

INFORMATION SHEET

Study Title: How habits become compulsions?
Exploring habit perseveration in OCD.

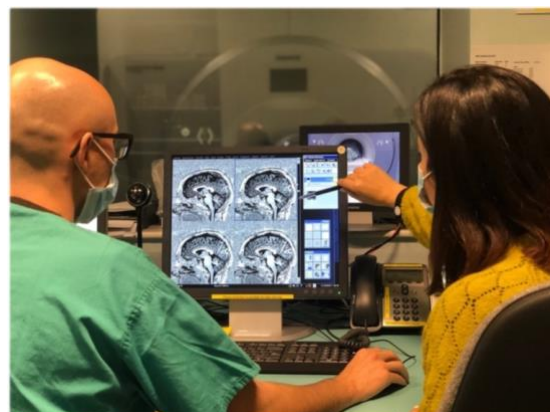
You are being invited to take part in a research study. Before you make a decision, it is important for you to understand why the research is being done and what it will involve. Please take time to read the following information carefully and discuss it with others if you wish. Ask us if there is anything that is not clear or if you would like more information. Take time to decide whether or not you wish to take part. Deciding not to participate will not affect you now or in the future in any way. Thank you for reading this.

What is the purpose of this study?

The purpose of this study is to investigate how people acquire new habits and how habits can sometimes become inflexible, leading to compulsions, which is a major component in Obsessive-Compulsive Disorder. We aim to study the neural and psychological processes that characterise the transitions from habits to compulsions. We have previously conducted a similar study, using other methods, in which we had very interesting results and also very positive feedback from the participants. Now we aim to deepen our knowledge on this topic by testing the same psychological constructs but with additional psychological, and imaging measures, which will help us to understand

better the link between habits and compulsions in OCD.

We will investigate the neurochemical changes in your brain relevant to learning and compulsivity. To do this, you will undertake an Magnetic Resonance Spectroscopy (MRS) scan. You will be provided with ear plugs to block the noise from the device and the entire procedure will be conducted by specialised and trained radiographers, at the Wolfson Brain Imaging Centre (WBIC), Addenbrookes, Cambridge. A safety form prior to undertaking the scan will also be required, to ensure there will be no hazards with the magnetic field.



Researchers at the Wolfson Brain Imaging Centre (WBIC).

During the study visit, we will also ask you to perform some short-computerised tasks and complete a set of questionnaires so that we may associate performance in the computerised tests to physiological changes, emotional states and personality traits. The results of the study will enable

us to better understand how a healthy brain reacts to specific tasks and may also help us understand how this is affected in Obsessive-Compulsive disorder.

What is an MRS device?



The MRI scanner at WBIC.

We can learn a great deal about how the brain works by looking at the flow of chemicals to different parts of the brain while the brain performs different tasks or when it is at rest. We need to obtain this information to understand both the working of the healthy brain, but also the problems of patients with neurological or psychiatric disease. We measure the changes in chemical flow due to brain function using 'images' taken with a magnetic resonance spectroscopy scanner (MRS). The MRS is a non-invasive, ionizing-radiation-free analytical technique. This scanner uses a strong magnetic field to create detailed images of brain. By analysing the concentration of different metabolites in the brain, we can understand possible chemical imbalances and acquire information for novel treatments. This is quite similar to a Magnetic Resonance Imaging (MRI) scan and does not involve injections or X-rays. The only difference is that instead of looking at blood flow (fMRI), it measures the concentration of different brain metabolites, important for brain function.

Why have I been invited?

You have been invited because we are looking for individuals with OCD to take part in this study and you have expressed a potential interest in participating in this research.

Do I have to take part?

It is up to you to decide. We will describe what will happen during this study in this information sheet, which we will then give to you. If you demonstrate interest in collaborating with us, we will then ask you to sign a consent form. You are free to withdraw at any time, without giving a reason. This will obviously not affect the standard of care you receive.

What does the procedure involve? What will happen to me if I take part?

If you are eligible to participate in the study, you will be invited for a first session at the Wolfson Brain Imaging Centre (WBIC), Addenbrookes, Cambridge, for the MRS scan. This should last about 1,30 hours. After this and a break to rest, the researcher will accompany you to the Herchel Smith Building, Forvie Site, Cambridge, which is within a short and walking distance to the WBIC, for the computerized tasks. This session will last 2 hours. Then you will be asked to fill in a few questionnaires about your mood and behaviour.

What are the possible risks/side effects of taking part in this study?

MRS are not known to be associated with any significant dangers. However, if you feel any discomfort, please inform the researcher and the necessary actions will be undertaken. In the unlikely event that any abnormality is to be found in your brain, we will refer you to the appropriate clinician, in consultation with your GP.

Regarding the computerised tasks and questionnaires, there are no known risks or side effects associated to these measurements.

What are the possible benefits of participating in this study?

We will pay you at a rate of £8/h for the first testing session. You will receive the reimbursement after the testing session. Apart from the monetary compensation, there will be no direct benefits of taking part in this study. However, you will have the pleasure of knowing that you have made a contribution to our understanding of the relationship between brain and behaviour.

What if there is a problem?

If you have a concern about any aspect of this study, you should ask to speak to the researchers who will do their best to answer your questions (contact: Ms Máiréad Healy, mph58@cam.ac.uk, or Dr Paula Banca, pmdob2@cam.ac.uk). In the very unlikely event of anything untoward happening, the University of Cambridge has arranged insurance for negligent and non-negligent harm to volunteer participants in this research project. If you wish to make a complaint, formally or informally, you can contact either: the lead investigator (Dr. Paula Banca), the PhD students responsible for these testing (Ms. Máiréad Healy) or the chief investigator (Professor Trevor Robbins) in the first instance.

Will my taking part in this study be kept confidential?

All information that is collected about you during the course of the research will be kept strictly confidential and will only be acquired after you provide formal written consent. Any information about you that leaves the department will have your name and address removed so that you cannot be recognized from it. All data are handled in compliance with

relevant UK statutory and Data protection laws. Only members of the research team and regulatory authorities (who monitor the quality of the research) will have access to the data. To ensure confidentiality, i.e. that your name will not be disclosed outside of the study, a code number will be assigned to you so that your data will be linked to this code rather than your actual name, to ensure confidentiality. The master list linking code names with subject names will be stored in paper form in a locked filing cabinet within the Behavioural and Clinical Neuroscience Institute (BCNI). This linked anonymization procedure, which is achieved by the use of a code number, ensures that your personally identifiable information will never leave the lab but your anonymised results may be inspected by the research team purely for the purpose of research and to analyse the results. Therefore, your results will always be linked to a code number and never to your name (linked anonymised results).

From time to time anonymised results may also be inspected by people from regulatory authorities and Cambridge University to check that the study is being carried out correctly. Raw cognitive testing data will be extracted from the testing computers and stored in encrypted format in the BCNI; these data will be anonymised via the use of code numbers for participants. Analysis will take place within the BCNI by a named member of the study group. The data will be reported in scientific journals, conference presentations, and internal research group reports. As per established guidelines, research data will be stored for 10 years after the end of the study, using subject codes to ensure anonymity. All inquiries concerning access to data held by the Behavioural and Clinical Neurosciences Institute (BCNI), Department of Psychology, University of Cambridge should be addressed

to the Administrator Ms Lorraine Coulson (lsc25@cam.ac.uk) in the first instance.

When the results of this study are published, your identity will not be disclosed. You have the right to be informed of published reports of this study once the entire study is complete. If you would like to be informed of the results of this study, please contact Dr Paula Banca (pmdob2@cam.ac.uk).

All inquiries concerning access to data held by the Behavioural and Clinical Neuroscience Institute (BCNI) at the University of Cambridge should be addressed to the lead researcher, Dr. Paula Banca (pmdob2@cam.ac.uk), the chief investigator, Professor Trevor Robbins (twr2@cam.ac.uk) or the BCNI Administrator, Ms Lorraine Coulson (lsc25@cam.ac.uk) in the first instance.

Will I be contacted for further studies?

In the consent form, you will be asked whether you agree to be contacted for further studies. You may or may not be contacted. However, if you are contacted, you are under no obligation to participate in a further study if you do not wish to. In addition, you are free to withdraw from a study at any time without giving a reason.

Who has reviewed the study?

This research study has been given a favourable opinion by the Cambridgeshire Research Ethics Committee.

Thank you for considering your participation in this study. Our research depends entirely on the goodwill of potential volunteers such as you. If you require any further information, we will be pleased to help you in any way we can.

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