Study analyzes link between psychotropic drugs and homicide risk

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A study analysing the Finnish homicide and prescription drug databases discovered that the use of certain drugs that affect the central nervous system are associated with an increased risk of committing a homicide. The greatest risk was associated with the use of painkillers and tranquillizing benzodiazepines, while anti-depressants were linked only to a slightly elevated risk. The study is the first one of its kind in the world.

Professor Jari Tiihonen's research group analysed the use of prescription drugs of 959 persons convicted of a homicide.

In the recent years, there has been plenty of debate over whether psychotropic drugs can cause violent behav-iour. In particular, this debate has been fuelled by massacres committed by young persons in schools and other public places in the US and in Finland, too. "It has been repeatedly claimed that it was the anti-depressants used by the persons who committed these massacres that triggered their violent behaviour. It is possible that the massive publicity around the subject has already affected drug prescription practices," Tiihonen says.

In order to properly study the link between drug use and the risk of committing a crime, the following criteria must be fulfilled: the sample needs to be representative, the reason for using the drug needs to be taken into consideration, and the effect needs to be controlled for. Furthermore, the effects of any other drugs and intox-icants used simultaneously also need to be considered. No other studies like the

present one have been pub-lished thus far.

The newly published study analysed the pre-crime use of prescription drugs among all persons convicted of a homicide in Finland between 2003 and 2011. The registers used were the Finnish Homicide Database of the In-stitute of Criminology and Legal Policy, and the Finnish Prescription Register of the Social Insurance Institution of Finland, Kela. After confounding factors were controlled for, the results show that the use of anti-psychotics was not associated with a significantly increased risk of committing a homicide, whereas the use of anti-depressants was associated with a slightly elevated risk (+31%), and the use of benzodiazepines (drugs used to treat anxiety and insomnia) with a significantly elevated risk (+45%). The study found, rather surprisingly, that the highest increase in the risk of committing a homicide was associated with opiate painkillers (+92%) and anti-inflammatory painkillers (+206%). In persons under 26 years of age, the highest increase in the risk of commit-ting a homicide was associated with opiate painkillers (+223%) and benzodiazepines (+95%). An increase in the risk by, for example, 100% means that the risk doubles. Although the use of intoxicants was present in the ma-jority of the homicides, the differences between the drug groups could not be explained by simultaneous in-toxicant use.

In many cases, benzodiazepines had been prescribed in very high doses and for a long period of time. "Benzo-diazepines can weaken impulse control, and earlier research has found that painkillers affect emotional pro-cessing. Caution in prescribing benzodiazepines and strong painkillers to people with a history of substance abuse is advisable," Tiihonen says.

More information: Tiihonen J, Lehti M, Aaltonen M, Kivivuori J, Kautiainen H, Virta L, Hoti F, Tanskanen A, Korhonen P: Psy-chotropic drugs and homicide: a prospective cohort study from Finland. *World*

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