

# Validating objective measures of reward processing

This information sheet aims to inform you of the nature of this study and what is expected of you, so you can decide if you want to take part. Please read the information carefully so that you can decide whether or not to participate and contact us if you have any questions.

## **Background**

Psychiatric illnesses such as depression affect many people. Current treatments for depression help alleviate symptoms in some people. However, these treatments do not cure the disease and many people are treatment resistant. One of the symptoms many people with depression experience is a reduction in how much they experience reward and find experiences in their lives pleasurable. This reduced ability to feel positive about experiences which should be rewarding is also seen in other psychiatric and neurodegenerative diseases and so is an important area for research. We are looking at ways which may help us to understand reward-related behaviour in healthy volunteers using different reward processing tasks.

## **Procedures**

Participation is voluntary, though you must meet the screening (determined via a short online questionnaire) and eligibility criteria (not suffering from a mental health condition or neurological illness, no current physical injuries, no allergy or intolerance to sugar, no disorder of smell or taste, fluent in English, not diabetic, aged 18 or older and not previously participated in a study using the Joystick-Operated Runway Task).

## If you choose to take part, you will:

Be asked to sign a consent form. You will also be informed that you can withdraw from the study at any time, without having to provide any reason. A copy of the consent form and this information sheet will be provided to take away for your own records.

**1. Perform a joystick operated computer task** – the task consists of several short trials. Trials vary in the reward available (0, 10, 100 or 1000 points) and physical effort required to win. On each trial, a cue in the top left will indicate how many points are on offer. To win these points, you will have to push the joystick to catch a target on the screen (black dot).

There is some physical effort involved in pushing the joystick and as such, some people may experience mild muscle ache for 24-48 hours afterwards. Do not over-exert yourself during the task. It is not necessary to complete all trials. If you feel fatigued, you do not have to complete the task.

- **2. Perform a button pressing task** this task consists of several short trials. On each trial, you must choose between a high effort/high reward versus low effort/low reward option. Effort varies in the form of number of button presses within a given amount of time.
- **3.** Complete a Sweet Taste Test you will taste several sugar solutions. You will be asked if you can detect the presence of sugar in each sample.
- 4. Complete some standard questionnaires (which ask about mood, reward and motivation).

Your questionnaire data will be anonymised and analysed at the end of the study. It is important to note that these questionnaires are not used for diagnostic purposes.

### Reimbursement

There will be no reimbursement for completing the online screening questionnaire. Only those who attend the full study session will be reimbursed.

If you attend the full study session, you will be reimbursed £20 for your time. Additionally, performance on the joystick or button pressing task (chosen at random) will generate an additional monetary reward (up to £5).

The experiment will take approximately **two hours** to complete. You will be given the opportunity to ask further questions regarding the nature of this study upon ending the task, and you will be asked to provide final consent before data is anonymised and analysed. We may also invite you to attend a second session if you are available which will last approximately **one hour**, and you will reimbursed an additional £10 for your time.

### **Your Data**

Upon completion of the experiment you will be asked to provide final consent to your data being used in further analyses and potential publication. All study data will be managed and stored in accordance with The Data Protection Act and your involvement in the study will remain confidential. This information will only be available to research staff and national bodies which monitor whether research studies are conducted properly.

Once the study is finished, your data will be anonymised. This means that it will be given an identification number and any identifying information about you will be removed. Therefore, it will not be possible to identify you by name from any aspect of documentation or reporting for this research study.

At the end of the study your data may be made "Open Access". This means that it will be stored in an online database so that it is publicly available. Open access means that data are made available, free of charge, to anyone interested in the research, or who wishes to conduct their own analysis of the data. We will therefore have no control over how these data are used. However, all data will be anonymised before it is made available and therefore there will be no way to identify you from the research data.

Open access of research data and findings is considered best scientific practice and is a requirement of many funding bodies and scientific journals. As a large proportion of research is publicly funded, the outcomes of the research should be made publicly available. Sharing data helps to maximise the impact of investment through wider use and encourages new avenues of research.

If you would like to be informed about the outcome of the study, please email the lead researcher (chloe.slaney@bristol.ac.uk) after the study.

### **Contact Details**

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