

InformationAndConsent

ThermalStress User Study

INFORMATION SHEET

You are being invited to take part in a research study. Before you decide, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Take time to decide whether you wish to take part or not. Please contact the experimenter if you have any questions about the study or would like more details.

Purpose of the study:

The purpose of the study is to investigate the effect of thermal feedback on heart rate and anxiety levels. The cues will be presented on the wrist or palm.

Vibrotactile feedback has been used in the past to influence body signals, for example has research shown that the vibrotactile presentation of a slow or fast heartbeat can influence the heart rate and anxiety levels of participants in calm and stressed situations. We are interested to see if other haptic modalities can

achieve this effect as well.

Why have you been chosen:

You have been chosen because you are an adult, have no sensory or visual impairments (not including wearing glasses or contact lenses) and no neurological disorders (e.g. epilepsy).

Do I have to take part?

Participation in the study is voluntary. You may decide whether to take part or not. If you do decide to take part, you will be given this information sheet to keep and be asked to sign a consent form. If you decide to take part, you are still free to withdraw at any time and without giving a reason.

What will happen to me if I take part?

You will be asked to come to the University of Glasgow and fulfil a calming and stressing task both with and without haptic cues being presented at the time.

Temperature changes will be of 8°C between 22°C and 38°C maximum.

The calming task will consist of you watching a calming video, while in the stressed state you will be asked to complete a mathematical task, the Paced Auditory Serial Addition Test (PASAT), which will be explained in detail, and you will have a practice round to get familiar with the task. You will be wearing a heart rate monitor

device throughout the experiment so we can collect the heartbeat during all tasks, and you will be asked to fill in a questionnaire capturing your anxiety levels before and after each task and we will ask you some more questions at the end of the experiment.

What are the possible disadvantages and risks of taking part?

You could experience mild discomfort from the thermal stimuli. The thermal cues will be presented from a base temperature or your skin temperature and the temperature changes should stay within comfortable range, but you can take the devices off at any time should the experience become too uncomfortable. We will be inducing stress in a safe way by asking you to fulfil a mathematical test and of course this stressful state can be slightly uncomfortable. If you at any time feel to emotionally affected by the task, please disengage from the task and let the experimenter know.

What are the benefits of taking part?

You will be paid with a £10 Amazon voucher for about an hour of your time. You will be contributing to research which eventually could enhance the spectrum of possible modalities with calming or arousing effect that can be used in safety critical or mentally demanding situations.

Will my taking part in this study be kept confidential?

All information collected, or responses provided, during the experiment will be kept strictly confidential. You will be identified by an ID number which in no way will be connected to you. Please note that assurances on confidentiality will be strictly adhered to unless evidence of serious harm, or risk of serious harm, is uncovered. In such cases, the University may be obliged to contact relevant statutory bodies/agencies.

What will happen to the results of the research study?

The results will be held by the researcher and the University of Glasgow and might be used for publication. The results can be outlined to the participants whenever they become available. The participants will not be identified in any report or publication. Anonymised data will be made available for open and replicable research.

Who is organising and funding the research?

This research is funded by the School of Computing Science, University of Glasgow.

Who has reviewed the study?

The project has been reviewed by the College Ethics Committee (Application Number 300220179).

Contact for Further Information:

You can contact the researcher of this study email;

Name: Dr. Patrizia Di Campli San Vito

Email: Patrizia.DiCampliSanVito@glasgow.ac.uk

Line manager details:

Professor Stephen Brewster,

Stephen.Brewster@glasgow.ac.uk , 0141-330-4966

Please read the following statements carefully and tick them to show your consent:

- I confirm that I have read and understood the Information Sheet provided to me for this survey and I have had the opportunity to ask questions.
- The study has been explained to me, and I understand the explanation given and what my participation will involve.
- I do not have sensory impairments in my hands and I do not use a pacemaker.
- I understand that during the study the experimenter will give additional instructions concerning the experiment and that the purpose of some instructions will only be explained at the end of the study.
- I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason.
- I understand that the research data may be published anonymously, but that my personal data will be kept confidential in accordance with data protection guidelines.
- I volunteer to take part in the study.

StartPracticalPart

You can now start with the practical part of the study.
Please let the experimenter know that you have finished.

Payment

Participant Payment List

I confirm that I have received an Amazon voucher over 10£ for participating in the study:

ThermalStress: Measuring the Impact of Thermal Feedback on Heart Rate and Anxiety Level in Calm and Stressed States

Name

Date

Email

I would like to be added to the computing science experiment participant list (You can unsubscribe anytime).

As a member of that list you will received email invitation to our experiments, to which you can respond if you are interested.

- Yes
- No