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### H56 Treatment for Injury Predicts the Risk of Child Homicide — A Case-Control Study

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After attending this presentation, attendees will better understand how children at risk of becoming victims of child homicide potentially can be identified.

This presentation will impact the forensic science community by increasing awareness of victim risk factors for child homicide.

There has been a decrease in child homicides in Sweden from eight to ten victims annually in the early 1990s to four to five victims in the late 2000s.<sup>1</sup> The majority of previous research on risk factors for child homicide has focused on risk factors regarding perpetrators (e.g., mental illness or drug abuse). A recent Swedish study reports that multiple birth (i.e., being a twin) is a risk factor for becoming a victim of child homicide.<sup>2</sup> Thus, the goal of this study was to determine whether previous medical care for injuries and/or intoxication is a risk factor for becoming a victim of intra-familial child homicide.

This study had a case-control design. All child homicide victims (0-14 years) in Sweden from 1994 to 2012 were identified in a database for autopsies administrated by the National Board of Forensic Medicine. Extra-familial cases and children who died within 24 hours after birth were excluded, leaving a total of 74 study cases. Autopsy reports, police reports, and court verdicts were studied. Five controls, matched for age, sex, and geographical proximity, were collected for each case through Statistics Sweden, resulting in a total of 370 controls. Data on previous health care use due to injuries were collected from the Swedish National Patient Registry.

The cases were more likely than the controls to have undergone previous treatment for injuries (inpatient and outpatient care, Odds Ratio (OR)=2.3; 95% Confidence Interval (CI) 1.1-4.7). The results were even more pronounced when looking only at inpatient care (OR=6.2; 95% CI 2.2-17.9). The difference was driven mainly by higher odds for female victims with an OR of 3.9 (95% CI 1.3-11.7) for any medical intervention and 9.7 (95% CI 2.2-42.5) for inpatient care. The same trend, although not statistically significant, could be identified for boys regarding inpatient care ( $p=0.065$ ;  $\chi^2=3.41$ ) but not for overall treatment. In most cases, the injuries were not identified by the clinicians as being caused by abuse.

In conclusion, health care clinicians should be aware that children who are treated for injuries, even when not suspected to be by abuse, are at elevated risk for violent victimization. It is reasonable to say that the study supports the Swedish legislation that states clinicians must alert the social services whenever a child is deemed to be at risk of victimization; however, due to the low base rates of homicide victimization, there is an obvious risk that parents and families are stigmatized. Hence, issues of child abuse and reports to the social services need to be handled in a clinically, scientifically, and judicially sound way.

#### Reference(s):

1. Sturup J., Granath S. Child Homicides in Sweden: A Descriptive Study Comparing the 1990s and the 2000s. *Homicide Studies*, 2015;19:175-187.
  2. Lysell H., Runeson B., Lichtenstein P., Långström N. Risk factors for filicide and homicide: 36-year national matched cohort study. *NJ Clin Psychiatry*. 2014;75:127-132.
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#### Child Homicide, Previous Injuries, Filicide