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Genetic link between mental illness, creativity: Study

BY TERESA SMITH, CANWEST NEWS SERVICE JULY 17, 2009



This photo called Selfportrait is a painting by artist Nigel Bart.

Photograph by: Handout, Nigel Bart

Art and music help Nigel Bart, who was diagnosed with schizophrenia 15 years ago, get through his day and manage his mental disorder.

He wakes up every morning with what he calls an intrinsic need to paint, to sculpt or to play the piano. And he's not alone.

The experiential link between creativity and mental illness is well documented, but a new study out of Budapest, Hungary has discovered what could be a genetic link between the two.

Szabolcs Keri, a psychiatrist and researcher, says he hopes the link will show people with mild forms of schizophrenia or bipolar disorder, and the rest of the world, that people with mental illness can be valuable, contributing members of society.

"I think people with mental illness have difficulty communicating verbally a lot of the time, and using other facets, like visuals or music, they can express themselves a lot better," said Bart, who lives in Winnipeg.

Keri said although severe schizophrenia and bipolar disorder are highly self-destructive illnesses, milder forms of the conditions make those afflicted think more originally and creatively.

Composer Ludwig van Beethoven, author Virginia Woolf and Syd Barrett, the first lead singer of the band Pink Floyd, are just a handful of artists thought to have suffered from mental illness which could have contributed to their creative genius.

Keri's study looked at Neuregulin 1, a protein in the gene NRG1 often found in schizophrenics. It regulates the flow of information between neurons, easing them into the frontal lobe of the brain — the part responsible for many of the higher human functions including personality, intellect, creativity and long-term planning.

Using widely recognized objective tests to measure the creativity and IQ of 200 "highly intellectual" Hungarians, he found that those who had the gene answered questions more creatively and "thought outside the box."

"It would be much too simple to say that people with Neuregulin 1 are automatically more creative . . . the brain is more complex than that," he said. "But you could say that, by easing the flow of information to the frontal lobe, Neuregulin 1 contributes to greater creativity and intellectual capacity."

Keri asserts that the NRG1 gene — which is present in both highly intelligent, creative people and those with schizophrenia and bipolar disorder — has been maintained through evolution because it is useful for society to have members who can think creatively.

Dr. Richard Kogan, psychiatrist and concert pianist based in New York City who studies the interface between musical genius and mental illness, isn't surprised by the genetic link.

"There seems to be something about the mildly manic state of people with bipolar disorder that predisposes them to creative achievement — there's an increased energy, sharpened imagination," he said.

He said he hopes the discovery will help the general public to accept, and even celebrate, people afflicted with these diseases.

"Mental illness, even now in the 21st century, is stigmatized," said Kogan. "I think if it can be shown that there are positive benefits to mental illness — that these people have access to the worlds beyond, or internal experience — this might help the public view the mentally afflicted in a more balanced way."

For his part, Bart is heartened by the discovery.

"When someone has a feeling that they need to create something, it's part of who they are, it's in their genes," he said.

"Some researchers say that it's a very romantic point of view that madness and creativity are related, but I don't think it's just romantic, I think it's reality," said Keri.

Keri says his research, the first to prove a genetic link between mental illness and creativity, is just the first step. "The results must be replicated in a much larger sample, taking into consideration even more genetic variants," he said.

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