

# Family study emphasizes distinct origins for bipolar disorder subtypes

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The most common subtypes of bipolar disorder, bipolar I and bipolar II, stem—at least in part—from different biological causes, according to a new study published in *Biological Psychiatry*. Despite genetic overlap between the two subtypes, each subtype tended to cluster within families, suggesting a distinction between bipolar disorders I and II.

The study, by Dr. Jie Song of the Department of Clinical Neuroscience, Karolinska Institutet, Sweden, and colleagues helps settle controversy over the relationship between bipolar I and bipolar II disorders. Although genetic similarities indicate overlap between the subtypes, the new findings emphasize different origins. According to Song, this is contrary to a common notion among many clinicians that bipolar II disorder is merely a milder form.

"We have tended to view the two forms of bipolar disorder as variants of the same clinical condition. However, this new study highlights important differences in the heritable risk for these two disorders," said Dr. John Krystal, Editor of *Biological Psychiatry*.

The study is the first nationwide family study to explore the difference between the two main subtypes of bipolar disorder. Dr. Song and colleagues analyzed the occurrence of the bipolar disorder subtypes in families from the Swedish national registers. Although a strong genetic correlation between bipolar I and bipolar II disorder suggests that they are not completely different, the [family](#) occurrence for each subtype was stronger than co-occurrence between the subtypes, indicating that bipolar

I and bipolar II disorders tend to "run" in families separately, rather than occurring together.

"Within the context of our emerging appreciation of polygenic risk, where gene variations are implicated in several disorders, the new findings point to only partial overlap in the risk mechanisms for these two forms of bipolar disorder," said Dr. Krystal.

The study also provided some additional clues that bipolar I and II [disorders](#) have distinct origins. Only bipolar disorder II showed gender differences—the proportion of females to males was higher in bipolar disorder II but not bipolar disorder I. And bipolar I clustered together in families with schizophrenia, which was not apparent for bipolar disorder II.

"Hopefully, our findings increase awareness of the need for refined distinctions between subtypes of mood disorder," said Dr. Song. The distinction between the subtypes also has implications for treatment strategies for patients. Dr. Song added that future research is warranted to characterize new biomarkers to improve treatment and prognosis.

**More information:** Jie Song et al, Specificity in Etiology of Subtypes of Bipolar Disorder: Evidence From a Swedish Population-Based Family Study, *Biological Psychiatry* (2017). [DOI: 10.1016/j.biopsych.2017.11.014](#)

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