The latest gene discoveries and implicated biology from large scale GWAS meta-analyses

5. Genetic, epigenetic and neurobiological factors

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Abstract text

The biology of suicidal behaviors (SBs) is partly influenced by additive genetic factors, with heritability estimates in the range of 30-55%. Rather than the historical approach of studying specific genes, genome-wide association studies (GWAS) screen the genetic landscapes across all possible genes. Today, large scale GWAS meta-analyses by researchers affiliated to the Psychiatric Genomics Consortium (PGC; https://pgc.unc.edu/) are done with very large sample sizes, producing results with a higher degree of generalizability. Here we go through the latest gene discoveries presented from the PGC Suicide working group, as well as test and try to interpret the implied biology by use of unbiased, biological network-aggregation analyses. These quests for genes underlying SBs attempts help us understand better why certain subjects seem more vulnerable to the tragic outcome of lifetime SBs, which could reduce stigma and help to enhance interventions in the future.

Selected references