Web-based Nutrition Education Module for Health Professions Students

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Summary

Nutrition is the greatest risk factor for all-cause mortality and is one of the leading contributors to disability-adjusted life years in the U.S. (Murray, 2018). Yet, a meta-analysis on medical education in nutrition has shown that a majority of medical students lack confidence in providing nutritional counseling (Crowley, 2019). We created a supplementary online module for health professions students focused on nutritional counseling basics. We found significant improvements in students’ confidence and knowledge in nutritional counseling.

Objective

To demonstrate efficacy of a web-based intervention on nutritional counseling for medical, nursing, and health professions students in improvement in two areas: objective nutrition knowledge and self-reported confidence in providing nutritional counseling.

Methods

A needs assessment survey was sent to all UTHSA students (medicine, nursing, school of health professions). A 45-minute lecture on nutritional epidemiology, motivational interviewing, and nutritional counseling was created, and content was advised by medicine and nutrition faculty authors. Pre- and post- intervention survey administered with lecture. The survey was composed of a 14-question knowledge assessment (KA) based on materials from the intervention and a 15-question self-reported confidence assessment. Confidence assessment questions were formatted on a 7-point Likert scale, and confidence was assessed in 4 areas: providing nutritional counseling to others, using nutrition guidelines (USDA, DHHS), counseling evidenced based diets (DASH, Mediterranean), and satisfaction with current nutritional knowledge. Pre-post- intervention data was analyzed using paired t test for statistical significance with 95% confidence intervals.

Needs Assessment Results

• N = 43 students
• 67% students never provided nutrition counseling before
• Average confidence in providing nutrition advice = 3.25 out of 5
• Students have high interest in learning nutrition counseling but is slightly dissatisfied in their nutrition education (see fig. 1)

Intervention Results

• N = 27 students
• Students significantly improved fundamental nutritional counseling knowledge from baseline to 2.2 points (p < 0.001, 95% CI [1.5, 2.9])
• Significantly improved confidence when providing nutrition counseling to a stranger (95% confidence) (fig. 2)
• Significantly improved confidence in using USDA and DHHS guidelines, motivational interviewing, MyPlate, and dietician at all the p < 0.001 level (fig. 3)
• Significantly improved confidence in providing nutrition counseling using evidence-based diets (Mediterranean, DASH, MyPlate) (p < 0.001)

References


Conclusions

As demonstrated by the needs-assessment survey (fig. 1), there is a need in health professions students at UTHSA to provide better nutritional counseling.

The nutritional module was able to significantly improve:
• Nutritional knowledge based on the knowledge assessment
• Confidence in counseling a new patient or stranger
• Confidence in using different types of nutrition intervention tools
• Confidence in counseling using evidence-based diets

There was no significant improvement in confidence providing counseling to a family member or friend. Based on the results, the intervention module was beneficial for students and increased both their knowledge and confidence in providing nutritional counseling.

Limitations to the module are the limited sample size and population. Our sample size was small and only included current students at UTHSA. Another limitation was the possibility of the assessments only measuring short-term recall. The surveys were completed immediately or shortly after viewing the module. There was also a high attrition rate among those who began the survey.

In the future, we would like to expand our module with shorter, more focused modules such as one dedicated solely for nutritional counseling in diabetic patients. We would also like to evaluate the completion rate of the module and recruit more volunteers. Beneficial additions would include more reference resources, practical applications, and summary slides.

Further information

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