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


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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

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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.

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