

## ☆ Extraversion (Lo, 2017)

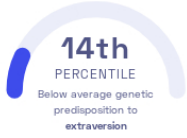
Min-Tzu Lo, et al.  
Nature Genetics

Mind

### STUDY SUMMARY

Identification of novel genetic variants associated with personality traits as well as a genetic correlation between personality and predisposition to psychiatric disorders.

### YOUR RESULT



### STUDY DESCRIPTION





Personality is determined by environmental and genetic factors. It can be modeled according to five broad domains ("Big Five"): extraversion, neuroticism, agreeableness, conscientiousness, and openness. This study identified five new genetic variants associated with personality traits by examining genetic data of over 200,000 individuals of European ancestry. Additionally, this study has discovered that the genetic factors that determine personality also influence the risk of psychiatric disorders. For example, openness was shown to be genetically correlated with bipolar disorder and schizophrenia. High neuroticism and extraversion were genetically correlated with ADHD as well as depression and anxiety. Low agreeableness was associated with narcissism and psychopathy.

### DID YOU KNOW?

The "Big Five" personality traits are often used by employers to hire employees. For most professions, conscientiousness - which involves being responsible and reliable - was the most highly valued trait.

### YOUR DETAILED RESULTS

To calculate your genetic predisposition to extraversion we summed up the effects of genetic variants that were linked to extraversion in the [study that this report is based on](#). These variants can be found in the table below. The variants highlighted in green have **positive effect sizes** and increase your genetic predisposition to extraversion. The variants highlighted in blue have **negative effects sizes** and decrease your genetic predisposition to extraversion. Variants that are not highlighted are not found in your genome and do not affect your genetic predisposition to extraversion. By adding up the effect sizes of the highlighted variants **we calculated your polygenic score for extraversion to be -0.06**. To determine whether your score is high or low, we compared it to the scores of 5,000 other Nebula Genomics users. We found that your polygenic score for extraversion is in the **14th percentile**. This means that it is higher than the polygenic scores 14% of people. We consider this to be a **below average genetic predisposition to extraversion**. However, please note that genetic predispositions do not account for important non-genetic factors like lifestyle. Furthermore, the genetics of most traits has not been fully understood yet and many associations between traits and genetic variants remain unknown. For additional explanations, click on the column titles in the table below and visit our [Nebula Library tutorial](#).

VARIANT <sup>Ⓞ</sup>	YOUR GENOTYPE <sup>Ⓞ</sup>	COMMENTS	EFFECT SIZE <sup>Ⓞ</sup>	VARIANT FREQUENCY <sup>Ⓞ</sup>	SIGNIFICANCE <sup>Ⓞ</sup>
rs1426371_A 	A / A	Extraversion	-0.31 (↓)	28%	$9.64 \times 10^{-16}$
rs6481128_G 	G / A	Extraversion	0.20 (↑)	45%	$5.44 \times 10^{-10}$
rs57590327_T 	G / G	Extraversion	0.24 (-)	26%	$1.26 \times 10^{-9}$
rs2164273_G 	G / G	Extraversion	0.18 (↑)	39%	$1.61 \times 10^{-9}$