

The Effectiveness of Nutritional Education Among Seniors Over the Age of 65 in Leading a Heart Healthy Lifestyle

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Objective: To evaluate the effectiveness of a nutrition educational program on increasing individual knowledge in leading a heart healthy lifestyle among seniors aged 65 years and older.

Design: Quasi-experimental.

Methods: Participant knowledge was assessed utilizing a pre-and post-test which included a Food Frequency Questionnaire (FFQ). Duplicate tests were given prior to an educational session and two weeks post-education. Participant performance was evaluated by comparing test grades and results from the FFQ.

Setting: Amherst Senior Center, Amherst, MA

Participants: 5 men and women over the age of 65 years.

Results: Participation in the educational session increased test scores by 24.6% (p<0.005) on average. There were no significant results between pre-and post-test FFQ between educational sessions. This indicated no significant difference in dietary changes.

Conclusion: An educational session improved individual knowledge on a heart healthy lifestyle but did not lead to changes in food intake among participants

INTRODUCTION

- For men and women in the age group of sixty-five to eighty-five, heart disease is the second leading cause of death as of 2017^{1,2}
- Dietary patterns that include excessive intake of sodium, added sugars, fats, and low intake of fruit and vegetables, whole grains, fibers, legumes, fish and nuts, contribute to the development of cardiovascular disease.³
- Nutrition educational sessions have been used to increase nutrition knowledge and improve dietary intake.⁴
- The purpose of the program was to evaluate the effectiveness of providing group nutrition education on leading a heart healthy lifestyle for the prevention of cardiovascular disease.

METHODS

- The study was divided into three sessions and held over a four-week time frame.
- Session one included the pre-test. The education program was conducted one week later and consisted of four topics: reading a nutrition label, qualifications of a heart healthy diet, exercise recommendations, and meal preparation.
- Post-test was distributed during session three, two weeks after the education session.
- Quantitative data was compared used Wilcoxon signed-rank tests for non-parametric data. IBM SPSS Statistics 26 was used for data analysis.

RESULTS

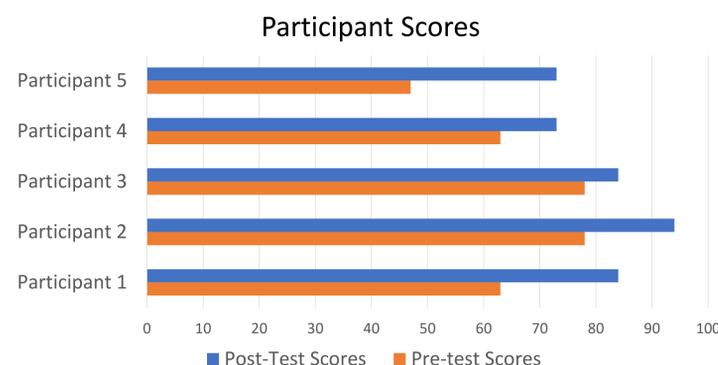


Figure 1. Pre- and post-test scores for each participant as a percentage. p<0.005.

Table 2_ Questionnaire Results per Questions Pre- and Post- Test

Questionnaire (n=5) with scales (range of possible scores)	Mean (SD)	
	Before Program	After Program
Drink tomato juice or vegetable juice (1-8)	1.8 (1.6)	2.0 (1.5)
Drink 100% fruit juice (1-8)	2.2 (1.3)	2.6 (1.0)
Drink other drinks such as Kool-Aid, Lemonade, Soda, Gatorade or Powerade (1-8)	1.0 (0.0)	1.0 (0.0)
Drink milk as a beverage (1-8)	3.2 (2.6)	2.2 (1.4)
Drink alcohol (1-8)	1.0 (0.8)	1.4 (0.8)
Eat whole grains (oatmeal, whole grain bread, pastas, cereals, i.e. shredded wheat, raisin bran) (1-8)	4.8 (1.2)	5.0 (1.9)
Eat fruit (1-8)	3.8 (0.9)	5.2 (1.5)
Eat vegetables (1-8)	5.4 (1.0)	5.2 (0.7)
Eat luncheon or deli-meat (such as bologna, beef, turkey, chicken, ham) (1-8)	1.0 (0.0)	1.0 (0.0)
Eat lean proteins such as chicken, turkey, fish, pork (1-8)	3.8 (1.2)	3.4 (1.0)
Eat beef (1-8)	1.4 (0.4)	1.0 (0.0)
Eat lean ground beef (1-8)	1.4 (0.5)	1.0 (0.0)
Eat soup (1-8)	3.4 (0.5)	3.4 (1.7)
Eat soup made with low-sodium broth (1-8)	1.6 (0.8)	2.4 (1.3)
Eat potato chips (1-8)	1.4 (0.8)	1.4 (0.8)
Eat frozen meals (1-8)	1.0 (0.0)	1.2 (0.8)
Eat candy, desserts (donuts, cake, cookies, pop tarts, Danishes) (1-8)	3.6 (1.4)	3.6 (2.3)
Add salt to your meals or snacks (1-8)	2.4 (1.5)	2.4 (1.4)

Table 2. FFQ answers scaled to following choices: 1. 1 time per week, 2. 1-2 times per week, 3. 3-4 times per week, 4. 5-6 times per week, 5. 1 time per day, 6. 2-3 times per day, 7. 4-5 times per day, 8. 6 or more times per day.

RESULTS, continued

Table 1. Pre- and Post-Quiz Results with Change Scores (n=5)

	Pre-Quiz (%)	Post-Quiz (%)	Change Score (pts)	Percent Change %
Participant 1	63.0	84.0	21.0	33.5
Participant 2	78.0	94.0	16.0	20.5
Participant 3	78.0	84.0	6.0	7.6
Participant 4	63.0	73.0	10.0	6.3
Participant 5	47.0	73.0	26.0	55.3
		Average Change	15.8	24.6

Table 1. Pre- and post- scores for each participant including change scores (points) and percent change.

DISCUSSION

- Food Frequency Questionnaire results between pre- and post-tests were not significant, indicating little dietary changes were made.
- The post-education test showed increased scores for all participants from the pre-education test.
- Results were similar to another study who found only test scores increased with no changes in FFQ after one educational session.⁵
- Additional education sessions over a longer period may lead to changes in dietary intake.

CONCLUSIONS

Nutrition educational sessions can improve individual knowledge on a heart healthy lifestyle but may not show changes in dietary behavior. This limitation may be related to the number of education sessions that were conducted. . Ideally, nutrition education sessions can be tailored to individual, or group needs, with the idea that these programs can be repeated for future use leading to positive health results.

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