

6-7-2021

Food Purchases in an Online Virtual Restaurant

James Hollis

Iowa State University, jhollis@iastate.edu

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

 Part of the [Community Health Commons](#), [Entrepreneurial and Small Business Operations Commons](#), [Food Science Commons](#), [Human and Clinical Nutrition Commons](#), and the [Sales and Merchandising Commons](#)

The complete bibliographic information for this item can be found at https://lib.dr.iastate.edu/fshn_ag_pubs/242. 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.

Food Purchases in an Online Virtual Restaurant

Abstract

Food is commonly purchased at fast-food restaurants and improving food choices at these establishments may be a key contributor to improving the nation's diet. A better understanding of the barriers to dietary change when purchasing foods at fast-food restaurants may aid the development of new interventions to improve dietary choices. The objective of this study is to determine the costs and benefits of choosing a lower calorie meal in a 3D virtual representation of a fast-food restaurant.

Disciplines

Community Health | Entrepreneurial and Small Business Operations | Food Science | Human and Clinical Nutrition | Sales and Merchandising

Comments

This abstract is published as James Hollis, Food Purchases in an Online Virtual Restaurant, *Current Developments in Nutrition*, June 2021, 5(Supplement 2); 554, doi: [10.1093/cdn/nzab043_006](https://doi.org/10.1093/cdn/nzab043_006).

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/).

Food Purchases in an Online Virtual Restaurant

James Hollis

Iowa State University

Objectives: Food is commonly purchased at fast-food restaurants and improving food choices at these establishments may be a key contributor to improving the nation's diet. A better understanding of the barriers to dietary change when purchasing foods at fast-food restaurants may aid the development of new interventions to improve dietary choices. The objective of this study is to determine the costs and benefits of choosing a lower calorie meal in a 3D virtual representation of a fast-food restaurant.

Methods: In this ongoing study, a 3D model of a fast-food restaurant was created and accessed by participants through the internet. The foods on the menu, their nutritional content and price were based on foods served at popular fast-food restaurants. After completing a demographic questionnaire, participants were placed at the entrance of a 3D virtual restaurant where they rated their subjective appetite

and rated the expected palatability and satiety of the foods on the menu. Participants were then randomized to one of two conditions: free-choice or goal-orientated (asked to choose a meal that was 700kcal). The participant could then view all menu items on a representation of an electronic ordering kiosk in the store and was asked to 'purchase' a meal. After the meal was selected, participants were asked to rate the palatability and expected satiety of that meal. The cost and nutritional content of the meal was determined.

Results: Preliminary data are presented but as the study is in progress statistical analysis has not currently been performed. Twenty-three participants have currently completed the study. The energy purchased in the free condition is 941kcal while in the constrained condition it is 722 kcal. The cost of the constrained meal is \$6.93 and the free meal is \$7.16. People in the free condition have taken 65.2 seconds to order whereas people in the constrained condition have taken 72.3 seconds.

Conclusions: This ongoing study illustrated the potential for collecting data about food choices using virtual worlds. This approach may provide new insights into how people make food decisions.

Funding Sources: This project received no funding.