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UiO : University of Oslo

ASSESSMENT OF INHIBITORY CONTROL

INFORMATION FOR PARTICIPANTS

You expressed your interest to participate in a research project on how individuals control behaviour and withhold responses when necessary. This so-called inhibitory control is part of higher cognitive functions that support the regulation of goal-directed behaviour and is important for adaptations in response to sudden changes in the environment. The purpose of this project is to investigate behavioural and neural measures relating to inhibitory control.

We would like you to complete a computer-based task while we measure your brain activity with electroencephalography (EEG). In addition, we will measure muscle activity with electromyography (EMG) and collect some basic demographic information about you, such as age, gender, and handedness. Prior to the experiment, we will ask you some health-related questions to assess your eligibility. Your responses to these questions will be stored connected to your participant ID, not your name. The following pages explain the study procedure and methods in detail. Please read this information carefully before deciding whether to participate in the study. Should anything remain unclear, please do not hesitate to ask the investigators.

The following techniques will be used in this experiment: electroencephalography (EEG) and electromyography (EMG).

EEG/EMG will be applied concurrently while you are doing the computer-based experiment. The EEG/EMG session will last about 2 hours (1 hour preparation and 1 hour experimental task) and take place at the Psychological Institute at University of Oslo.

1. Confidentiality of Documents

If you decide to participate in the study, you will need to sign a consent form. All information will be kept strictly confidential. All information that is collected in the context of this study will be disclosed only in anonymous form, i.e., without a name and address. All our staff is subject to professional secrecy and data protection compliance. If the results of the study are published, the privacy of the participants' data and contribution is guaranteed in its entirety.

2. Withdrawal of Consent

Participation in the study is voluntary. You can withdraw your consent to participate in the study at any time without providing any reason, and without incurring any penalty. You can no longer withdraw your consent for the storage of the data after completing your participation. This is because it is not possible to delete data specific to you when the data is stored anonymously.

3. Description of the methods and potential risks

a. EEG – Electroencephalography

EEG measures changes in electrical potentials on the surface of the head, which are caused by the accumulated activity of a large number of neurons. Thus, EEG allows us to draw conclusions about cognitive processes. EEG is considered a safe method and is one of the standard tools of clinical diagnostics and brain research.

EEG recordings are carried out as follows: first, a cap with electrodes is put on your head. The electrodes have been attached to the cap by small plastic rings. The skin underneath the electrodes is carefully cleaned and a hypoallergenic electrode gel is used to make contact between your skin and the electrodes, thereby transferring electrical brain activity from the scalp to the electrodes for recording. EEG recordings do not hurt and are not dangerous. After the recording, you will have the opportunity to wash and dry your hair.

<u>The following points should be noted:</u>

- During scalp preparation for the EEG, the gel and cotton swabs used to clean the skin may lead to slight local skin irritations. These usually disappear within a few hours. The use of a skin cream may further support recovery.

b. EMG – Electromyography

EMG measures the changes in electrical potentials on the skin caused by the activity of the muscles underneath. It works by the same principles as the EEG; in fact, even the same equipment is used. Here, however, electrodes will be attached to three positions on both the left and the right hand, respectively. The electrode rings are attached to cleaned skin and are then filled with a hypoallergenic electrode paste. EMG recordings are painless and safe; the same considerations as for EEG apply.

4. Payment

Participants receive a universal gift card worth 300 NOK to compensate for potential expenditures.

5. COVID-19

Please contact the researchers if you experience symptoms of COVID-19 after participation or have been in contact with someone who has recently tested positive of COVID-19.

6. Further questions?

For questions, please contact Prof. René Huster (Department of Psychology, Tel.: +47-228-46152, Email: rene.huster@psykologi.uio.no)

We thank you for your interest and support!