



## LIVERPOOL JOHN MOORES UNIVERSITY PARTICIPANT INFORMATION SHEET

**Title of Project** The psychophysiology of listening effort.

**Name of Researcher and School/Faculty** Kate Slade, School of Natural Sciences and Psychology

You are invited to take part in a research study. Before you decide, it is important that you understand the reasons why we are conducting this research and what is involved. Please take time to read the following information. If something is unclear or if you would like more information, please ask the researcher. Please take time to decide if you want to take part or not.

### 1. What is the purpose of the study?

The aim of this study will be to assess the psychological and physiological correlates of listening effort in adult participants.

### 2. Am I eligible to take part?

All adults (18+) who do not wear a pacemaker (as some of the physiological measures used may interfere with the pacemaker functioning) can speak fluent English and have normal hearing are eligible to participate in this study. If you are under 18, cannot speak fluent English, have a pacemaker and/or do not score within the desired range on our hearing test, you will unfortunately be unable to participate.

### 3. Do I have to take part?

No, this study is voluntary. It is up to you to decide whether to take part. If you do wish to participate, you will receive and sign a consent form. You are free to withdraw at any time and without reason. A decision to withdraw will not affect your rights or any future study participation.

### 4. What will happen to me if I take part?

a) The researcher will provide you with the study information and request that you sign a participant consent form.

b) **Main study set up.**

The main study will require 1 hr 15 minutes of your participation time. You will be assigned randomly to one of two groups, a reward group or a no reward group. The researcher will measure your height and weight. Four sets of disposable electrodes (which are small sensors, no bigger than a 10p that assess heart rate) will be attached to the base of your neck at both the right and left side, and at the right and left side of your torso. Two straps that measure breathing will be placed around your body; one around your chest and one around your stomach. A blood pressure cuff will also be placed at the top of your left arm.

c) **Main study.**

- You will sit at a computer wearing headphones and you will indicate your age and gender.
- You will complete a short questionnaire about fatigue.
- You will perform **four listening tasks**, consisting of 2 practice trials and 10 task trials in each task. In a trial, you will hear a 32-second story read by an English female voice embedded in various levels of white noise. After hearing the story, you will have 5-seconds to answer a multiple-choice question about it. **If you are assigned to the reward group and you correctly answer 7 or more of the 10 questions in a task you will receive an extra £2 Amazon Voucher.** You will have the opportunity to earn a voucher in each of the four listening tasks, provided you score 7/10 or higher. **If you are assigned to the no reward group, you will receive no extra reward for performance. All participants will receive a £5 Amazon voucher for participation.**
- Before completing each task, you will take a 6-minute rest to watch a video clip. After completing each level, you will answer two short questionnaires. One will be the fatigue,

which you will have already completed at the beginning, and one will be a short questionnaire about effort.

- During the rest periods (while you watch the video clip) and during the task trials the researcher will record measurements of cardiovascular activity (heart rate using the sensors and blood pressure using the blood pressure cuff).
- d) You will be debriefed, thanked for participation and remunerated.

## **5. Are there any risks / benefits involved?**

There are no intended risks or particular benefits for taking part. However, you will be able to earn a £5 amazon voucher and gain first-hand experience of physiological measures. Taking part in this study will help to advance research into listening effort and hearing fatigue.

It will not be possible to record abnormal results from the cardiovascular measures, nor will it be possible to make any clinical diagnoses based on any of your results, as the researcher is unqualified to do this. If irregular hearing and blood pressure results are recorded this can be due to a variety of reasons, which are not a cause for concern. We will feed back any irregularities to you and you may wish to see your GP. You may be unable to continue participation. Irregular results do not necessarily mean you have a problem with your hearing or blood pressure, the researcher is not qualified to make these judgements. Additionally, if the researcher records typical results, this does not necessarily mean that you do not have any problems with your hearing or blood pressure.

## **6. Will my taking part in the study be kept confidential?**

All data provided by participants is anonymous, as participants are provided with a Participant ID number (PID). This will be confidential, stored securely and separately from all other data. All other data will only be identified by the anonymised PID and cannot be linked back to you without the consent form.

**This study has received ethical approval from LJMU's Research Ethics Committee 18/NSP/029**

### **Contact Details of Researcher and Contact Details of Academic Supervisor**

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If you any concerns regarding your involvement in this research, please discuss these with the researcher in the first instance. If you wish to make a complaint, please contact [researchethics@ljmu.ac.uk](mailto:researchethics@ljmu.ac.uk) and your communication will be re-directed to an independent person as appropriate.