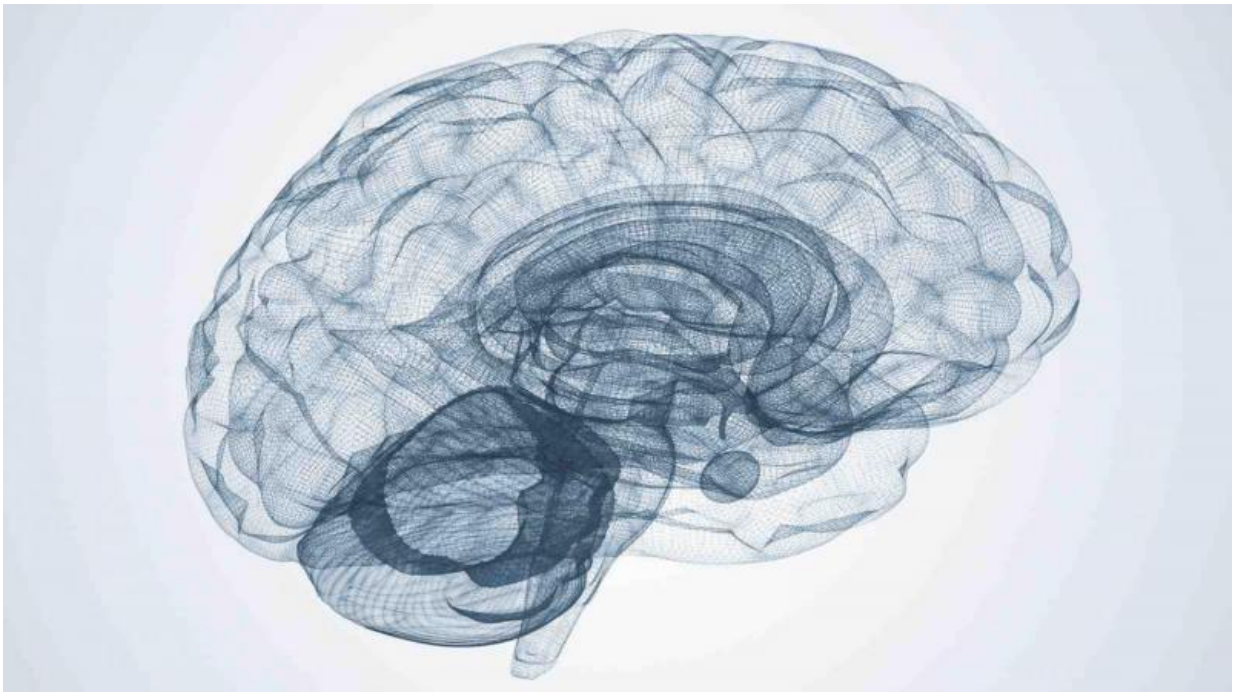


# The link between nature, nurture and brain disorders

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Credit: Victoria University

Two Victoria University of Wellington researchers have published a new book in an effort to highlight the complexities of understanding the development of brain disorders like schizophrenia.

Professor Bart Ellenbroek and Dr Jiun Youn from Victoria's School of Psychology say [genes](#) are not the only factor that make people more

vulnerable to developing a brain disorder.

"Genes are a very important influencer in determining how brain disorders such as addiction, ADHD, autism, major depression and schizophrenia develop—but they are not the sole cause. In identical twins, the risk that both twins develop the same disorder is much less than 100 percent, even though they have exactly the same genes.

"More and more research shows that genes work together with environmental stressors, like pre-natal exposure to an infection or childhood abuse, to influence the likelihood of someone developing a psychiatric disorder."

More research into the area of gene-environment interactions is crucial, says Professor Ellenbroek.

"Many large pharmaceutical companies are rapidly stepping away from investing in developing treatments for brain disorders, because of their very low success rates.

"Yet one in three people in the Western world are predicted to suffer from a brain disorder at some stage during their lifetime, and the cost of neurological and [psychiatric disorders](#) is very high—with a 2010 study showing the cost for brain disorders is higher than the cost for diabetes, cardiovascular disorders, respiratory disorders and cancers combined.

"Therefore it's important that genes are looked at in combination with environmental factors, as this will significantly progress our understanding of [brain disorders](#). If we ignore the interaction with the environment I don't think we will make much progress."

Professor Ellenbroek and Dr Youn's new book, [Gene-Environment Interactions in Psychiatry: Nature, Nurture, Neuroscience](#), was published

by Academic Press, an imprint of Elsevier.

"The idea for the book came after teaching an Honours class for a few years and realising that there were very few books that cover both the basics of gene–environment interactions, as well as the current state of this research in psychiatric disorders. We hope it will be useful for students, clinicians and scientists alike," says Professor Ellenbroek.

"Gene-environment interactions is one of the most fascinating topics in neuroscience. However, we need at least 10 to 15 years of fundamental research before we get to the stage where patients benefit from it."

Provided by Victoria University of Wellington

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