**Effectiveness of Nutrition Education Sessions to Increase Non-Nutrition Graduate Students’ Level of Nutrition Knowledge and Confidence in Giving Nutrition Advice**

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**Introduction**

**Obesity & Chronic Disease**
- More than one-third of US adults are obese (NCHS, 2014)
- Obesity increases the risk of developing chronic diseases, e.g., diabetes and cardiovascular disease (CDC, 2010)
- Lifestyle factors, e.g., dietary habits, play a key role in the development of chronic disease (Ogden et al., 2014)

**Need to Educate Non-Nutrition Health Professionals on Nutrition**
- Increased demand for healthcare professionals to address the obesity and chronic disease epidemic (Ettienne-Gittens et al., 2012)
- Non-nutrition health professionals are often tasked with delivering nutrition education (AAD, 2014; Ettienne-Gittens et al., 2013)
- Few guidelines exist regarding basic qualifications needed by non-nutrition health professionals who give nutrition education (Ogden et al., 2013)

**Efficacy of Nutrition Training Programs**
- Providing nutrition education may help non-nutrition health professionals increase their level of nutrition knowledge

**Research Questions**
- Can the nutrition knowledge of future healthcare professionals increase with targeted training?
- Will that knowledge/training increase their level of confidence to give nutrition-related advice to the public?

**Hypotheses**

**Null Hypothesis 1**: There is no significant difference in non-nutrition graduate students’ level of nutrition knowledge before and after participating in seven basic nutrition education sessions.

**Null Hypothesis 2**: There is no significant difference in non-nutrition graduate students’ level of confidence to give nutrition advice before and after participating in seven basic nutrition education sessions.

**Methods**

**Sample Population** (n = 5)
- Non-randomized, convenience sample of Graduate Research Fellows (GRFs), 23-26 years old in Cohort 5, 2015-2016, Sanos y Fuertes research project

**Procedures**
- Permission to use data was granted by the Co-PI
- Data: pre/post-tests, demographic forms, and focus group recording
- 6 nutritional professionals recruited to evaluate the content validity of pre/post-tests

**Measures**
- Demographics
  - 7-item paper-and-pencil questionnaire
- Nutrition Knowledge
  - 7 identical pre/post-tests containing 5 question on the presented topic
  - Topics: nutrient guidelines overview, digestive system anatomy, digestive disorders, chronic disease, mindful eating, nutrition and pregnancy, and infant/toddler nutrition
- Confidence to Give Nutrition Advice
  - 4 questions printed on paper and given during the focus group
  - Confidence level rated on a scale of 0 to 10 (0 = not at all confident, 10 = extremely confident)
- Content Validity
  - 42-item Content Validity Questionnaire
  - 4-point Likert scale (1 = not relevant, 2 = somewhat relevant, 3 = relevant, 4 = very relevant)

**Data Analysis**
- Hypotheses: paired sample t-test
- Focus group data: transcribed and coded for themes
- Content validity: content validity index (CVI)

**Results**

**Discussion**

**Null Hypothesis 1**
- Statistically significant difference between pre/post-test scores from all 7 sessions

**Null Hypothesis 2**
- Statistically significant difference between perceived level of confidence in their ability to give nutrition advice before and after the nutrition education sessions

**Conclusion & Limitations**
- There was a significant difference in GRFs level of nutrition knowledge and confidence to give nutrition advice before and after the nutrition education sessions
- As GRFs’ level of nutrition knowledge increased, so did their level of confidence

**Future Research**
- Future studies should investigate the impact of trainings over a longer period of time

**Limitations**
- Small sample population limited to 5 GRFs
- Basic nutrition knowledge is difficult to measure accurately
- 1-hour focus group time frame may not have been sufficient
- A total of 2 pre/post-test items were found to be invalid

**Acknowledgements**
- Thank you to Dr. Gail Frank and the Sanos y Fuertes team for allowing me to use this data
- Special thanks to my committee members, family, and fellow Dietetic Interns for all of your help and support

**For more information**
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**Table 1. Paired sample t-tests difference in level of nutrition knowledge**

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*Significant at the 0.05 level

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**Table 2. Paired sample t-tests difference in level of confidence to give nutrition advice**

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</tbody>
</table>

*Significant at the 0.05 level

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**Content Validity of Pre/Post-Tests**
- Majority of pre/post-test items were relevant and valid (I-CVI greater than 0.79)
- 2 items were not relevant (I-CVI less than 0.79)

**Emergent Themes from Focus Group**
- Insufficient Nutrition Knowledge
- Change in Level of Nutrition Knowledge
- Credibility
- Increase in Confidence to Give Nutrition Advice