

Schizophrenia and Its Genetic Basis: A Review Study

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ABSTRACT

Background: Schizophrenia is a devastating mental illness that interferes with the patient's social and occupational functioning and impairs the patient's life. **Methods:** The research method is a Review Study based on library, documentary and field studies. **Results:** Studies indicate the bio-genetic basis in the etiology of schizophrenia disorder; however, the mystery of the formation of this disease is still somewhat unknown. Parents' age is considered as an effective index on incidence of children to psychotic disorders. Studies show that parents' higher age is associated with having children with schizophrenia and mostly parents, who have children with schizophrenia under the legal age, do not live with their child. **Conclusion:** This study was a review study, the results of which can be useful in planning preventive interventions.

Keywords: Schizophrenia, Genetic

Schizophrenia is a devastating mental illness that interferes with the patient's social and occupational functioning and impairs the patient's life (Bachmann et al., 2005). Psychosis is a general term that is used to determine the most severe psychiatric disorders caused by disintegration of thought processes, emotional disorders, loss of spatial and temporal orientation, inability to evaluate the outer reality, not compromised response to usual requirements of life, existence of delusions and hallucinations in some cases, and in general, damaging the character by pathological process. This syndrome leads to vulnerability in individuals' social life (Bartels et al., 2003). Studies indicate the bio-genetic basis in the etiology of schizophrenia disorder (Shih et al., 2004). However, the mystery of the formation of this disease is still somewhat unknown (Lee et al., 2016). In treatment-resistant psychotic patients than psychotic patients' respondent to treatment, dopamine synthesis is lower (Demjaha et al., 2012). Lack of response to treatment can be in the form of side effects, neuroleptic syndrome, extra pyramidal syndrome, weight gain, lack of therapeutic cooperation and mortality in psychotic patients Naumovska et al., 2015). With respect to biological system, high density in dopaminergic receptors is associated with favorable therapeutic prognosis (Robert et al., 2009). However, due to individual differences,

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codification of a prevention and treatment program in the area of schizophrenia requires unique therapeutic approaches (Thibaut, 2014). In regard to existence of individual differences in psychotic patients, even smoking cigarette can cause difference in the conclusion of the treatment because of affecting on levels of blood plasma (Huang et al., 2016). These individual differences are often explained as a genetic diversity (Zhang et al., 2010). Even in the case of the same genotypes, also, some differences in the response and severity of psychotic symptoms can be seen (Ota et al., 2012). Recent studies show that environmental change can cause certain symptoms in psychotic patients that are famous as “isolation syndrome” and are associated with increasing anxiety, hyperactivity and learning and memory impairment (Oliveras et al., 2016). Some parts of reasons explaining schizophrenia disorder should be explained in case of genetic changes. Hereditary factors that are transferred from one generation to another are called gens. Gens are located in all parts of a giant molecule called Ribonucleic acid Dzaksy of DNA. DNA changes into the form of nucleoprotein accompanied proteins that appear in form of chromosome in special staining in the cell nucleus. A gen includes some information that protein is built by its help. DNA molecule is stable and has the power of replication. Change of a part of molecule's structure is called mutation. Mutation, in fact, is associated with changing the information existing in DNA molecule that as a result, a defective protein appears or building protein is totally cut. However, it should be considered that the final result of mutation is creating new characteristics in individuals of a spice. A gen can change into various shapes because of multiple mutations that are called El morph or in a row set of genes. Each gene occupies a special place on a chromosome that is called locus. In this way, all in row genes occupy specific place of the primary gene on the same chromosome. The term locus sometimes is applied instead of the term gene. In short, in the early time of appearance of genetics, gene was thought as an independent factor that was located on a string throughout chromosome like beads. Parents' age is considered as an effective index on incidence of children to psychotic disorders. Studies show that parents' higher age is associated with having children with schizophrenia and mostly parents who have children with schizophrenia under the legal age, do not live with their child (Schrank et al., 2016). Increasing parents' age is associated with increase in risk of incidence of the child to autism spectrum disorders (Byars & Boomsma, 2016). Scientific evidence suggests that prenatal factors in psychotic patients, compared to non-psychotic individuals, are a predictor of mortality in this group of patients (Rautio et al., 2016). This study was a review study, the results of which can be useful in planning preventive interventions.

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Conflict of Interests:

The author declared no conflict of interests.

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