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Participant Information Sheet

Project title: Promoting healthier food portions with the application of Augmented Reality

Name of student researcher: Eliena Martin

Name of Primary Supervisor: Dr. Rajshri Roy

Name(s) of Secondary Supervisor(s): Dr. Alex Shaw

Study Site: Grafton and City campus

Researcher Introduction

My name is Eliena Martin. I am a student dietitian who is undertaking this research as my Master's Thesis under the Nutrition and Dietetics Department from the Medical and Health Science Faculty. My Master's thesis is supervised by Dr Rajshri Roy

Project description and invitation

Augmented Reality technology (AR) is a technology that superimposes a computer-generated image on a user's view of the real world, thus providing a composite view. While it is a growing trend, it is a relatively new technology, therefore, the knowledge and information about its potential capabilities is quite limited. Current knowledge focuses on the accuracy of AR by itself. However, the impact of interaction (e.g. user-friendliness, feasibility, influence etc.) with people hasn't been studied. This is essential in order for AR technology to be used by humans. This information would be useful when used in the nutrition field as a tool to promote healthy eating behaviors.

The study is coordinated by the Department of Nutrition and Dietetics in collaboration with the Department of Computer Science. This study is funded by the University of Auckland Food and Health Programme Seed Funding, awarded to Dr Rajshri Roy.

Invitation to participate

Invitation to Participate: You are invited to participate in this research because you:

- Are between 18 to 35 years of age
- Are a student in the University of Auckland
- Can provide informed consent and make a decision
- Can read English
- Are available for "duration needed" for the study
- Are a smartphone user
- Owns a smartphone (in case change to remote plans)

This participation information sheet will help you decide if you'd like to take part in the study. It explains the rationale behind the study, what your participation will involve, outlines potential benefits and risks, and describes what will happen when the study ends.

Purpose of the research

The aim of the study is to evaluate the usability and impact of this AR food scanning smartphone application on dietary behaviors. There are two main objectives of this research:

- To check whether nutritional information provided by this AR food scanning smartphone application have an impact on healthy food choice, and

- To understand if AR is trusted by consumers, their perspectives, and the potential applicability of AR in the field of nutritional information provision of food products compared to other provisions of nutrition information

Project procedure: If you choose to participate, we will arrange a time that suits you to meet at the University of Auckland campus (masked and socially distant). We will confirm your eligibility for the study and provide you with this information sheet and consent form. After signing the consent form, we will provide you with a device for this app and show you how it is used.

You will then be randomly assigned to one of the three conditions:

- Nutrition Information condition
- The Food Switch App condition
- Augmented Reality condition

After this, you will be asked to choose a product from a sample of 6 beverages that fit into 3 healthiness categories. You will be given up to five minutes to choose a product. You will then cross over and receive a different condition and be asked to repeat the same thing but this time with a different condition. This will be repeated until you have chosen a product using all three different conditions. At the end of the experiment, we will ask you to fill out questionnaires that assess the efficacy and usability of each condition.

If due to any future COVID-19 restrictions, we are unable to carry out this research in person, then participants will be asked to download the augmented reality and the food switch smartphone application on their devices, and the study will be conducted via Zoom. The facilitator will use the screen sharing option to share the bar code images and the nutrition information panels of the beverages. The rest of the study procedures will be the same but conducted remotely through Zoom. The in-session chat will be used to share questionnaire links with the participants.

Duration: Participation duration will be approximately 60-120 minutes.

Koha: You will also be presented with a \$20 supermarket e-voucher for your time.

Benefits: Through your participation, you will help provide information on the potential uses of AR technology in the nutrition field which in turn would lead to refinement of the application and larger investigation which could ultimately lead to the development of a new tool to improve dietary behaviors.

Risks: There are no expected harms associated with participating in this study. However, there may be risks to participants who are unvaccinated or who have not received the Covid-19 booster shot if they come on campus for the research.

Voluntary Participation: Participation in this study is entirely voluntary. If you choose to participate, you can change your mind at any time, including after giving consent, without providing a reason, and without any negative consequences.

Data Storage, Retention, Destruction and Future Use

Data collected during the study will be electronically stored at the University of Auckland for a minimum of three years and a maximum of six years. There are few risks to collecting and storing this information as it will be held only on secure University servers. During this period, it is expected that this data will be used for research purposes similar to what is described above, and in publications (subject to the Anonymity and Confidentiality conditions described below). At the end of the maximum period collected data will be destroyed, unless further approvals to retain the records have been sought and granted.

Right to Withdraw from Participation

You may withdraw from the study anytime, without giving a reason. Your withdrawal from the study will not affect your relationship with the University of Auckland, including but not limited to any course marks, project supervision, or employment opportunity. You are encouraged to ask questions anytime during the study. If you choose to withdraw from the study, your study participation will end, and the study team will stop

collecting information from you. You may withdraw your consent for the collection and use of your information at any time, by informing the researcher. However, information collected up to your withdrawal from the study cannot be taken out as all data collected will be de-identified.

Anonymity and Confidentiality

Your data (questionnaire responses) will be used to test the study's hypotheses. Statistical analyses will be performed, the results of which will then be discussed in research reports. Research publications and presentations from the study will not contain any information that could personally identify you; only averages will be presented. As participant data will be de-identified, you will not be identifiable in any outputs of the research. Any information that identifies you as a participant will be used confidentially and kept in a secure location. Your name will appear only on your Consent Form, which will be coded with an alphanumeric participation identification number. This identification number is used to de-identify all other data, ensuring your identity is kept confidential. Your data will only be referred to or labelled with this number. The Consent Form will only be seen by you and the researchers. It will be stored electronically at the Department of Nutrition and Dietetics at the University of Auckland to allow for publication and future analysis. Your de-identified electronic data will be stored on a password-protected computer and backed up at the University of Auckland for a maximum of six years.

Study Findings

A summary of the research's findings can be emailed to you upon request. If you would like a summary of the results, please provide your email at the end of this study. As it takes some time to analyze the study results; it may be more than one year after your participation to receive this summary.

Contact details: If you have any questions, please contact:

If you have any questions, concerns or complaints about the study at any stage, you can contact:

Dr Rajshri Roy

Eliena Martin

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Department of Nutrition and Dietetics

Email:

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You may also contact Head of Department, Department of Nutrition and Dietetics, Professor Clare Wall, c.wall@auckland.ac.nz

For any queries regarding ethical concerns, you may contact the Chair, The University of Auckland Human Participants Ethics Committee, The University of Auckland, Research Office, Private Bag 92019, Auckland 1142. Telephone 09 373-7599 ext. 83711. Email ro-ethics@auckland.ac.nz.

Approved by the University of Auckland Human Participants Ethics Committee on 25/03/2022 for three years. Reference Number 23989.

Thank you for taking time to read about this study. Please keep this sheet for your information.