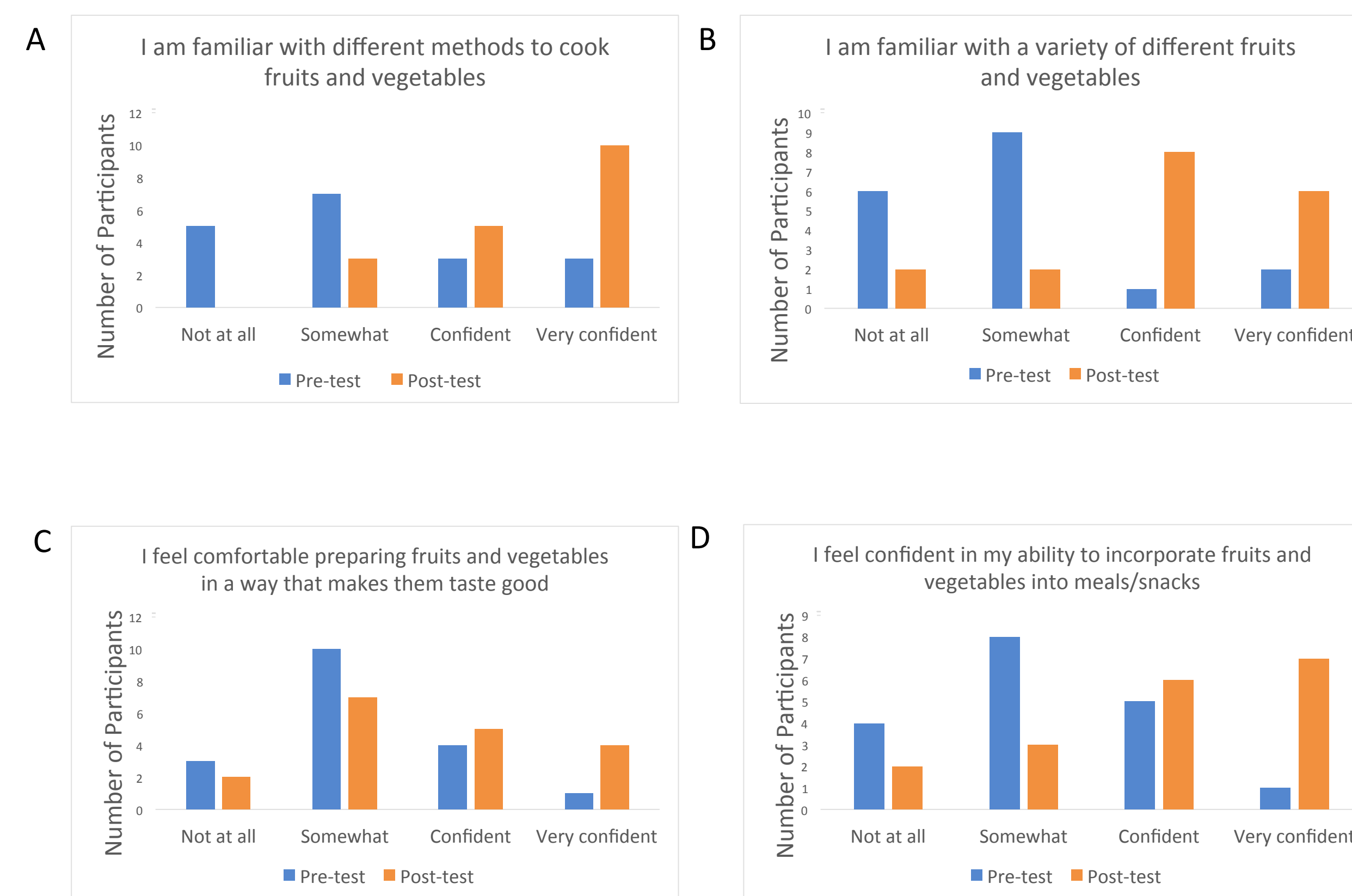


Figure 2. Confidence with preparing fruits and vegetables (n=18). A) Participant familiarity with different methods to cook fruits and vegetables was significantly different between baseline and post-intervention results; ($p = .002$). B) Participant familiarity with a variety of fruits and vegetables significantly increased from baseline to post-intervention; ($p = .003$) C) Participant confidence in preparing fruits and vegetables in a way that makes them taste good was not significantly different between baseline and post-intervention; ($p = 0.155$). D) Participant confidence in their ability to incorporate fruits and vegetables into meals/snacks significantly increased from baseline to post-intervention; ($p = 0.013$). Mann-Whitney U tests were conducted via SPSS.

RESULTS, CONTINUED

Nutrition Question	Number of Correct Answers at Baseline	Number of Correct Answers on Post-Test
Name 3 of the 5 "stops" on a nutrition fact label	4 (22.2%)	18 (100%)
Total carbohydrates include which three categories?	0 (0%)	7 (38.8%)
Older adults have a risk of being deficient in what nutrients? (able to identify at least two)	3 (16.7%)	16 (88.8%)

Table 1. Number of nutrition-related knowledge questions participants were able to answer correctly at baseline compared to post-intervention. Improvements in participant knowledge were observed in all three questions.

Question/Response	Number of Participants Making Responses (n) at Baseline (n = 18)	Number of Participants Making Responses (n) at Post-Intervention (n = 18)
What do you look for when reading a nutrition fact label?	-	-
Protein	13	15
Fat	5	12
Calories	11	12
Added Sugar	2	15
Cholesterol	4	11
Carbohydrates	12	13
Sodium	6	17
What is the importance of adequate fat in your diet?	-	-
Brain health	9	12
Insulation/Lubrication	2	14
Hormones	0	8
Absorbs nutrients	0	9
What is the importance of adequate protein in your diet?	-	-
Muscle building	12	14
Energy/fuel	10	10
Healing	3	7
Cellular structures and functions	0	8
Good health	9	1
What is the importance of adequate carbohydrate in your diet?	-	-
Energy/fuel	10	18
Brain health	7	3
Weight maintenance	2	0

Table 2. Common themes of answers for open-ended questions compared from baseline to post-intervention.

CONCLUSION

The results of this study serve as a model for how nutrition education programs can be used to improve behaviors, knowledge, and self-efficacy around chronic disease management in older adults at an independent senior living center. Further research is needed to evaluate what other types of nutrition programs may be beneficial amongst this population group at the community level.

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