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# Sensory processing in children with and without developmental conditions

We would like to invite you and your child to take part in a study looking at how children process sensory information. Before you decide, it is important that you understand why the research is being done and what it involves. Please take time to read the following information carefully and discuss it with your child, and ask us if you have any questions.

**What is the purpose of the study?**

Everyday we are faced with sensory information and we need to make decisions about it – for example deciding whether we have time to cross a road. In this study, we are looking at how autistic children, dyslexic children and children without a developmental condition aged 6 to 14 years make decisions about what they see. If you and your child agree, we will also use a non-invasive method called electroencephalography (EEG) that measures information from the scalp to show how the underlying brain processes differ for children with and without a developmental condition. The research will help us understand more about sensory processing in autism and dyslexia, and how the two conditions differ and overlap.

**Do my child and I have to take part?**

No – it is up to you and your child to decide whether or not to take part. If you decide to take part, you will be asked to sign a consent form. If you agree to participate, you are free to withdraw your consent at any time and without giving a reason.

**What will happen if my child and I take part?**

Your child will be invited to two sessions. In one session, your child will play some fun computer games where they will be asked to work out the direction of moving fireflies. Optionally, while your child plays the games, we will record brain activity using a technique called EEG. Children wear a hair net (like you might see at a hairdresser) from which sensors send information to a computer. When people do mental activities like thinking or remembering, certain brain areas become active. In our study we record the brain waves produced while children make decisions in the computer games. This session will take around 1½ hours (or 45 minutes if your child is not taking part in the EEG). Children should bring their glasses if they need them.

In another session, we will do some standard tests of language, reasoning, reading and spelling, and check your child’s vision with an eye chart, which will take no longer than 1 hour. If we suspect that your child may have problems with his/her sight, we will advise you to take your child to an optician. Children with an autism diagnosis will be given activities to see whereabouts they lie on the spectrum, which will take approximately 30-45 minutes. We may videotape these activities for later coding. We will also ask you to complete some brief questionnaires about your child’s development. If you would prefer, the researcher can complete these with you over the phone or in-person.

Children will be given a certificate and families will be given a £10 gift voucher for taking part. If you come to the University, we will also reimburse you for your travel expenses.

### Where and when will the project take place?

If your child is taking part in the EEG, you will be asked to come into the University. If not, the sessions can be conducted either at the University, home, or school. The sessions can be conducted on the same day (with a break), or split across different days.

### What are the possible disadvantages and benefits of taking part?

There are no risks in taking part in this study. The EEG technique has long been used in clinical and research settings, and is harmless. The sensors listen to brain activity (like a microphone), but do not send any signals to the brain. The procedure is for research and is not designed to identify health problems; the researcher has no training in identifying health-related problems from the recordings. This research could help us understand and help children who have difficulties processing sensory information.

### What happens to the results of the research study?

The personal information we collect about your child is kept strictly confidential. Children are identified by a code number and all information and results (including EEG recordings) are kept on password-protected computers and in locked filing cabinets in the University. Families will receive a report of the results of the study. We also plan to publish the results in a scientific journal. Your contact details will only be used for the purposes of this study, unless you tell us you are interested in hearing about similar studies in the future. We ask for your child's age to look at how children of different ages do differently. Hard copies of research data will be destroyed ten years after the project's completion, but fully anonymised digital data will be kept in a safeguarded repository so that other researchers within and outside the European Economic Area (including those outside the University) can apply to use the data in the future, so that it can be of greater scientific benefit. If collected, video tapes will be kept on a password-protected network drive in the University for ten years and will not be shared with other researchers.

### Who has reviewed the study?

This study has been reviewed by, and received ethics clearance through, the Central University Research Ethics Committee of Oxford University (ref: R56348/RE001).

### What if there is a problem?

If you have a concern about any aspect of this project, please contact Dr Catherine Manning by email (catherine.manning@psy.ox.ac.uk) or by phone (01865 271 442), who will do her best to answer your query. The researcher should acknowledge your concern within 10 working days and give you an indication of how she intends to deal with it. If you remain unhappy or wish to make a formal complaint, please contact the chair of the Research Ethics Committee at the University of Oxford (Chair, Medical Sciences Inter-Divisional Research Ethics Committee; Email: ethics@medsci.ox.ac.uk; Address: Research Services, University Offices, Wellington Square, Oxford, OX1 2JD, UK). The chair will seek to resolve the matter in a reasonably expeditious manner.

### What should I do next?

If you would like to take part, please fill in the consent form and return it to the researcher (in person, or by secure email/post). If you would like to discuss the research with someone beforehand (or if you have questions afterwards), please get in touch (catherine.manning@psy.ox.ac.uk / 01865 271 442).

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# Consent form

“Sensory processing in children with and without developmental conditions”

(Office use)
Researcher’s name:
Researcher’s signature:
Date:

***Please tick the boxes to confirm that you agree with each statement:***

I have read the information sheet about the research project and discussed the project with my child (if appropriate). I have had the opportunity to ask questions about the study, and have received satisfactory answers to questions (where applicable). ☐

I understand that participation is voluntary and that my child and I are free to withdraw from the study at any time, without giving any reason and without penalty. ☐

I understand that I can contact the researcher to discuss this study at any time. ☐

I understand how to raise a concern and make a complaint. ☐

I understand who will have access to the data, how the data will be stored, and what will happen to it at the end of the project. ☐

I understand that this project has been reviewed and approved by the University of Oxford Central University Research Ethics Committee. ☐

I agree for my child to participate in this study. ☐

***The following statements are optional:***

I agree for my child to have an EEG recording during the study ☐

I consent to my child being video recorded (n.b. this applies to autistic children only) ☐

I would like to be contacted about future studies on sensory processing ☐

**Name of child:** ______________________ (Forename) ________________________ (Surname) ☐ **(Male)** ☐ **(Female)**

**Name of parent/guardian (please print):** ______________________________________________

**Parent/guardian signature:** ______________________________ **Today’s date:** _______________

**Child’s age:** ________________ **School**:_______________________________________________

**My child has:** (please tick) ☐ a diagnosis of an autism spectrum condition ☐ a diagnosis of dyslexia ☐ no diagnosed developmental conditions

**Contact phone:** __________________________ **Contact email:** ____________________________

**Contact address:** __________________________________________________________________

**Please return this form to the researcher. Thank you!**