



### **D43 Impact of Forensic Evidence on Solvability in Child Abduction Murder Investigations**

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The goal of this presentation is to assist police investigators more timely and efficiently identify forensic evidence which will contribute to the solution of child abduction murder cases.

This presentation will impact the forensic science community by improving the efficiency and effectiveness of the investigation process in child abduction murder cases.

There is a paucity of research which addresses the role forensic evidence plays in murder investigations of abducted children. Only two researchers, Hanfland et al. (1997) and Brown (2005) present descriptive statistics about the types of forensic evidence found in murder investigations of abducted children. Unlike murders in general, in which weapons are collected as evidence in almost 40% of cases, weapons are collected as evidence in only 17 to 20% of child abduction murder investigations (Hanfland et al., 1997; Brown, 2005). The most common evidence collected in these types of investigations is hair (26.1%) followed by weapons (20.0%) (Brown, 2005). Brown (2005) found that finger and shoe prints (18.0%), semen (17.2%), fibers (15.9%) and blood (14.3%) were found in investigations in substantially the same percentages as Hanfland et al (1997).

In addition to evidence that was left behind by the offender at the crime scene, Brown (2005) examined whether or not the offender deliberately discarded evidence after the murder. Discarded evidence was found by police in 24.2% of child abduction murders (Brown, 2005). This was a slight increase from 21% in a previous study (Hanfland et al., 1997). Of that discarded evidence, 36.0% was found along the roadway on which the killer traveled in the course of the murder, body disposal, and escape (Brown, 2005). This is a decrease from the 50% previously found in the Hanfland et al. (1997) study. Brown (2005) found that evidence was found along the roadway within one-mile of the Body Recovery Site in 56.5% of cases. This statistic was slightly less than the 59% reported by Hanfland et al. (1997). This statistic has important investigative implications for child abduction murder investigations because an investigator is likely to find evidence discarded by the offender within a one-mile radius of the body recovery location (Hanfland et al. 1997; Brown, 2005).

These studies provide valuable information to police investigators on the probability of certain types of evidence to be recovered at the murder incident component locations. However, to date, no researcher has addressed the impact of forensic evidence on case solvability in murder investigations of abducted children. This is surprising considering the increasing impact of forensic evidence in the solvability, clearance and conviction of offenders. This presentation will address the impact of physical evidence left by an offender on case solvability in murder investigations of abducted children. In particular, the impact of hair, weapons, finger, foot or shoe prints, semen, fibers, firearms, bite marks, tire tracks, trace evidence, blood and fluids evidence will be examined.

**Forensic Evidence, Child Abduction Murder, Solvability**