

Researchers at the Stanford University School of Medicine have shown for the first time that a sample of children who either have or are at high risk for bipolar disorder score higher on a creativity index than healthy children. The findings add to existing evidence that a link exists between mood disorders and creativity.

The small study, published in the November issue of the Journal of Psychiatric Research, compared creativity test scores of children of healthy parents with the scores of children of bipolar parents. Children with the bipolar parents - even those who were not bipolar themselves - scored higher than the healthy children.

"I think it's fascinating," said Kiki Chang, MD, assistant professor of psychiatry and behavioral sciences and co-author of the paper. "There is a reason that many people who have bipolar disorder become very successful, and these findings address the positive aspects of having this illness."

Many scientists believe that a relationship exists between creativity and bipolar disorder, which was formerly called manic-depressive illness and is marked by dramatic shifts in a person's mood, energy and ability to function. Numerous studies have examined this link; several have shown that artists and writers may have two to three times more incidences of psychosis, mood disorders or suicide when compared with people in less creative professions.

Terence Ketter, MD, professor of psychiatry and behavioral sciences and a study co-author, said he became interested in the link between mental illness and creativity after noticing that patients who came through the bipolar clinic, despite having problems, were extraordinarily bright, motivated people who "tended to lead interesting lives." He began a scholarly pursuit of this link and in 2002 published a study that showed healthy artists were more similar in personality to individuals with bipolar disorder (the majority of whom were on medication) than to healthy people in the general population.

Some researchers believe that bipolar disorder or mania, a defining symptom of the disease, causes creative activity. Ketter said he believes that bipolar patients' creativity stems from their mobilizing energy that results from negative emotion to initiate some sort of solution to their problems. "In this case, discontent is the mother of invention," he said.

The researchers point out that creativity and bipolar may have important genetic components that are transmitted together inter-generationally. There have only been limited studies investigating this; the Stanford study is the first to specifically examine creativity in the offspring of bipolar parents.

During the study, the researchers looked at creative characteristics in 40 bipolar patients and 40 offspring, comparing them with 18 healthy adults and 18 healthy offspring. The children in the study ranged in age from 10 to 18. Half of the children of bipolar patients also had bipolar disorder; the other half had attention deficit hyperactivity disorder or ADHD, which appears to be an early sign of bipolar disorder in offspring of parents with the condition. The majority of participants with bipolar or ADHD were on medication.

The researchers included children with ADHD so they could study creativity before the onset of full bipolar disorder. "We wanted to see whether having a manic episode is necessary for this sort of creativity," said Chang, who also directs the Pediatric Bipolar Disorders Program at Lucile Packard Children's Hospital.

Study participants were given psychiatric evaluations and then completed the Barron-Welsh Art Scale, or BWAS, a test that seeks to provide an objective measure of creativity. The scoring is based on "like" and "dislike" responses to figures of varying complexity and symmetry; past studies suggest that creative people tend to dislike the simple and symmetric symbols.

The researchers found that the bipolar parents had 120 percent higher BWAS "dislike" scores than the healthy parents. The children with bipolar and the children with ADHD had, respectively, 107 and 91 percent higher BWAS dislike scores than the healthy children.

"The results of this study support an association between bipolar disease and creativity and contribute to a better understanding of possible mechanisms of transmission of creativity in families with genetic susceptibility for bipolar disease," the researchers wrote in their paper.

The researchers had hypothesized that the scores of children with ADHD would differ significantly from the scores of bipolar children so they were surprised when the scores did not. Chang said this indicates that mania is not what is fueling the creativity. "The kids with ADHD who hadn't been manic yet still had very high levels of creativity," he said.

The researchers also found a link between the length of a bipolar child's illness and creativity: the longer a child was sick or manic, the lower the BWAS dislike score. It makes sense, Chang said, that this illness could, over time, erode one's creativity. "After awhile you aren't able to function and you can't access your creativity," he explained.

BWAS dislike scores tend to decrease with age even in healthy individuals, so more research is needed, Ketter said. Further studies are also needed to assess the role of genetic and environmental factors in creativity and bipolar, he added. The team plans to next examine whether the degree of creativity in parents correlates with the degree of creativity in their children.