

BLENDING VOICES. STRENGTHENING LIVES.

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Investigating the Relationship Between Brain Injury and Psychosis in Sexual Offending

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As sexual offending presents a risk to the community, it is important to understand the associated vulnerabilities or risk factors for those who sexually offend. While most theories acknowledge a multifactorial explanation for sexual violence, neurobiological theories have recently received increasing attention. The current research aims to examine the relationship between major mental illness and brain injuries in those who have committed a sexual offense. Major mental illness (MMI) refers to severe and chronic mental disorders that demonstrate “perceptual disturbance, cognitive instability, social dysfunction and often profound functional disability” (Moulden & Marshall, 2017). Although only a small portion of those who sexually offend have been diagnosed with MMI, previous research has identified signals which suggest that there may be a shared vulnerability by those with MMI and brain injury in those who engage in sexual aggression. Previous research has also demonstrated that there may be neurological vulnerabilities that exist within individuals that engage in sexual offending (Cantor et al., 2008). Specifically, negative correlations were found between white matter volumes of the temporal and parietal lobes bilaterally in men diagnosed with pedophilia. As these regions of the brain connect the cortical regions that respond to sexual cues, the research suggests that pedophilia may be a result of partial disconnection within the network that recognizes sexually relevant stimuli (Cantor et al., 2008). Similarly, changes in white matter volume predicted future development of psychosis, and individuals with MMI exhibiting psychosis demonstrated a shared white matter dysconnectivity (Kumar, Iwabuchi, Oowise, Balain, Palaniyappa & Liddle, 2015; Walterfang et al., 2008). A previous pilot study demonstrated increased odds (OR = 3.83) of brain injury amongst individuals with MMI who engaged in sexual aggression (Moulden, Myers, Messina, Fram-Kovar, Chaimowitz & Zipursky, 2016). The current study aims to replicate and extend these findings by examining if a relationship exists between brain injury and psychosis among those who sexually offend, and to what extent this distinguishes them from other offending types (violent and general) in the forensic mental health system.

The sample consists of 1240 patients in the forensic mental health system in Ontario, Canada, which is comprised of 10 forensic psychiatry programs. A retrospective file review was conducted based upon comprehensive hospital reports prepared for the provincial tribunal, which summarized a variety of variables of interest, such as demographic data, social and developmental history, psychiatric history, criminal history, and progress within the forensic system. Group differences will be evaluated between offender category type with respect to the contribution of MMI and brain injury. Planned post hoc analyses include, specific brain injury analyses, gender effects, and family history of mental illness. This study aims to improve our knowledge of neurological vulnerabilities and potential interactions in their contribution to sexual violence.

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