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FOR MANAGEMENT OF PSYCHOLOGICAL AND NEURODEVELOPMENTAL DISORDERS-  
A REVIEW

## Gene Mining for Management of Psychological and Neurodevelopmental Disorders- a Review

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## Abstract:

Genetic studies could act as surplus tool in testifying psychological disorders revealing concrete details about diseases. Application of omics-data could assist in classification of neurodevelopmental disorders. In this study PCR-based DNA markers were emphasized due to low cost, affordability and high reproducibility. 52 genes were identified including their molecular ontogeny with detection of mono/oligo/polygenic control of diseases. The mono or oligogenic diseases could be controlled easily. The distinct candidate gene approach in tracing of neurodevelopmental disorder is rare. The prevalence of pleiotropic control mechanism of genes in majority of disorders may assist in novel drug development leading to multiple disease management and re-purposing of existing drugs. The polygenic risk score could select super-controls, high risk individuals, rare variants in clinical trials. The sexually transmitted neurodevelopmental traits could be utilized in pre-marital counselling and pre-natal child care. The role of epigenetic factors involving histone methylation, modification in amino acid content imposes higher order control along with dubious environmental component. The criss-cross inheritance of X-chromosome regulates gene expression in male offspring and a single holandric gene was identified to be related to autism. Gene-mining data could lead to biomarker development, early disease detection, prognosis, control and management of psychological and neurodevelopmental disorders.

**Keywords:** Disease management, Drug-development, Genome wide association study (GWAS), Pleiotropy, Polygenic, Psychological/neurodevelopmental disorder

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