Neurobiological consequences of child abuse

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Genetic, brain imaging and neurotransmitter studies have revealed the long-term consequences of child abuse and neglect. These changes increase vulnerability to mood and anxiety disorders in adulthood. Exposure to trauma during childhood increases the risk of certain psychiatric disorders beyond the risk associated with adult violence exposure. We have demonstrated a number of long-term neurobiological consequences of child abuse and neglect, including structural and functional brain imaging changes, and neuroendocrine and immune alterations. In particular, alterations in the hypothalamic-pituitary-adrenal (HPA) axis, a major mediator of the stress response, contribute to the long-standing effects of early life trauma. However, not all exposed individuals demonstrate altered HPA axis physiology, suggesting that genetic variations influence the psychiatric consequences of trauma exposure. Variants in the gene encoding the CRF R1 receptor, FKBP5, PAC1 and others interact with adverse early environmental factors to predict risk for stress-related psychiatric disorders. These studies suggest molecular targets for new drug development, biological risk factors, and predictors of treatment response. In addition, the effect of abuse may extend beyond the immediate victim into subsequent generations, as a consequence of epigenetic effects transmitted directly to offspring and/or behavioral changes in affected individuals. Recognition of the biological consequences and transgenerational impact of trauma has critical importance for both treatment research and public health policy.

What do Stellenbosch University medical students think about psychiatry – and why should we care?

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Mental illnesses are a major cause of morbidity and mortality worldwide, with increasing relevance to low- and middle-income countries as communicable diseases are slowly tamed. However, there remains a shortage of psychiatrists worldwide, especially in developing countries, which can least tolerate the loss of productivity due to mental illness. Unfortunately, psychiatry is routinely ranked by medical students as one of the least appealing specialties and recruitment into psychiatry suffers as a result. Many studies have examined the correlates of poor student attitudes towards psychiatry, with the hope of identifying both positive and negative factors influencing career choice in psychiatry. However, previous studies have mostly been small, local and only examined a few potential correlates. Stellenbosch University recently took part in the International Study of Students’ Career Choice in Psychiatry, the first international large well-powered cross-sectional study. Final-year medical students from 17 different countries were invited to take part in a detailed online survey. In this presentation I will share results from the South African branch of the study, and compare these to results from other countries. I will also outline challenges facing poorer developing countries in recruiting psychiatrists.