Teaching Dietetic Students to Create Nutrition Education Material with a Validated Evaluation Tool

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Abstract
The purpose of this study was to determine if there was a quality difference between nutrition education handouts created by dietetic students using teaching methods concepts and a modified DANEH tool. The (DANEH) tool was created to objectively measure quality and readability of community nutrition education handouts and may be useful in training dietetic students to create high-quality nutrition education materials.  

Methods

A convenience sample of 18 dietetic students enrolled in a senior-level teaching methods course participated in the study. Brigham Young University Institutional Review Board approved the research. Written informed consent was obtained from students. A post-test randomized experimental design was used. Participants were randomly assigned to either the control group (class concepts only) or the intervention group (class concepts plus modified DANEH tool). Researchers and reviewers were blinded as to which group the students were assigned. The DANEH tool was previously validated for inter-rater reliability and criterion validity for the food-bank client/food-insecure audience. It consisted of 21 criteria related to quality of nutrition education handouts. In this study, the first criterion was changed to add content and accurate evidence-based nutrition guidelines for Medical Nutrition Therapy. The key concepts taught in class matched the criteria in the DANEH tool.

Results

One participant’s data was excluded in final analysis because of the missing scores. Using a larger sample size may show a statistical difference was shown. Using a larger sample size may show a statistical difference was shown. The low ICC may be due to lack of practical experience and minimal training provided to the reviewers. The small sample size is also a limitation that may explain why no statistical difference was shown. Using a larger sample size may show a significant difference.

Conclusion

This research suggests the DANEH tool may be helpful in teaching dietetic students to create high quality nutrition education handouts. However, further research with a larger population is indicated.

References


Figure 1. DANEH Tool Criteria

<table>
<thead>
<tr>
<th>Reviewer</th>
<th>DANEH score* (n=9)</th>
<th>SD</th>
<th>DANEH score* (n=9)</th>
<th>SD</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>17.78 ± 1.72</td>
<td></td>
<td>18.50 ± 1.60</td>
<td></td>
<td>0.0386</td>
</tr>
<tr>
<td>2</td>
<td>16.78 ± 3.00</td>
<td></td>
<td>17.13 ± 2.30</td>
<td></td>
<td>0.794</td>
</tr>
</tbody>
</table>

Figure 2a. DANEH Score for Reviewer 1 and 2.

Figure 2b. DANEH Score for Reviewer 1 and 2.* DANEH score is out of 21 points.

Figure 3. DANEH Tool Criteria

<table>
<thead>
<tr>
<th>Accurate, current content</th>
<th>Logical order</th>
<th>Relevant issue to target audience</th>
<th>Short paragraphs</th>
<th>Appropriate amount of white space</th>
<th>Left justified text</th>
<th>Content and images are culturally appropriate</th>
<th>Several informative headings</th>
<th>Readable font</th>
<th>Important text is bolded or underlined</th>
<th>Purposeful images</th>
<th>Repetition of key concepts</th>
</tr>
</thead>
</table>

Background

Health literacy, an individual’s capacity to obtain, process, and understand basic health information to make appropriate health decisions, is a strong indicator of health outcomes. 1, 2, 3

Methods

The Developing and Assessing Nutrition Education Handouts (DANEH) tool was created to objectively measure quality of nutrition education handouts for the Healthy Food Bank Hub and may be useful in training dietetic students to create high-quality nutrition education materials. 4 The purpose of this study was to determine if there was a difference between nutrition handouts created by dietetic students using the DANEH tool versus those created using only concepts taught in the teaching methods course.

A convenience sample of 18 dietetic students enrolled in a senior-level teaching methods course participated in the study. Brigham Young University Institutional Review Board approved the research. Written informed consent was obtained from students. A post-test randomized experimental design was used. Participants were randomly assigned to either the control group (class concepts only) or the intervention group (class concepts plus DANEH tool). Researchers and reviewers were blinded as to which group the students were assigned. The DANEH tool was previously validated for inter-rater reliability and criterion validity for the food-bank client/food-insecure audience. It consisted of 21 criteria related to quality of nutrition education handouts. In this study, the first criterion was changed to add content and accurate evidence-based nutrition guidelines for Medical Nutrition Therapy. The key concepts taught in class matched the criteria in the DANEH tool.

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References