



PARTICIPATION INFORMATION SHEET

YOU WILL BE GIVEN A COPY OF THIS INFORMATION SHEET

Title of study Evaluating the impact of simulated motion travel (with and without a visual prophylactic intervention for motion sickness) on the cognitive ability of offshore workers using Virtual Reality.

This research has been funded by the Offshore Renewable Energy Catapult due to the need for more research into the impacts of motion travel on the cognitive and motor ability of offshore workers.

I would like to invite you to participate in a research project which forms part of my PhD thesis in Computer Science. Before you decide whether you want to take part, it is important for you to understand why the research is being done and what your participation will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask me if there is anything that is not clear or if you would like more information.

What is the purpose of the study?

The purpose of the study is to provide information to the offshore renewable wind energy industry about motion sickness. The types of questions asked are how does the experience of motion sickness (as induced in a Virtual Reality (VR) headset and motion simulator) affect the ability to do various cognitive and motor tasks. Are there ways of reducing the development of motion sickness.

Why have I been invited to take part?

You are being invited to participate in this study because you have completed the Health screen for participants form. You did not answer yes to any of the following conditions, pregnancy, sufferer of vertigo, have an inner ear disorder, head injury, epilepsy, or have a history of severe and debilitating motion sickness.

What will happen if I take part?

As part of participation females will be asked about the stage of the menstrual cycle they are at -- this information is required simply to ensure that both experiments are conducted at the same point in a person's hormonal cycle to prevent this factor from interfering with the data. This information will be held confidentially. All participants will have their forehead sweat monitored as this is an objective measure of motion sickness. No audio or visual recording equipment will be used.

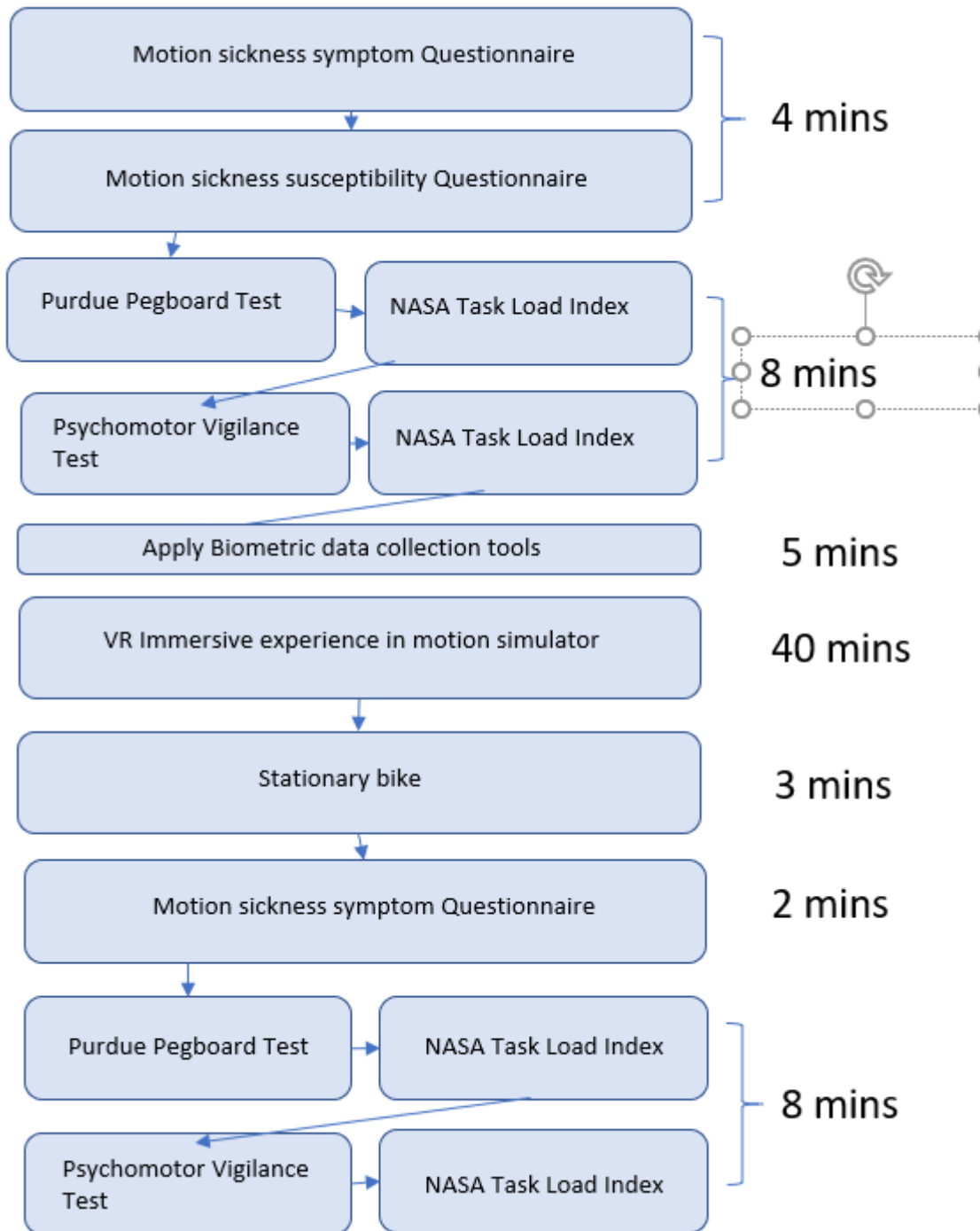
Participation will take place on the third floor of the Robert Blackburn Building on the University of Hull campus. The whole session will last approximately 1 hour – 1 hour 20 mins for each experiment and **you will be invited to complete two separate**

experiments one month apart, each experiment will follow the same process as shown in the schematic below.

If you choose to take part in the study you will be asked to complete a motion-sickness symptom questionnaire and complete a Purdue Pegboard Test and a Psychomotor Vigilance Test and a NASA task loading index. You will then be asked to sit in a motion simulator seat, don a VR headset, and a sweat-band will be placed around your forehead. You will then be presented with a virtual experience of travelling by a crew transfer vessel to a wind farm until you begin to feel the effects of motion sickness. This will not exceed 40 min – it should take considerably less for most people to induce a feeling of mild motion sickness, however the time will differ for each individual.

You will then be weighed and ride a stationary bike for a short period of time expending an equal amount of energy as if you had climbed 20m on a ladder.

You will then be asked to complete another motion-sickness symptom questionnaire and complete a Purdue Pegboard Test, a Psychomotor Vigilance Test and a NASA task loading index.



Do I have to take part?

Participation is completely voluntary. You should only take part if you want to and choosing not to take part will not disadvantage you in any way. Once you have read the information sheet, please contact us if you have any questions that will help you decide about taking part. If you decide to take part we will ask you to sign a consent form and you will be given a copy of this consent form to keep.

Payment/Incentives

You will be given a £12 amazon gift voucher for the first experiment and £24 for the second experiment you take part in. As you are invited to take part in two experiments you will receive a total of £36 in amazon gift vouchers.

What are the possible risks of taking part?

You are likely to experience (mild) motion sickness which some people find mildly uncomfortable. Symptoms can include dizziness, sweating, fatigue, irritability, stomach awareness.

Motion sickness develops gradually and so we will be monitoring your forehead sweat to give an objective measure of motion sickness development. You will be able to stop the immersive experience and exit the motion simulator when you begin to feel slight initial symptoms of motion sickness, you will not be required to stay in the experience until you feel extreme symptoms of motion sickness such as vomiting.

What are the possible benefits of taking part?

The participant will be contributing to science and will learn about motion sickness and its effects upon people's task performance. You will also receive a £12 amazon voucher for the first experiment and a £24 amazon voucher for the second experiment, resulting in a total of £36 pound in amazon vouchers.

Data handling and confidentiality

Your data will be processed in accordance with the General Data Protection Regulation 2016 (GDPR).

- On emailing to apply for the study you will be issued with a participant number for identification and this will be used for the second experiment also. After completion of the second experiment the emails linking your name to the participant ID will be deleted. To withdraw data, you will need your participant ID.
- You will not be identified in the final report, the data collected during the experiments will not be tied to any personal identifying data such as your name or birth date.
- Research and anonymised data will be retained for 10 years after it has been collected. Data will be anonymised and archived.
- Anonymised data will only be shared within the research team and with the project supervisor from ORE Catapult if requested, this will be shared using a link to the data within the University's secure backed-up data storage facility called sharepoint. Personal data that has not been anonymised will not be shared.
- Personal data will be not shared outside of the EU.
- The research data may be used to support future research and may be shared anonymously with other researchers.

Data Protection Statement

The data controller for this project will be the University of Hull. The University will process your personal data for the purpose of the research outlined above. The legal basis for processing your personal data for research purposes under GDPR is a 'task in the public

interest' You can provide your consent for the use of your personal data in this study by completing the consent form that has been provided to you. Information about how the University of Hull processes your data can be found at <https://www.hull.ac.uk/choose-hull/university-and-region/key-documents/data-protection.aspx>

You have the right to access information held about you. Your right of access can be exercised in accordance with the General Data Protection Regulation. You also have other rights including rights of correction, erasure, objection, and data portability. Questions, comments and requests about your personal data can also be sent to the University of Hull Data Protection Officer [dataprotection@hull.ac.uk]. If you wish to lodge a complaint with the Information Commissioner's Office, please visit www.ico.org.uk.

What if I change my mind about taking part?

You are free to withdraw at any point of the study, without having to give a reason. Withdrawing from the study will not affect you in any way. You are able to withdraw your data from the study up until 20th September 2024, after which withdrawal of your data will no longer be possible due to either being published in aggregated form and/or forming part of a PhD thesis. If you choose to withdraw from the study and wish any data collected so far to be deleted, provide your participant ID and we will not retain the information you have given thus far.

How is the project being funded?

This study is being funded by Offshore Renewable Energy Catapult (ORE Catapult) which is a statutory government body tasked with accelerating the growth of the offshore renewable energy industry.

What will happen to the results of the study?

The results of the study will be summarised in my PhD thesis in Computer Science at the University of Hull. They may also be published in peer reviewed journals. Any published anonymised research data will be held on the hydra repository which is publicly accessible.

Who has reviewed this study?

Research studies are reviewed by an independent group of people, called a Research Ethics Committee, to protect your interests. This study has been reviewed and given a favourable opinion by the Faculty of Health Sciences Ethics Committee and the Faculty of Science and Engineering, University of Hull.

Who should I contact for further information?

If you have any questions or require more information about this study, please contact me using the following contact details:

Lisa Somerville
University of Hull
Cottingham Road,
Hull, HU6 7RX
L.m.somerville-2019@hull.ac.uk

01482 465 228

What if I have further questions, or if something goes wrong?

If you wish to make a complaint about the conduct of the study, you can contact the University of Hull using the details below for further advice and information:

Dr Peter A Robinson
Faculty of Science and Engineering, Department of Computer Science
University of Hull
Cottingham Road,
Hull, HU6 7RX
+44(0) 1482 465 228
P.A.Robinson@hull.ac.uk

Alternatively please contact registrar@hull.ac.uk

Thank you for reading this information sheet and for considering taking part in this research.