

# New research provides insight into how obsessive-compulsive disorder develops

May 23 2011

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Hand washing from Hygiene Matters 2010. Credit: SCA-Svenska-Cellulosa-Aktiebolaget-Flickr

(Medical Xpress) -- New scientific evidence challenges a popular conception that behaviours such as repetitive hand-washing, characteristic of obsessive-compulsive disorder (OCD), are carried out in response to disturbing obsessive fears.

The study, conducted at the University of Cambridge in collaboration with the University of Amsterdam, found that in the case of OCD the behaviours themselves (the compulsions) might be the precursors to the disorder, and that obsessions may simply be the brain's way of justifying these behaviours. The research provides important insight into how the debilitating repetitive behaviour of OCD develops and could lead to more effective treatments and [preventative measures](#) for the disorder.

The research, funded by the Wellcome Trust and published in the renowned [American Journal of Psychiatry](#), tested 20 patients suffering from the disorder and 20 [control subjects](#) (without OCD) on a task which looked at the tendency to develop habit-like behaviour. Subjects were required to learn simple associations between stimuli, behaviours and outcomes in order to win points on a task.

The team, led by Claire Gillan and Trevor Robbins at the University of Cambridge MRC/Wellcome Trust Behavioural and Clinical Neuroscience Institute and Sanne de Wit at the University of Amsterdam, found that patients suffering from the disorder had a tendency to continue to respond regardless of whether or not their behaviour produced a desirable outcome. In other words, this behaviour was habitual. The discovery that compulsive behaviour - the irresistible urge to perform a task - can be observed in the laboratory, in the absence of any related obsessions, suggests that compulsions may be the critical feature of OCD.

Indeed, one of the most effective treatments for OCD is cognitive behavioural therapy (CBT), which typically involves a method known as "exposure and response prevention". This technique challenges patients to discontinue compulsive responding, and learn that the feared consequence does not occur, whether or not the behaviour is performed. The effectiveness of this treatment is compatible with the idea that compulsions, and not obsessions, are critical in OCD. Once the compulsion is stopped, the obsession tends to fade away.

"It has long been established that humans have a tendency to 'fill in the gaps' when it comes to behaviour that cannot otherwise be logically explained," said Claire Gillan, a PhD student at the University of Cambridge. "In the case of OCD, the overwhelming urge to senselessly repeat a behaviour might be enough to instil a very real obsessive fear in order to explain it."

**More information:** The paper "Disruption in the Balance Between Goal-Directed Behavior and Habit Learning in Obsessive-Compulsive Disorder" was published in the July print edition of the American Journal of Psychiatry. The authors include: Gillan CM, Papmeyer M, Morein-Zamir S, Sahakian BJ, Fineberg NA, Robbins TW, de Wit S (2011). [ajp.psychiatryonline.org/cgi/r ... .ajp.2011.10071062v1](http://ajp.psychiatryonline.org/cgi/r...ajp.2011.10071062v1)

Provided by University of Cambridge

Citation: New research provides insight into how obsessive-compulsive disorder develops (2011, May 23) retrieved 18 December 2022 from <https://medicalxpress.com/news/2011-05-insight-obsessive-compulsive-disorder.html>

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