

## **PARTICIPANT INFORMATION SHEET**

### **Time perception in dyslexia**

You are being invited to take part in a research project. Before you decide whether or not to take part, it is important for you to understand why the research is being undertaken and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish.

Thank you for reading this.

#### **1. What is the purpose of this research project?**

We are investigating the reason behind the reading difficulties experienced by people with dyslexia when viewing written symbols, such as letters, numbers, and musical notes. We are exploring possible reasons for improvement in reading speed and accuracy when symbols are printed with wider spacing or larger print size. Our hypothesis is that reading difficulties and visual stress might arise when the brain cannot overcome the wobbly/unstable perception resulting from small eye movements produced while reading or focusing on tiny objects.

#### **2. Why have I been invited to take part?**

You have been invited because we are looking to recruit people with or without dyslexia or visual stress. Participants should be 18 or over, English is their primary language, have no sight impairments (other than a need to wear glasses), no hearing impairments, no cognitive impairments, and not have a history of epilepsy.

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

No, participation is voluntary. If you decide to take part, we will discuss the research project with you and ask you to sign a consent form. If you decide not to take part, you do not have to explain your reasons and it will not affect your legal rights. If you are a student at Cardiff University, involvement in this research project will have no effect on your education or progression through your degree course.

You are free to withdraw your consent to participate in the research project at any time, without giving a reason, even after signing the consent form.

#### **4. What will taking part involve?**

The study takes place in a single session at the School of Optometry and Vision Sciences, lasting no more than 2.5 hours. After signing the consent form, you will be asked for some basic demographic information (month & year of birth, sex assigned at birth, whether you have any known disorders affecting your sight, hearing, or cognition). We will then perform some standard tests of vision (visual acuity) and symptoms of visual stress (Pattern Glare Test and questionnaire). Next, you will be seated at a computer, resting your chin and head on a rest. The computer screen will show two bars with a brief time separation between each, and, using a keypad, you will be asked to report which bar appeared first. This will be repeated many times. You will be given breaks throughout the experiment. A second task uses a similar procedure, although this time you will decide whether a central bar is misaligned more to the left or right. Sometimes these bars will be jittering (moving around on the screen). During all

tasks at the computer, we will be using a remote camera-based eyetracking device to monitor your eye movements. This is non-invasive and although it uses cameras it does not record images; only a numeric representation of your eye movements is stored. Afterwards a brief intelligence test followed by two reading ability tests will be administered to group participants. Reading tests will be audio recorded for further analysis.

**5. Will I be paid for taking part?**

Yes, you will receive £40 for taking part. You would not however benefit financially in the future should this research project lead to the development of a new treatment /method /test /assessment.

**6. What are the possible benefits of taking part?**

There are no direct advantages or benefits to you from taking part, but your contribution could help us to understand the cause of dyslexia and visual stress.

**7. What are the possible risks of taking part?**

We consider there to be no significant risks to taking part.

**8. Will my taking part in this research project be kept confidential?**

All information collected from (or about) you during the research project will be kept confidential and any personal information you provide will be managed in accordance with data protection legislation. Please see '*What will happen to my Personal Data?*' (below) for further information.

**9. What will happen to my Personal Data?**

Personal data (your name, month & year of birth and sex assigned at birth) will be collected by a designated researcher. The Consent Form is the only place that your name will be stored; all other data will be stored separately using an anonymous code, which can only be linked back to your name via the Consent Form itself, which will be stored in a locked location at the School of Optometry and Vision Sciences.

Cardiff University is the Data Controller and is committed to respecting and protecting your personal data in accordance with your expectations and Data Protection legislation. Further information about Data Protection, including:

- your rights
- the legal basis under which Cardiff University processes your personal data for research
- Cardiff University's Data Protection Policy
- how to contact the Cardiff University Data Protection Officer
- how to contact the Information Commissioner's Office

may be found at <https://www.cardiff.ac.uk/public-information/policies-and-procedures/data-protection>

After no more than 1 month, the research team will anonymise all the personal data it has collected from, or about, you in connection with this research project, with the exception of your consent form. Your consent form and research data (which includes month & year of

birth, sex assigned at birth, and audio recording) will be retained for a minimum period of 5 years after the end of the project or after publication of any findings based upon the data (whichever is later) and may be accessed by members of the research team and, where necessary, by members of the University's governance and audit teams or by regulatory authorities. Anonymised information will be kept for a minimum of 5 years but may be published in support of the research project and/or retained indefinitely, where it is likely to have continuing value for research purposes.

If you ask to have your data removed, all data collected up until the point of withdrawal (other than that provided on the Consent Form) will be deleted. Note that it will not be possible to withdraw any anonymised data that has already been published.

**10. What happens to the data at the end of the research project?**

Anonymised data collected during the research project may be made publicly available via a data repository and/or shared with other researchers. Your name will not be attached to shared data. Audio recordings will not be shared.

**11. What will happen to the results of the research project?**

It is our intention to publish the results of this research project in academic theses/journals and present findings at conferences. Participants will not be identified in any report, publication, or presentation.

**12. What if there is a problem?**

If you wish to complain or have grounds for concerns about any aspect of the manner in which you have been approached or treated during the course of this research, please contact [DunnMJ1@cardiff.ac.uk](mailto:DunnMJ1@cardiff.ac.uk). If your complaint is not managed to your satisfaction, please contact [optomethics@cardiff.ac.uk](mailto:optomethics@cardiff.ac.uk).

If you are harmed by taking part in this research project, there are no special compensation arrangements. If you are harmed due to someone's negligence, you may have grounds for legal action, but you may have to pay for it.

**13. Who is organising and funding this research project?**

The research is organised by Mr Bader Almagren and Dr Matt J Dunn of the School of Optometry and Vision Sciences in Cardiff University. The research is currently funded by the government of Saudi Arabia.

**14. Who has reviewed this research project?**

This research project has been reviewed and given a favourable opinion by the School of Optometry & Vision Sciences Research Ethics Committee, Cardiff University.

**15. Further information and contact details**

Should you have any questions relating to this research project, you may contact us during normal working hours:

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**Thank you for considering taking part in this research project. If you decide to participate, you will be given a copy of the Participant Information Sheet and a signed consent form to keep for your records.**