

Playing smartphone games could help researchers understand the brain

You can help researchers studying the brain and mental health conditions by playing games on the Brain Explorer app, finds Loyal Liverpool

3 February 2021, By Loyal Liverpool

OUR brains hold the key to understanding how mental health conditions first develop. All of us possess traits related to psychiatric conditions to some extent. That's why researchers are looking to you and me – and the population at large – to help them better understand the origins of common mental health conditions, including depression, anxiety and obsessive-compulsive disorder (OCD).

Last year, the World Health Organization described mental health as one of the most neglected areas of public health, even though, globally, close to a billion people live with a mental health condition. To gather more data on how our brains work and how common mental health conditions arise, Tobias Hauser at University College London and his colleagues launched the Brain Explorer citizen science project.

All you have to do to participate is download the Brain Explorer app on your smartphone and start playing games, interspersed with brief questionnaires.

My favourite is Treasure Hunt, in which, as a space miner, you must search for rare, buried treasure on different planets. The game gives you a chance to investigate what type of treasure is the most abundant on each planet, and indirectly tests how decisive you are by looking at the way you gather information.

In an earlier study, Hauser and his team found that adolescents with OCD tended to gather more information on average than those without. He hopes to study how this extends to the wider population with anonymised data from Brain Explorer.

This may be helpful for informing treatments too. "In our lab, we've used this kind of task previously in the context of drug studies," says Hauser.

He and his team found that people given a drug that blocks a brain chemical called noradrenaline became more impulsive and tended to gather less information before making decisions.

Hauser suspects the population-level data will also help us better categorise mental health conditions. "Many people that score high on anxiety also score high on depression and so on. So the boundaries between disorders are not very clear," says Hauser. "What we call one disorder, like OCD, is probably consisting of multiple distinct neural impairments and processes."

Using data from the app, he says, it may be possible to tease apart different clusters of behaviour and psychiatric traits associated with different mental health conditions.

About 4000 people have downloaded and played on the app since it first launched in December. "This is over 100 times more than the number of participants we have in our normal lab research studies," says Hauser.

Source: [New Scientist](#)