Impact of childhood maltreatment on depression and metabolic syndrome

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Childhood maltreatment (CM), defined by exposure to abusive, neglectful or overtly traumatic experiences during childhood, contributes to psychiatric disorders, including major depressive disorder (MDD) and metabolic syndrome in adulthood. Additionally, there is consistent evidence from population-based cohort studies that MDD is associated with increased risk for type 2 diabetes mellitus (T2DM) and obesity. However, it remains unclear whether CM has a direct impact on the development of metabolic syndrome or if CM influences the development of metabolic syndrome in patients with MDD through diagnosis-dependent biological pathways. Studies were conducted to explore patho-physiological mechanisms that may link CM exposure and stress-related psychiatric disorders and metabolic syndrome. CM is highly prevalent in a sample of African-American/Caucasian patients with MDD. Our data also indicates that exposure to CM is linked with increased visceral fat deposition. Disturbance of HPA axis activity and activation of the immune system may be two potential mechanisms contributing to it. In addition, the association between CM and T2DM is also examined. Individuals with CM, especially in patients with MDD and CM exposure, are at elevated risk for T2DM. Mechanism underlying a greater risk for T2DM is due to, at least in part, a consequence of reduced insulin sensitivity and glucose intolerance. It is suggested by our results that CM exposure is linked with increased prevalence of MDD, disturbed visceral fat deposition and greater risk for T2DM. Our study has significant implications for the understanding of pathophysiology and potentially treatment of stress-related MDD and metabolic syndrome.

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Prevalence and correlates of non-medical stimulant and related drug use in a sample of South African undergraduate medical students

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Background: The non-medical use of prescription psycho-stimulants or cognitive-enhancing substances under healthy college students is a growing concern. This use appears to be particularly high under medical students. To our knowledge, no literature is however available on the non-medical use of stimulants among South African medical students.

Objectives: To determine the prevalence and correlates of non-medical stimulant use as well as subjective opinion on peer numbers using stimulants and university attitude towards stimulant use among a sample of South African undergraduate medical students.

Methods: A descriptive observational study was conducted by means of a self-report questionnaire. Second and fourth year medical students (n=252) completed the questionnaire.

Results: Of the sample, 44 (18%) reported a lifetime use of stimulants for non-medical purposes and 33 (85%) of this group reported use within the past year. A total of 6 (2%) students reported a diagnosis of ADHD. In the group without a diagnosis of ADHD, non-medical stimulant use was associated with year of study (p=0.03) and illicit substance use (p=0.01). Most of the students in this group (31, 32%) reported using stimulants to improve concentration.

Conclusion: Non-medical use of stimulants to improve concentration and academic performance is prevalent under the South African medical students sampled in this study. Further research at other institutions and under non-medical students would be helpful to assess the scope of this phenomenon.

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