Viva Vegetables: Can brief nutrition education by Utah State University dietetic students nudge college students' knowledge and self-efficacy regarding the consumption of vegetables?


Introduction

Vegetable consumption is highly beneficial in promoting overall health, reducing risks associated with chronic illnesses, and managing weight, among other benefits. Although vegetable intake is considered to be healthy, most adults, including college students, throughout the United States are not eating enough vegetables. Much research has been conducted to determine how healthy eating can be impactful among college students; however, there is a lack of research dedicated solely to the benefits of increasing vegetable intake among this same population. Many research studies have shown that vegetable and fruit intake can be influenced through certain interventions. Consumption of vegetables and fruits increased among adults with participation in a nutrition class. However, there is a lack of research dedicated solely to the benefits of increasing vegetable intake among this same population.

Purpose of our study:

Determine if brief nutrition education and food demonstration can improve college students' knowledge of the benefits of increasing vegetable intake among this same population. Much research has been conducted to determine how increasing vegetable intake among college-aged students. Interactive vegetable-focused nutrition workshops had a statistically significant, short-term, positive impact on the self-efficacy and knowledge of college students. Further research could assess if effects were long-lasting. This study suggests that workshops like these could be incorporated into nutrition education programs with the goal of increasing vegetable consumption among college-aged students.

Methods

Participants: 99 students attending college at USU in Logan attended a Viva Veggies nutrition education workshop and completed a pre- and post-survey.

Recruitment & Setting:

- Participants were recruited through campus social media, posters and handouts around campus, announcements in entry-level university courses, and personal invitations from dietetic students and Aggie Recreation Center (ARC) employees.
- 6 different workshops were held in the first two weeks of February at the ARC.

Intervention:

- Participants attended a 50 minute nutrition workshop consisting of:
  - Powerpoint presentation reviewing vegetable examples, specific nutritional benefits, and preparation tips
  - Vegetable food demonstration with samples
- Participants completed a post-survey and received a free kitchen tool for participating.

Survey:

- The pre-survey taken before the workshop included:
  - Demographic information
  - Questions to assess confidence (self-efficacy) in consuming vegetables
  - Knowledge assessment questions on nutrients found in vegetables
- The post-survey included:
  - Identical self-efficacy and knowledge questions

Statistical Analysis:

- Assessed difference in participants’ knowledge of vegetables and self-efficacy to prepare and eat vegetables before and after attending the nutrition workshop.
- Descriptive statistics were run on demographic questions.
- Paired sample t-tests and repeated measures ANOVA were run for self-efficacy and knowledge questions.

Results

Table 1: Summed Knowledge and Self-Efficacy Mean Score Before and After Nutrition Workshop and Percent Change, Stratified by Age and Gender.

<table>
<thead>
<tr>
<th>Category Description</th>
<th>Number of Participants</th>
<th>Pre-Survey Mean Score</th>
<th>Post-Survey Mean Score</th>
<th>% change</th>
<th>P-Value</th>
<th>SD</th>
<th>Pre-Survey Mean Score</th>
<th>Post-Survey Mean Score</th>
<th>% change</th>
<th>P-Value</th>
<th>SD</th>
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</thead>
<tbody>
<tr>
<td>Total Participants</td>
<td>99</td>
<td>2.68</td>
<td>5.85</td>
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<td>32.43</td>
<td>35.78</td>
<td>10%</td>
<td>&lt;0.001</td>
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<td>2.59</td>
<td>5.77</td>
<td>123%</td>
<td>&lt;0.001</td>
<td>1.8</td>
<td>31.7</td>
<td>35.32</td>
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<td>&lt;0.001</td>
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<td>21-24</td>
<td>38</td>
<td>2.71</td>
<td>6.03</td>
<td>122%</td>
<td>&lt;0.001</td>
<td>1.6</td>
<td>32.76</td>
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<td>&lt;0.001</td>
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<td>5.65</td>
<td>100%</td>
<td>&lt;0.001</td>
<td>1.4</td>
<td>33.39</td>
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<td>31.68</td>
<td>35.59</td>
<td>12%</td>
<td>&lt;0.001</td>
</tr>
</tbody>
</table>

*baseline self-efficacy was higher for males than females (p=0.03)

SD = standard deviation

Conclusions

Interactive vegetable-focused nutrition workshops had a statistically significant, short-term, positive impact on the self-efficacy and knowledge of college students. Further research could assess if effects were long-lasting. This study suggests that workshops like these could be incorporated into nutrition education programs with the goal of increasing vegetable consumption among college-aged students.

References