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STRESSFUL LIFE EVENTS IN EARLY LIFE AND SUICIDAL BEHAVIOUR.

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There is robust evidence that stressful life events (SLE) are associated with an increase in risk of developing depression. However, humans display wide variation in response to adversity. Caspi et al (2003) reported that a functional length polymorphism (5-HTTLPR) in the promoter of the serotonin transporter gene moderated the influence of SLE on depressive symptoms, major depression, and suicidality, suggesting evidences of a gene-by-environment interaction.

Neuroimage data from healthy, non-depressed, s allele carriers of the 5-HTTLPR show an exaggerated amygdale response to threatening visual stimuli as well as reduced gray matter volume in limbic regions critical for processing of negative emotion compared with individuals with the LL genotype. These data suggest a potent modulatory effect of the 5-HTTLPR on amygdala reactivity to environmental threat.

In recent years, a growing number of molecular genetic studies have focused on the serotonin system, suggesting that this system may be involved in the pathogenesis of suicidal behaviour. Meta-analytic evidences support a link between the s allele of the 5-HTTLPR and the risk of suicidal behaviour. However, several case-control association studies show an association between the short allele and the violence, the number, and the medical lethality of the attempts.

On the other hand, recent data suggest that biological stress reactivity, mediated by the hypothalamic-pituitary-adrenocortical axis, might be a plausible mechanism underlying the association between the 5-HTTLPR genotype and exposure to life stress in predicting psychopathology.

In this presentation we discuss data regarding the complex relationship between the above mentioned systems, stress, and suicidal behaviour.

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