Efficacy of Two Nutrition Education Methods for Older Adults in an Independent Living Community

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Abstract

Older adults are a diverse population with many life experiences. As adults age, food and physical activity can promote better health and quality of life. This study took place in an independent living facility. Independent living facility residents live in their own apartments where they cook their own meals and choose their own physical activity. Two methods of nutrition education, in-person and online lessons, were used to discuss areas of concern for older adults: meal planning, physical activity, protein intake and produce consumption. Participants completed several measures to gather information, determine education topics, and determine the effects of the study. Interviews were conducted to gather perspectives on their community and perceptions of food and nutrition. The Dietary Screening Tool was administered before (PRE) and after (POST) the educational sessions to assess changes in dietary intake frequency and nutritional risk. Finally, Post-Pre questionnaires assessed self-reported change in familiarity and intention to change. Results were not significant due to a small, non-diverse sample. However, the results suggested a shift toward higher familiarity and likelihood to apply changes.

Background

- Food, nutrition, and activity are important in improving the quality of life.
- Residents of a local independent living facility were interested in learning more about nutrition and physical activity recommendations.

Method (Parts 1 and 2)

Recruitment:
- Convenience sampling was used to recruit participants.
- Participants had to be:
  - Residents of a local independent living facility
  - Age 55+ (minimum age required to live there)
  - Be interested in learning more about nutrition and physical activity

Participants:
- Twelve older adults completed Parts 1 and 2
  - The majority were females and were "at nutritional risk" (Table 1).

Part 1: Needs Assessment Methods

Assessments:
- On-line surveys were conducted to identify participants individual preferences on their personal nutrition habits.
- Physician-prescribed nutrition habits
- Challenges to achieving optimal health

Results:
- Participants completed the Dietary Screening Tool (Table 1) which assesses dietary intake frequency and nutritional risk; max score = 100 (Table 2)
- Descriptive statistics assessed frequencies of DST responses.
- Interviews were reviewed for themes.

Method (Parts 2)

Recruitment:
- Convenience sampling was used to recruit participants.
- Participants had to be:
  - Residents of a local independent living facility
  - Age 55+ (minimum age required to live there)
  - Be interested in learning more about nutrition and physical activity

Participants:
- Twelve older adults completed Parts 1 and 2
  - The majority were females and were "at nutritional risk" (Table 1).

Part 2: Program Evaluation Methods

Educational Program Design:
- Topics included:
  - Fruits and vegetables
  - Protein
  - Eating regular meals
  - Physical activity
- Participants were randomly assigned to either the online lesson group or the in-person lesson group; content did not differ between groups (Table 3)
- Both groups completed the DST at Session 1 (PRE) and 3 months following the program (POST).
- Post-Pre questionnaires were completed after each lesson by both groups.

Part 1: Needs Assessment Results

The majority of participants reported that:
- Independence was a factor in choosing the community they live in
- Involvement in their community is a common value
- Socialization is an important aspect of the community
- Food preferences are based on past experiences and enjoyment
- Walking was the preferred form of physical activity
- Challenges to achieving optimal health are attitude and social conditions (e.g., eating alone, withdrawal)

Part 2: Program Evaluation Results

- No significant changes in nutritional risk were detected from PRE to POST

Table 1. Participant Demographics at Initial Assessment

<table>
<thead>
<tr>
<th>Gender</th>
<th>Number</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>4</td>
<td>30.8</td>
</tr>
<tr>
<td>Female</td>
<td>8</td>
<td>69.2</td>
</tr>
</tbody>
</table>

Nutritional Risk Category (n=11):
- At Risk
- Possible Risk
- Not at Risk

Table 2. Dietary Screening Tool Categories and Points

<table>
<thead>
<tr>
<th>Diet Category</th>
<th>Total Points</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Problem&quot; Diet Categories</td>
<td></td>
</tr>
<tr>
<td>Dairy</td>
<td>10</td>
</tr>
<tr>
<td>Lean Protein</td>
<td>10</td>
</tr>
<tr>
<td>Vegetables</td>
<td>10</td>
</tr>
<tr>
<td>Total and Whole Grains</td>
<td>15</td>
</tr>
<tr>
<td>Whole Fruit and Juice</td>
<td>10</td>
</tr>
<tr>
<td>&quot;Western&quot; Diet Categories</td>
<td></td>
</tr>
<tr>
<td>Processed Meat</td>
<td>10</td>
</tr>
<tr>
<td>Added Fats, Sugars, and Sweets</td>
<td>20</td>
</tr>
</tbody>
</table>

Table 3. Lessons Overview

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>ONLINE LESSONS</th>
<th>IN-PERSON LESSONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Duration</td>
<td>• 5-8 minutes</td>
<td>• 45 to 60 minutes</td>
</tr>
<tr>
<td>Educational Delivery</td>
<td>Group viewing of lessons without discussion during or after</td>
<td>Interactive group education session</td>
</tr>
<tr>
<td>Interactive Activities</td>
<td>None</td>
<td>Critical thinking: • Matching games (e.g., matching chronic diseases to the nutrient that can prevent them) • Application activities (e.g., using food models to indicate preferences and meal ideas, discussing good sources of nutrients) • Taste testing • Physical activity</td>
</tr>
</tbody>
</table>

Supplemental Materials
- PowerPoint slides
- Lesson-specific worksheets
- Extension publications

Table 4. Nutritional Risk Change from PRE and POST

<table>
<thead>
<tr>
<th>Nutritional Risk Category</th>
<th>PRE N (Percent)</th>
<th>POST N (Percent)</th>
</tr>
</thead>
<tbody>
<tr>
<td>At Nutritional Risk</td>
<td>3 (23.0)</td>
<td>2 (15.4)</td>
</tr>
<tr>
<td>Possible Nutritional Risk</td>
<td>5 (38.5)</td>
<td>5 (38.5)</td>
</tr>
<tr>
<td>Not at Nutritional Risk</td>
<td>5 (38.5)</td>
<td>6 (46.2)</td>
</tr>
</tbody>
</table>

Conclusions

- Generalizability of this study is limited due to a small sample size (n=13) and a non-diverse sample of White males and females.
- These results suggest that both online and in-person nutrition education for older adults may improve the familiarity of and intention to practice recommended nutrition and physical activity practices.
- Further research is needed to determine if the method of nutrition education delivery can influence familiarity and likelihood to practice nutrition and physical activity recommendations.

References