

6-7-2021

A Study Protocol to Investigate the Use of Virtual Worlds to Provide Nutrition Education

James Hollis

Iowa State University, jhollis@iastate.edu

Shelley E. Woodall

Iowa State University, swoodall@iastate.edu

Follow this and additional works at: https://lib.dr.iastate.edu/fshn_ag_pubs

 Part of the [Community Health Commons](#), [Dietetics and Clinical Nutrition Commons](#), [Food Science Commons](#), [Human and Clinical Nutrition Commons](#), and the [International and Community Nutrition Commons](#)

The complete bibliographic information for this item can be found at https://lib.dr.iastate.edu/fshn_ag_pubs/243. For information on how to cite this item, please visit <http://lib.dr.iastate.edu/howtocite.html>.

This Abstract is brought to you for free and open access by the Food Science and Human Nutrition at Iowa State University Digital Repository. It has been accepted for inclusion in Food Science and Human Nutrition Publications by an authorized administrator of Iowa State University Digital Repository. For more information, please contact digirep@iastate.edu.

A Study Protocol to Investigate the Use of Virtual Worlds to Provide Nutrition Education

Abstract

Objectives The use of grocery store tours to provide nutrition education has increased in popularity. Participants in these tours can accompany a nutrition professional as they walk through a grocery store and receive information about products and their nutritional quality. However, there are several obstacles to this approach being more widely used. The objective of this ongoing research project is to show that people find virtual worlds to be acceptable, to determine the most effective method of delivering nutrition education virtually and to determine if people find information provided by an avatar to be credible.

Disciplines

Community Health | Dietetics and Clinical Nutrition | Food Science | Human and Clinical Nutrition | International and Community Nutrition

Comments

This abstract is published as Hollis, J., Woodall, S., A Study Protocol to Investigate the Use of Virtual Worlds to Provide Nutrition Education. *Current Developments in Nutrition*, June 2021;5(Supplement 2);479. doi: [10.1093/cdn/nzab040_003](https://doi.org/10.1093/cdn/nzab040_003).

Creative Commons License



This work is licensed under a [Creative Commons Attribution-Share Alike 4.0 International License](https://creativecommons.org/licenses/by-sa/4.0/).

A Study Protocol to Investigate the Use of Virtual Worlds to Provide Nutrition Education

James Hollis, Shelley Woodall

Iowa State University

Objectives: The use of grocery store tours to provide nutrition education has increased in popularity. Participants in these tours can accompany a nutrition professional as they walk through a grocery store and receive information about products and their nutritional quality. However, there are several obstacles to this approach being more widely used. The objective of this ongoing research project is to show that people find virtual worlds to be acceptable, to determine the most effective method of delivering nutrition education virtually and to determine if people find information provided by an avatar to be credible.

Methods: An innovative technological approach is to create 3D virtual supermarkets that can be used to deliver nutrition information. We have created a 3D virtual supermarket where the viewer is provided with relevant nutrition information by an avatar in different sections

of a virtual supermarket (e.g., produce, dairy, meat or cereals). The avatar uses props such as nutritional information panels, photos or videos to help convey specific information. We are currently conducting a study where participants experience a virtual grocery store tour using three different electronic mediums: handheld tablet, PC monitor or VR-HMD. After being randomized to a treatment order, the participant reports to the laboratory on three occasions. On reporting to the laboratory, the participant has a sensor attached to their wrist to measure heart rate, heart rate variability, skin conductance and skin temperature (to determine if there are physiological differences between the different mediums). They then remain seated quietly for ten minutes while baseline measures are taken. The participant then observes the store tour through the relevant medium. After the completion of the tour, the participant completes a questionnaire about their experiences of the tour.

Results: This is a study protocol and results are currently being collected.

Conclusions: This study will provide new information regarding an innovative approach to providing nutrition education.

Funding Sources: This project received no funding.