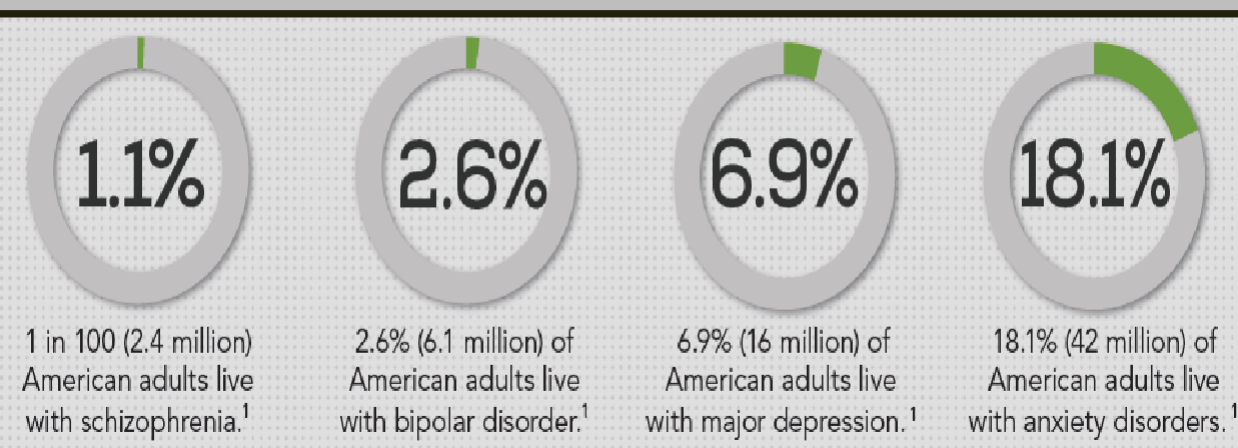


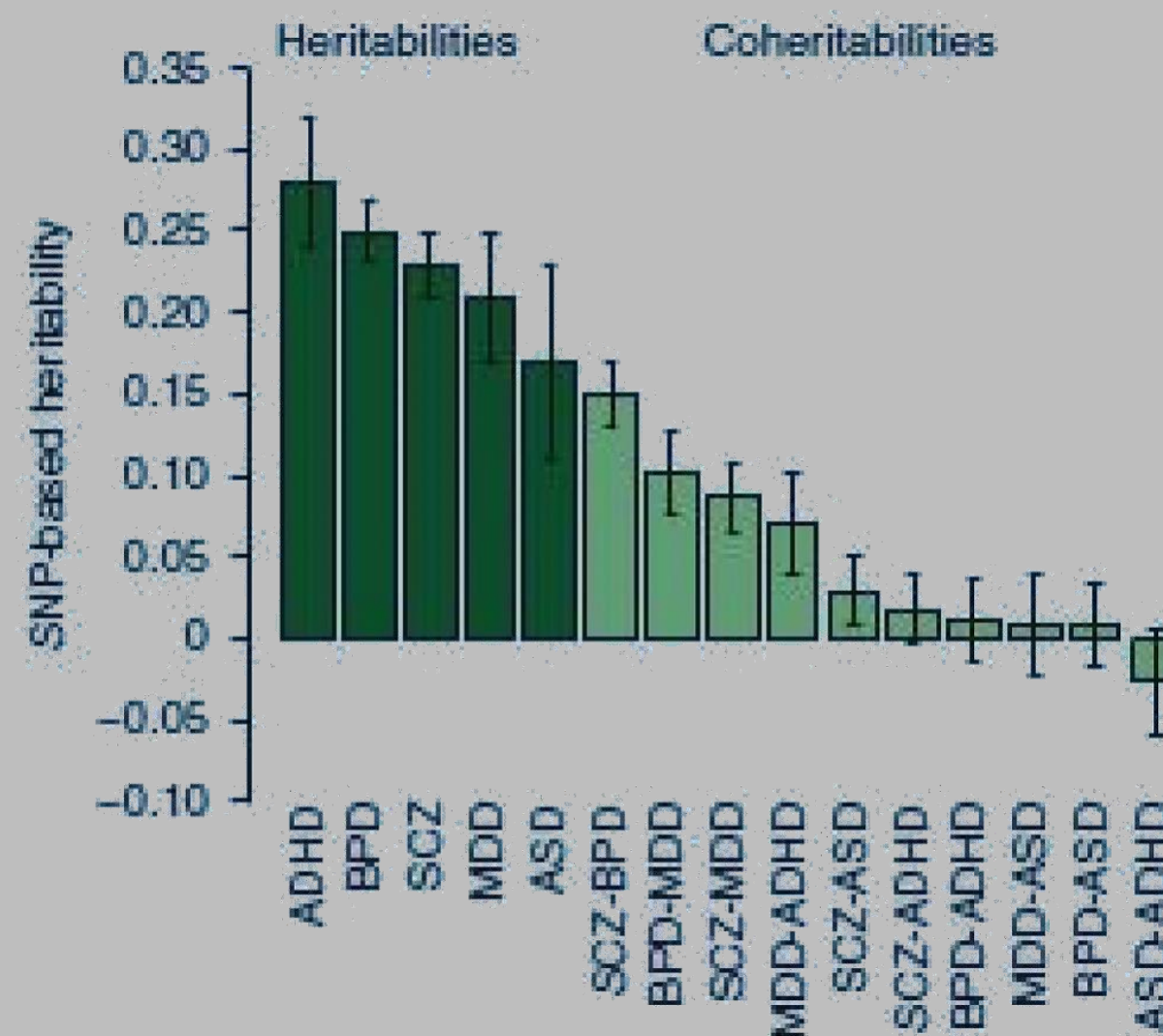
## Introduction

- The **psychiatric disorders** is behavioral or mental pattern that cause significant distress or impairment of personal function.<sup>1</sup>
- Many disorders have been described with signs and symptoms that vary widely between specific disorders.<sup>1</sup>
- Major psychiatric disorders are schizophrenia, autism, bipolar disorder, major depressive disorder and attention deficit hyperactivity disorder (ADHD).<sup>1</sup>
- The **Genetic variations** is the difference in DNA sequence between individuals within a population, variation occur in germ cells (sperm and egg) and in other somatic cells, only variations in the germ cells can be inherited.<sup>2</sup>



## Material and Methods

- The data in this poster were collected from two different resources which were published recently in 2018 and 2013 respectively .
- The first report have been done by UCLA Center for Health Policy Research.
- The second report have been published by Lancet (general medical journal) and the research was done by collaboration between 313 doctors and founded by National Institute of Mental Health.



## Discussion

- The scientists screened for evidence of illness-associated genetic variation among over 33,000 patients. All had been diagnosed with at least 1 of the 5 disorders. A comparison group included about 28,000 people who had no major psychiatric diagnosis.<sup>3</sup>
- The analysis revealed variations in 2 genes that code for the cellular machinery that helps regulate the flow of calcium into neurons.<sup>3</sup>
- 1-CACNA1C : had previously been linked to bipolar disorder, schizophrenia and major depression. CACNA1C is known to affect emotion, thinking, attention and memory functions that can be disrupted in mental illnesses.<sup>3</sup>
- 2-CACNB2, was also linked to the all five disorders.<sup>3</sup>

## Discussion

- 3-The researchers discovered illness-linked variation for all 5 disorders in certain regions of chromosomes 3 and 10. Each of these sites spans several genes, and causal factors haven't yet been pinpointed. The suspect region along chromosome 3 had the strongest links to the disorders. This region also harbors certain variations previously linked to bipolar disorder and schizophrenia.<sup>3</sup>
- 4-The RNA in 700 tissue samples from the brains of deceased subjects revealed significant overlap between distinct disorders, like schizophrenia and autism, but also specificity, with major depression showing molecular changes are absent in other disorders.<sup>4</sup>

## Conclusion

- Common genetic variations accounted for 17 to 28 percent of risk for the five mental disorders.
- The mechanisms by which molecular changes occur according to genetic factor is not clearly understood. This give more opportunity now to understand the mechanisms by which this comes about.

## References

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