Educating Patients on Nutrition Using a Short Computer-Based Video: A Successful Clinic Model

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Background

- Over 130 million Americans suffer from one or more chronic diseases, such as diabetes.
- A Whole Food, Plant-Based Diet (WFPBD) can help in the management, treatment, and reversal of chronic disease, such as diabetes.[1]
- Patient education regarding nutrition is important but difficult during short clinic visits.[2]
- The waiting room setting offers a unique opportunity to educate patients using short computer-based videos.[3]

Objectives

- Determine the feasibility and impact of a short educational-video intervention regarding WFPBD vs. SAD on the knowledge and confidence of clinic patients

Methods

- Eligibility criteria: age > 18 years
- N = 77 patients volunteered to complete an online survey before and after watching a 4-minute educational video (see QR CODE)
- Knowledge scores assessed through sum of correctly answered questions (max 10 points)
- Confidence scores assess using a Likert Scale Point System (max 45 points)
- Related-Samples Wilcoxon Signed Rank Test was used to compare pre- and post- video scores and deduce most predictive knowledge-based questions

Results

- There was a statistically significant increase in both patient knowledge (z = 5.748, P < .001) and confidence in their knowledge (z = 6.605, P < .001) after watching the educational video.
- Survey questions about fiber, plant-based foods, and saturated fats were the most significant predictors of patients' increased knowledge (F (3, 73) = 124.27; P < .001) and confidence in knowledge (F (3,73) = 103.81; P < .001).

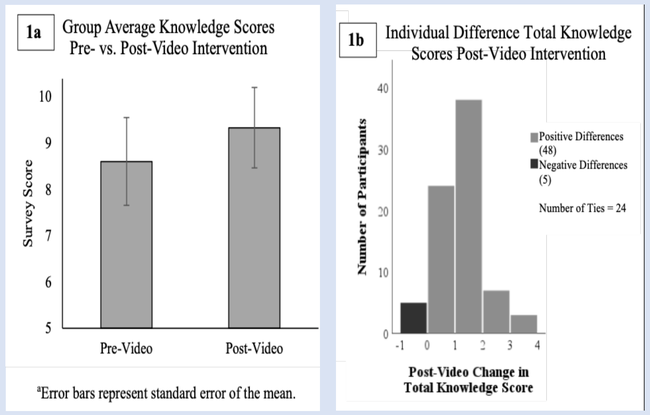

Figure 1a. Participants' average total knowledge score pre-video (M = 8.61; SD = 0.95) and post-video intervention (M = 9.34; SD = 0.87). **Figure 1b.** Participants demonstrated significantly higher total knowledge scores following video intervention (z = 5.75; P < .001).

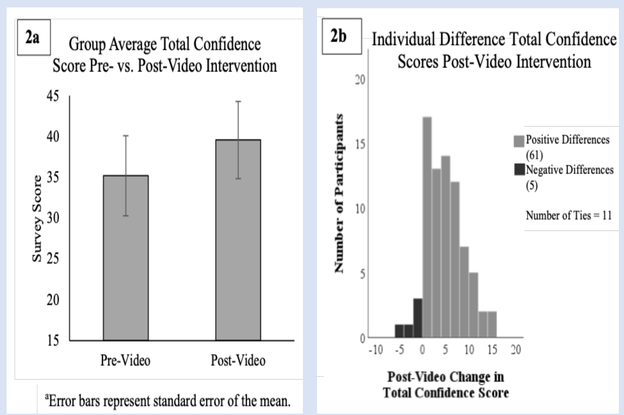

Figure 2a. Participants' average total confidence score pre-video (M = 35.19; SD = 4.90) and post-video (M = 39.56; SD = 4.72) intervention. **Figure 2b**. Participants demonstrated significantly higher total confidence scores following video intervention (z = 6.61; P < .001).

Conclusions

- The administration of short computer-based educational videos can be a feasible and impactful patient education tool for outpatient clinics.

Limitations

- Selection bias: non-randomized and voluntary nature of participant recruitment
- Response bias: dietary habits of the participants may have influenced their survey responses
- Sample size: small number of patients may not have been representative of general population
- Socioeconomic status and literary level: survey was administered in English. Education status may have impacted participants medical literacy

References

1. Tuso PJ, Ismail MH, Ha BP, Bartolotto C. Nutritional update for physicians: plant-based diets. *Perm J*. 2013;17(2):61-66. doi:10.7812/TPP/12-085
2. Prasad K, Poplau S, Brown R, et al. Time Pressure During Primary Care Office Visits: a Prospective Evaluation of Data from the Healthy Work Place Study. J Gen Intern Med. 2019;
3. Yvonne Chan YF, Nagurka R, Richardson LD, Zaets SB, Brimacombe MB, Levine SR. Effectiveness of stroke education in the emergency department waiting room. J Stroke Cerebrovasc Dis. 2010;19(3):209-215