

A Correlational Study of Mood, Behaviour, and Personality Characteristics; and Biomarkers among Suicide Completers

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Abstract

Systematic reviews of PA studies from 2000 onwards have highlighted cases of suicide without identifiable psychiatric conditions (Milner et al., 2013). Up to 66.7% of these cases remained undiagnosed in studies examining only Axis I disorders, while about 37.1% had no psychiatric condition in studies assessing both personality and Axis I disorders. Regional differences also emerged, with China and India having higher proportions of undiagnosed psychiatric conditions compared to Europe, North America, or Canada. Polymorphisms in cytokine genes have been significantly associated with depression and suicidal behavior (Holtzman et al., 2012; Y. K. Kim et al., 2013; Omrani Dr. et al., 2009; C. Zhang et al., 2016). Functional polymorphisms in the promoter and/or coding regions of these regulatory genes are likely to pre-determine the phenotype manifestation of certain cytokine profiles and could be used as markers for suicidal behavior. The predisposition to suicidal behavior does not follow a Mendelian inheritance pattern, and the psychosocial and stress parameters in the Indian population may differ from those in Western populations. Therefore, studying the genetic basis of suicide in the Indian population is essential. This study aims to investigate the molecular genetic patterns of the IL-1 β , IL-4, IL-6, IL-10, and TNF- α genes in suicidal behavior. Psychological autopsies were also conducted for all subjects. 256 samples were collected from subjects within 48 hours of death within age range between 14-70 years. The all participants were an India citizen descending from Indian parents and grandparents. After obtaining informed consent from the LAR, 2mL of whole blood was collected from the femoral vein of the deceased and transferred to an EDTA (Ethylene diamine tetra acetic acid) vial and stored at -4 o C, until extraction. The genomic DNA (Deoxyribose Nucleic Acid) was extracted from 500 μ l of whole blood using a modified organic extraction method. The findings were interesting to discuss in the line of existing literature.