Pathways from Childhood Cumulative Risk to Criminal Conviction in Young Adulthood

The most vulnerable children are those who experience multiple risk factors in childhood. Such factors include prenatal exposure to alcohol and other drugs, poverty, and maltreatment. These types of risk factors rarely occur in isolation, but often cluster together. The cumulative risk hypothesis suggests that as the number of risk factors increases, so does the likelihood that a child will experience negative outcomes. Although there is some support for this hypothesis over the short-term, it is not known if cumulative risk has effects that last for years to come and, if so, how those long-term effects occur. Research that identifies the ways in which cumulative risk leads to negative outcomes could be used to identify interventions for programs designed to prevent such outcomes from occurring in vulnerable children.

The Study
Boys Town’s Pathways to Risk and Resilience study (“Pathways” for short) is a research project that seeks to address critical questions related to cumulative risk in children in order to inform intervention development and refinement. Funded by the National Institute on Drug Abuse, Pathways is unique in three respects. First, Pathways does not involve a program evaluation. Instead, it is a basic research effort that examines child development and family processes over time. Second, Pathways does not involve data collection, but rather conducts analyses of existing data that were collected by other researchers to address different research questions. Third, Pathways does not involve analyses of data collected at Boys Town or, for that matter, in the United States. The data set for Pathways is the 1986 Northern Finland Birth Cohort Study (1986NFC), which has followed a birth cohort of over 6,000 children from the prenatal/birth period through childhood and adolescence, and into young adulthood. Data were collected using surveys, clinical interviews, hospital records, and criminal records. The size of the birth cohort, the long-term follow-up, and the extensive measures collected from multiple sources are highly unique features of the 1986NFC. In fact, no comparable data set has been assembled in the United States.

In a recent Pathways analysis, we collaborated with colleagues at the University of Nebraska - Omaha and Michigan University to test the hypothesis that the likelihood of being convicted for committing a crime in young adulthood increases as the number of risk factors experienced in childhood increases. Cumulative exposure to childhood risk factors was measured using items covering domains such as socioeconomic disadvantage (e.g., low socioeconomic status), family structure and function (e.g., parental absence), mother characteristics (e.g., maternal drinking), and child psychological risk (e.g., learning deficits). Each item was defined as being either present (coded 1) or absent (coded 0); thus, summing across these items yields a count of the total number of risk factors experienced in childhood. Note that the total cumulative risk score in this analysis could range from 0 to 6. Criminal conviction in young adulthood was measured using Finland’s Central Register for Criminal Records, which covers all court-imposed convictions (excluding minor traffic offenses). Thus, the variable measured the experience of any criminal conviction (coded 1) versus no criminal conviction (coded 0).

Results
Results showing the link between childhood cumulative risk and young adult criminal conviction are reported in the figure below. As evident in the figure, there is a strong and clear progression in which the likelihood of criminal conviction increases steadily, from 11% to 30%, as the number of risks (continued on page 2)
Pathways from Childhood (cont’d)

experienced in childhood increases. This is sobering in light of the fact that serious criminal convictions occurred up to 13 years following the cumulative risk exposure.

This raises an important question: How does childhood cumulative risk result in criminal convictions over such a lengthy period of time? An additional project analysis addressed this question by testing the hypothesis that childhood cumulative risk increases (1) school failure, (2) substance use, and (3) conduct problems in adolescence, all of which increase, in turn, the likelihood of criminal offending in young adulthood. This analysis used additional survey data collected from 1986NFBC participants at ages 15 and 16. Results are illustrated in the figure below. Paths represented by the directional arrows going from childhood cumulative risk to the adolescent variables were positive and statistically significant, indicating that as the number of risks increased, so did the experiences of school failure, substance use, and conduct problems. Each of these negative adolescent experiences had a positive and statistically significant path going on to criminal conviction. The hypothesis was supported. Childhood cumulative risk is related to young adult criminal conviction, partly because such risk increases adolescent school failure, substance use, and conduct problems.

Implications

These findings can be translated into practice. Experiencing the types of risks described above early in development, before age 9 in the current study, increases children’s risk for serious offending many years later. Efforts are needed to screen children for these risks for the purpose of referring them to targeted services. Evidence-based services that promote school success, prevent substance use, and reduce conduct problems during adolescence, a critical period of development, can help build resilience in vulnerable children by redirecting pathways that otherwise lead to criminal convictions. Examples of such services include parent-training and family-focused interventions as well as school-based programs optimized to address the unique, emerging challenges of the adolescent years.

Of course, ideally children would not be subjected to risk experiences, such as poverty and maltreatment, in the first place. Additional interventions are needed to prevent these early risk experiences. Such interventions must seek systems-level change, for example, at the community level. Progress is being made at Boys Town and elsewhere to provide such interventions, but there remains a need to better understand how to intervene with vulnerable children to prevent the further harms that can come from early risk exposure.

Conclusion

The Pathways to Risk and Resilience study is an example of basic applied research that helps to identify vulnerable children and families, elucidate intervention targets to reduce risk and enhance protection, and inform the optimal timing of interventions. This information can be used not only to develop new interventions but also to refine and increase the impact of existing Boys Town programs. Additional project analyses are planned, which will further increase our understanding of the negative consequences of early risk exposure. It is anticipated that findings will be of further use to researchers and practitioners working to develop and refine interventions that build strong families and promote the positive development of children and families in need.

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The analyses were supported by National Institute of Drug Abuse (NIDA), National Institutes of Health, Grant # R01 DA038450.

* p < .05

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Is produced by the Boys Town National Research Institute for Child and Family Studies. Our purpose is to disseminate research to promote the Boys Town mission and evaluate the effectiveness of its programs and services.

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