

New ways to predict violent behavior?

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In the future, diagnosing severe personality disorders, evaluating the childhood environment, assessing alcohol consumption and the analysis of the MAOA genotype may provide more accurate means for assessing risk among violent offenders, according to the Finnish research carried out jointly at the University of Helsinki and the Helsinki University Central Hospital Psychiatry Centre.

"The many negative effects of violence could be alleviated by improving the accuracy of predicting violent behaviour. Lack of knowledge about the root causes of violence is, however, an impediment for such predictions," says Roope Tikkanen, MD, who has published his doctoral dissertation on the subject.

Tikkanen analysed the risk factors of violent reconvictions and mortality, using research data collated by Professor Matti Virkkunen based on court-ordered mental status examinations carried out in Finland during 1990-1998. The majority of the 242 men participating in the study suffered from alcoholism and severe [personality disorders](#). The control group comprised 1,210 Finnish males matched by sex, age and place of birth. Following a nine-year follow-up period, the risk analyses were conducted based on criminal register (Legal Register Centre) and mortality (Statistics Finland) data.

Risk variables used in the analyses were antisocial personality disorder (ASPD), borderline personality disorder (BPD), the comorbidity of ASPD and BPD, childhood adversities, alcohol consumption, age, and the [monoamine oxidase A \(MAOA\)](#) genotype. In addition to these

factors, the temperament dimensions were also assessed using the Tridimensional Personality Questionnaire (TPQ).

The prevalence of recidivistic acts of violence (32%) and mortality (16%) was high among the offenders. Severe personality disorders and childhood adversities increased the risk of recidivism and mortality both among offenders and in comparison to the controls. Offenders with BPD and a history of childhood maltreatment stood out as having a particularly poor prognosis.

The MAOA genotype was associated with the effects of alcohol consumption and aging on recidivism. With high-activity MAOA(MAOA-H) offenders, alcohol consumption and age affected the risk of violent reconvictions - alcohol increasing it and aging decreasing it - while with low-activity MAOA (MAOA-L) offenders no such link existed.

The temperament dimensions of offenders included high novelty seeking, high harm avoidance, and low reward dependence which correspond to the definition of an explosive personality.

"The risks of violent reconvictions and mortality accumulate in clear subgroups of violent offenders. Diagnosing severe personality disorders, assessing childhood environments and long-term [alcohol consumption](#), and analysing the MAOA genotype may be tools that can in the future be employed in the prevention of recidivism and mortality and improving the accuracy of risk assessment among offenders," says Tikkanen.

Source: University of Helsinki

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