

OCD | Special Report

Pathways To Homicide: Understanding Young Offenders And Victims

Boys who end up being convicted of homicide do not become killers by accident or as a result of a random set of circumstances. Instead, they follow developmental pathways that lead them to commit the ultimate crime, according to the latest research to emerge from the Pittsburgh Youth Study, which more than two decades ago began following the lives of 1,517 boys who attended Pittsburgh's public schools.

Moreover, researchers identified certain negative early life experiences shared by the 37 boys who became convicted homicide offenders, which now makes it possible to predict those most likely to commit murder with greater accuracy than ever before. They also found that boys who fell victim to homicide and boys who were arrested on homicide charges, but not convicted, also tended to follow distinctive pathways to such outcomes.

Recent findings of the Pittsburgh Youth Study shed new light on how boys in urban settings become homicide offenders and murder victims, including influential risk factors, such as being raised in a broken home, having a young mother, living in a bad neighborhood, and committing serious delinquent acts at an early age—knowledge that can help determine who is most at risk and how best to intervene to divert them from the path that leads to murder.

The Pittsburgh Youth Study

The Pittsburgh Youth Study began in 1987 as a long-term examination of developmental pathways among at-risk boys and the roots of delinquency. It was one of three such projects started with funding from the U.S. Department of Justice Office of Juvenile Justice Delinquency Prevention. The other sites are in Denver, Colo. and Rochester, N.Y.

Each study is a longitudinal investigation involving repeated assessments with the same juveniles and their parents or primary caretakers throughout the boys' developmental years and beyond. The approach allowed investigators to

more accurately determine when a boy first engaged in disruptive behaviors and to examine the possible causes, frequency, severity, and other factors.

In Pittsburgh, investigators began by contacting more than 3,000 randomly selected boys in the Pittsburgh Public Schools who were enrolled in grades 1, 4 and 7. They used a screening assessment of each boy, his primary caretaker, and a teacher to gather retrospective data on the boys' disruptive and delinquent behaviors. To increase the number of high-risk boys, the 30 percent who were determined to be the most antisocial were included in the study sample and another 30 percent were randomly selected from the remaining group. In all, 1,517 boys ranging in age from 7 to 13 years old were selected across the three grade cohorts to receive follow-up assessments.

More than 57 percent of the youngest and oldest boys in the study were African American, as were 56 percent of the middle-aged boys. The rest were Caucasian. The percentage of boys who had been held back in school ranged from 39.4 percent of the oldest cohort to 26.3 percent of the youngest at the beginning of the study. More than 95 percent of the youngest cohort of boys, 92.2 percent of the middle-aged boys, and 94 percent of the oldest cohort lived with their natural mother. The percentage of boys living in a household that included their natural father ranged from 37.1 percent to 41.5 percent.

Assessments were initially conducted in 6-month intervals. Later, they were done annually. Investigators to date have done an estimated 50,000 assessments, most of which were face-to-face interviews. Archival data from sources such as school and court records were also gathered.

Participation among the boys and their primary caretakers was high, ranging from 84 percent to 86 percent across the three grade cohorts.

Pathways To Violence

The Pittsburgh Youth Study and its sister studies in Denver and Rochester have produced a body of research that contributes substantially to the understanding of delinquent behavior, particularly the onset of delinquency and violence.

One of the most significant findings is that delinquency and violence are the result of a gradual developmental process that occurs over many years. Contrary to popular perceptions that serious criminal offenders are psychopaths who act unpredictably, the Pittsburgh Youth Study found that serious offending in some ways is predictable. Investigators reported that there are developmental pathways—remarkably orderly progressions—that tend to lead young boys to delinquency and violence.

The Pittsburgh Youth Study has presented evidence that there is not one, but three of these developmental pathways. Investigators defined, for example, what they call an Authority Conflict Pathway, which starts with stubborn behavior before age 12, progresses to defiance and then to authority avoidance, such as truancy. A second, Covert Pathway, is a step-by-step progression in which a boy begins with minor covert acts before age 15, moves to property damage, then to moderate delinquency and, finally, to serious delinquency.

A third, Overt Pathway, is particularly relevant to the recent research on young homicide offenders and their victims. Boys who follow this pathway start with acts of minor aggression, progress to gang fighting and physical fighting, then graduate to more severe acts of violence, including murder.

Young Homicide Offenders And Victims

Researchers did not intend to focus specifically on boys who become homicide offenders when the Pittsburgh Youth Study began. They did not, however, anticipate the scope of tragedy they would encounter while following 1,517 inner-city boys into early adulthood.

Over the course of more than two decades, 39 of the boys became victims of homicide, 37 were convicted of homicide, and another 33 were arrested for homicide, but not convicted.

“That was terribly unexpected. We had no idea that we would have so many killings,” said Pittsburgh Youth Study Principal Investigator Rolf Loeber, PhD, professor of psychiatry, psychology, and epidemiology at the University of Pittsburgh. “When the killings happened, we knew the individuals. We knew to what extent they had encountered difficulties in life, what kind of school career they had, their family background, their psychopathology. All of this information was collected without knowing that these individuals would kill or be killed.”

Having gathered data on the boys throughout their development was particularly important when examining the victims of homicide, Dr. Loeber said. “Most studies don’t have information on the background of the victims. To reconstruct their lives is very hard after they are killed. You have to rely on relatives, friends. But there are more than 50 risk and protective factors that predict violence. It is very difficult to reconstruct them by just talking to a relative.”

Researchers examined data on a wide range of factors gathered from interviews with the boys and their caretakers and from other sources. They examined three classifications of risk factors:

- Criminal risk factors, which included self-reported and court records of prior violent, property, drug and other offenses, such as robbery, aggravated assault, carrying a weapon, vehicle theft, receiving stolen property, selling drugs and minor fraud.

- Explanatory factors, which are factors that do not measure anti-social behavior. They include having a young mother, family on welfare, lack of guilt, a mother who is unemployed, living in a bad neighborhood, and being raised in a broken family.

- Behavioral risk factors, which are factors that reflect anti-social behavior. They include factors related to attitude, such as truancy, school suspension, having a positive attitude to delinquency, disruptive behavior disorder, and having delinquent peers.

Convicted Homicide Offenders

Researchers had a number of questions in mind when they set out to examine the data on boys who ended up being convicted of homicide. For example, to what extent did they engage in antisocial and delinquent behavior early in childhood? To what extent can convicted homicide offenders be predicted based on a combination of criminal, explanatory and behavioral risk factors? Is there a dose-response relationship between the number of risk factors experienced and the chances of becoming a convicted homicide offender?

Several studies suggest that most homicide offenders were violent early in life and committed many other crimes. The boys convicted of homicide who participated in the Pittsburgh Youth Study were no exception.

The strongest predictor of young homicide offenders was prior criminal or delinquent acts. Researchers examined both self-reported offenses and records of delinquency convictions up to age 14 and found that violent offenses were the most prevalent.

Among boys later convicted of homicide, 76 percent reported having carried a weapon and 62 percent reported participating in gang fighting, aggravated assault, or robbery. The study also found that being convicted of different

types of violent offenses, including aggravated assault and weapons charges, was a stronger predictor of later homicide offending than self-reported violence.

One unexpected finding was that several types of property crimes committed up to age 14 also strongly predicted later homicide conviction, which suggests the boys were already versatile criminal offenders who engaged in a variety of delinquent acts before they committed murder. Several types of self-reported substance use, such as hard drugs and alcohol, did not significantly predict a later homicide conviction—a finding that also ran contrary to expectations.

When criminal risk factors obtained from all sources were considered, arrests on simple assault and weapons charges, self-reported weapon carrying, conspiracy convictions (a rather larger category of offenses), and self-reported minor fraud emerged as significant independent predictors of later homicide conviction.

Researchers constructed a criminal risk score based on those risk factors and found that 59 percent of the boys later convicted of homicide had at least three of the five risk factors.

Among explanatory risk factors, nine were found to significantly predict convicted homicide offenders. Living in a broken home, for example, was the most prevalent with 89 percent of convicted homicide offenders having experienced a broken home, compared to 62 percent of the study controls. The study also reports that 71 percent of convicted homicide offenders were raised in a family on welfare, and 65 percent lived in a bad neighborhood. Other important explanatory risk factors were having a young mother, being old for their grade in school, having an unemployed mother, lack of guilt, low socioeconomic status, having a father with behavioral problems, and hyperactivity-impulsivity-attention deficit.

Researchers also measured 19 behavioral factors and found that 11 significantly predicted convicted homicide offenders. The strongest predictor was having been suspended from school. Among boys later convicted of homicide, 78 percent had at least one school suspension. Other behavioral risk factors experienced by more than half of the boys who became convicted homicide offenders were having a positive attitude toward delinquency, disruptive behavior disorder, and serious delinquency.

Predicting Convicted Offenders

Researchers analyzed all of the significant, independently predictive explanatory, behavioral, and criminal risk factors in a final exercise to predict convicted homicide offenders. The boys experienced all of the factors before they turned 14 years of age.

The best predictors were determined to be the following:

- Prior delinquent acts—specifically, a conspiracy conviction, simple assault arrest, and self-report weapons carrying.
- An attitude that favors delinquency.
- Having a young mother.
- Having been suspended from school.
- And living in a bad neighborhood as defined by U.S. Census data.

This integrated analysis presented further evidence that

The findings suggest that determining whether boys have experienced four or more of the most-predictive risk factors might be a useful way to predict those well down the path to murder.

a range of risk factors best predicts boys who are most likely to commit murder and that the more risk factors a boy experiences, the greater the probability he will become a convicted homicide offender. For example, having at least four of the seven risk factors identified 62 percent of the boys convicted of homicide.

Researchers note the results may overestimate the true ability to predict homicide offenders largely because the risk scale was built and tested on the same participants. However, the findings suggest that determining whether boys have experienced four or more of

the most-predictive risk factors might be a useful way to predict those well down the path to murder.

Race

Previous studies suggest that African American boys are more likely to be convicted of homicide than Caucasian boys. In the Pittsburgh Youth Study, 86 percent of the boys convicted of homicide were African American, while African American boys accounted for 54 percent of the study's control sample.

Researchers found, however, that race itself did not predict convicted homicide offenders. Instead, the racial differences in the prevalence of convicted homicide offenders were largely the result of significant racial differences in early risk factors that predicted later homicide convictions. For example, 81 percent of the study's African American boys lived in broken homes, compared to 42 percent of Caucasian boys. Being raised in a family on welfare was

an experience shared by 61 percent of African American boys, compared to 23 percent of Caucasian boys. And 65 percent of African American boys lived in a bad neighborhood, compared to 32 percent of Caucasian boys.

Homicide Victims

Boys who became victims of homicide resembled those who became convicted homicide offenders. The study reports that risk factors found to strongly predict homicide victims tend to be similar to those that strongly predict boys who became convicted homicide offenders.

Researchers found that of the significant risk factors that predicted convicted homicide offenders, 71 percent were also significant predictors of homicide victims. For example, early offending strongly predicted homicide victims, just as it did with convicted offenders. In the Pittsburgh study, 56 percent of homicide victims had been arrested and 44 percent had been convicted by age 14. The most common offenses committed early in the lives of those victims included vehicle theft, aggravated assault, receiving stolen property, drug offenses, and conspiracy.

The results showed other similarities. The study found that homicide offenders did not grow up more deprived or exposed to more risk factors than homicide victims, although certain explanatory factors were stronger predictors for one group than they were for the other. For example, the strongest predictors for convicted homicide offenders were mostly socioeconomic factors, such as a broken home and a family on welfare, while the strongest predictors for victims were mostly individual, including a lack of guilt, and school-related factors, such as low achievement, being old for their grade, and hyperactivity-impulsivity-attention deficit.

Another important conclusion about shared characteristics between homicide offenders and homicide victims was that violence appeared to evolve from disputes related to illegal activities, such as the drug trade, the trade in stolen goods, robbery to obtain drugs and/or money, or other illegal property transactions. The authors concluded that it is likely that reductions in these illegal activities may reduce conflict and ensuing violence and homicide.

The Pittsburgh Youth Study stands as the first prospective longitudinal study of homicide victims. Its limitations include the fact that the Pittsburgh numbers were modest and the Pittsburgh results may not be generalized to the nation. Nevertheless, researchers reported that the explanatory and behavioral risk factors they measured significant-

ly predicted homicide victims up to 22 years later. And in most analyses, homicide victims were predicted just as accurately as convicted homicide offenders.

Implications For Interventions

The Pittsburgh Youth Study shows that homicide offenders and victims are the product of a series of causes that unfold over time and offers new insights into those causes that are useful in determining how best to intervene to prevent them from taking such a destructive course.

Research suggests, however, that preventive interventions do not guarantee success. In a study that involved Pittsburgh Youth Study participants, for example, researchers looked at whether homicide offenders used more mental health services or school services, such as special education and classes for behavioral problems, than violent offenders who crimes did not include murder. They found that about two-thirds of homicide offenders had received help for behavioral problems when they were young—a rate significantly greater than what was found among other violent offenders.

In that study, however, it was not possible to determine the precise nature of the services, or to assess the quality of services or whether they were based on empirically verified interventions.

Pittsburgh Youth Study researchers argue that empirical knowledge about what works, and knowledge of the causes of homicide offending, is necessary to determine the optimal timing and the effectiveness of preventive interventions and in providing the basis for screening young people to determine their risk of becoming homicide offender or victims.

In one exercise, they used the Pittsburgh Youth Study cohorts to examine the possible effects that changing one aspect of an individual's problem behavior might have on the national male homicide rate. The exercise used data from the youngest and oldest cohorts of boys and was based on implementation of three well-evaluated early prevention interventions: the Olds Nurse Home Visitation Program, which provides in-home services to families around the birth of the child and during infancy; the Perry Preschool Program, which provides early childhood education to at-risk families; and multisystemic therapy (MST) for violent juvenile offenders, which works with adolescent offenders who have already shown evidence of delinquency.

The results suggest that effective intervention has the potential to save lives and reduce the financial costs associated

with homicide, such as the expense of imprisoning convicted offenders. For example, if implemented nationally:

- The Nurse Home Visitation program with at-risk families by itself might prevent nearly 22 percent of all homicides in the United States. In cost-savings alone, this would amount to some \$3.5 billion.

- The Perry Preschool Program for preschoolers could potentially reduce homicides by up to 24 percent, saving about 3,000 lives a year and nearly \$4 billion in incarceration costs.

- MST for juvenile delinquents by itself would reduce homicides, but only by 6 percent.

“One of the most significant findings [of the Pittsburgh Youth Study] is that the idea of developmental pathways from less problematic behavior to much more serious behavior is not random – that, for the majority of cases, it is systematic,” Dr. Loeber said. “The take-home message is: If we want to reduce the overall level of victimization in society, or a city like Pittsburgh, it is much more effective to start early in life rather than waiting for individuals to be violently victimized or killed.” At the same time, it is necessary to deal with the current generations of violent individuals and their potential victims. It seems probable that reducing illegal economic activities will reduce disputes and violent solutions.

References

Loeber, R., & Farrington, D.P. (2011). *Young Homicide Offenders and Victims: Risk Factors, Prediction, and Prevention from Childhood*. New York: Springer Publications, written by O.B.E., professor of psychological criminology at Cambridge University.

This Special Report is based on the above-referenced publications. It is not intended to be an original work but a summary for the convenience of our readers. References noted in the text follow:

Loeber, R., Lacourse, E., & Homish, D. L. (2005). Homicide, violence and developmental trajectories. In R. E. Tremblay, W. W. Hartup, & J. Archer (Eds.), *Developmental origins of aggression* (pp. 202–220). New York: Guilford.

Brodie, L. M., Daday, J. K., Crandall, C. S., Sklar, D. P., & Jost, P. F. (2006). Exploring demographic, structural, and behavioral overlap among homicide offenders and victims. *Homicide Studies*, 10, 155–180.

Centers for Disease Control (2008, Summer). *Youth violence. Facts at a glance*. Atlanta, GA. Center for Disease Control. www.cdc.gov/injury.

Stouthamer-Loeber, M., Creemers, J., Loeber, R., Homish, D. L., & Wei, E. (2001). Juvenile justice and mental health interventions for juveniles who eventually commit homicide. Paper presented at the meeting of the American Society of Criminology, Atlanta, GA. ■

Announcement

Free Background Reports Cover Children's Issues

University of Pittsburgh Office of Child Development offers a recently-updated series of free background reports providing concise overviews of current topics important to children and families.

New topics in the series, *Children, Youth & Family Background*, include childhood obesity, foster care, early literacy, parent-teen relationships, and the trend among nonprofit agencies to help support their missions by starting money-generating social enterprises.

The reports, originally produced to keep journalists and policymakers up to date on children's issues, are available

free of charge to anyone interested in learning about the latest developments in areas ranging from education and child development to child welfare and juvenile crime. These reports are written, edited, and reviewed by the University of Pittsburgh Office of Child Development.

All *Children, Youth & Family Background* reports are posted on the OCD website as portable document files (.pdf) for viewing and downloading at the following address: <http://www.oed.pitt.edu/Children-Youth-and-Family-Background-Report/49/Default.aspx> ■
