RESEARCH BRIEF

Early Risk Factors and Juvenile Justice Outcomes in Youth with High-Incidence Disabilities

PURPOSE OF THE STUDY

The purpose of this study was to identify underlying patterns of early risk factors in youth with high-incidence disabilities (HID). This study also investigated the association between identified patterns of early risk factors and juvenile justice outcomes.

BACKGROUND & PURPOSE

The intersection of youth with disabilities and their disproportionate representation in various child-serving systems is a significant social justice issue. Although they comprised only 4.3% of the U.S. children under the age of 18 in 2019 (Young, 2021), these youth are substantially overrepresented in child protection services, making up between 11% and 32% of cases (Haight et al., 2013). They also account for 20% of school disciplinary actions (Vincent et al., 2012) and represent 30% to 60% of the juvenile delinquent population within the juvenile justice system (Quinn et al., 2005).

Youth with HID are of particular concern due to the unique challenges posed by these disabilities and their overlapping characteristics (Sabornie et al., 2005). HID typically include emotional and/or behavioral disorders, specific learning disabilities, and mild intellectual disability. Other categories within HID include high-functioning autism, attention deficit hyperactivity disorder, and speech and language impairments. Due to the relative invisibility of HID, the behavioral challenges of youth with HID can be misinterpreted as disobedience or deviance. Notably, HID are identified as the most common special education diagnosis for youth involved in the juvenile justice system (Quinn et al., 2005).

Although prior research has consistently demonstrated that youth with disabilities are overrepresented in child-serving systems, there remains a gap in understanding early risk factors and processes that affect juvenile justice outcomes, especially for youth with HID. Thus, the current study aimed to address two research questions:

1. Are there underlying patterns of early risk factors experienced by youth with HID?

2. Are these patterns of early risk factors associated with juvenile justice outcomes of youth with HID?

Photo credit: iStock by Getty Images

DUE TO THE RELATIVE INVISIBILITY OF HID, THE BEHAVIORAL CHALLENGES OF YOUTH WITH HID CAN BE MISINTERPRETED AS DISOBEDIENCE OR DEVIANCE. NOTABLY, HID ARE IDENTIFIED AS THE MOST COMMON SPECIAL EDUCATION DIAGNOSIS FOR YOUTH INVOLVED IN THE JUVENILE JUSTICE SYSTEM (QUINN ET AL., 2005).

School of Social Work
Leadership for a just and caring society

COLLEGE OF EDUCATION
+ HUMAN DEVELOPMENT

UNIVERSITY OF MINNESOTA

METHODS

A secondary data analysis was conducted using data from the Minnesota Linking Information for Kids (Minn-LInK) project. A latent class analysis was employed to identify distinct patterns of early risk factors and a logistic regression model was used to analyze the association between the identified patterns and juvenile justice outcomes in children with HID.

FINDINGS

This study identified three meaningful subgroups of youth with HID based on underlying patterns of early risks they experience: academic risks, child welfare risks, and few early risks. The findings also suggest that such within-group differences account for the varying developmental outcomes observed among these youths. Academic challenges and child welfare involvement experienced by youth with HID increased the likelihood of juvenile justice involvement.

A secondary data analysis was conducted using integrated, administrative data from the Minnesota Linking Information for Kids (Minn-LInK) project. The sample was drawn from a cohort of 60,035 students who were enrolled in 3rd grade in the academic year 2008-2009. Of those students, 10.5% of children (n = 6,279) were identified as having been diagnosed with HID in the special education system. In this study, HID included emotional and/or behavioral disorders, specific learning disabilities, speech and language impairments, mild-moderate developmental cognitive disabilities, and autism spectrum disorders. After excluding youth with missing values for early risk factors, the final sample comprised 5,377 youth with HID.

Early risk factors included family poverty, low attendance rates, poor academic achievement, a history of child maltreatment and out-of-home placement, and school discipline up to 5th grade. Juvenile justice outcomes were determined based on youth's juvenile court records from 6th to 8th grade. A latent class analysis was employed to identify unobserved homogeneous subgroups of youth with HID who exhibit similar patterns of early risk factors. A logistic regression model analyzed the association between the identified patterns of early risk factors and juvenile justice outcomes. Sex and race were included as covariates.

Sample Characteristics

The final sample of youth with HID (N = 5,377) was predominantly male (70.8%). White was the largest racial group (75.8%) followed by Black (10.7%), Hispanic (6%), American Indian (4.1%), and Asian (3.4%). Nearly half (44%) of the sample came from families in poverty. Around one fifth (17.1%) had child protection system records (CPS) and 4.1% experienced out-of-home placement (OHP). Nearly 10% had lower than average school attendance rates, and almost half (42.2%) did not meet proficiency in reading or math. A large majority (88.3%) received individualized education plans (IEPs) with 20% of youth with HID receiving IEPs in separate learning environments such as a separate classroom or facility. About one tenth (11.1%) received school discipline. Between 6th and 8th grade, approximately 3.4% of youth became involved with the juvenile justice system.

Summary of Early Risk Experiences across Latent Class Membership

The comparison of model fit indices, along with the assessment of both theoretical relevance and practical applicability, supported the three-class model as optimal due to its meaningfulness and practical utility. The post-hoc analysis of early risk factors across the latent classes identified significant differences in all risk factors, except for sex, across the three classes (F = 59.59, $p<0.001$). The latent classes of early risks differed according to youth race (F = 155.13, $p<0.001$), poverty (F = 756.43, $p<0.001$), attendance (F = 162.9, $p<0.001$), academic achievement (F = 5609.1, $p<0.001$), IEP placement setting (F = 377.5, $p<0.001$), CPS (F = 914, $p<0.001$), OHP (F = 801.65, $p<0.001$), and school discipline (F = 324.95, $p<0.001$).

Underlying Patterns of Early Risk Factors

Figure 1 illustrates the three-class model of early risk factors among youth with HID: 47.3% of the youth (n = 2,276) were classified into Class 3, 37.9% (n = 1,823) were classified into Class 1, and 14.8% (n = 711) were classified into Class 2. The largest class, Class 3, was characterized primarily as *"Few Early Risks."* Overall, youth with HID in Class 3 had lower probabilities of experiencing early risk factors. The second largest class, Class 1, consisted of youth with HID who had the highest probability of family poverty and poor academic achievement during their early school years. This class was labeled *"Academic Risks."* Class 2 represented a predominant pattern of child welfare involvement including child protection services and out-of-home placement alongside high probabilities for family poverty and poor academic achievement. This class was labeled *"Child Welfare Risks."*

Figure 1. Item Response Probabilities for the Three-Class Latent Class Analysis Model
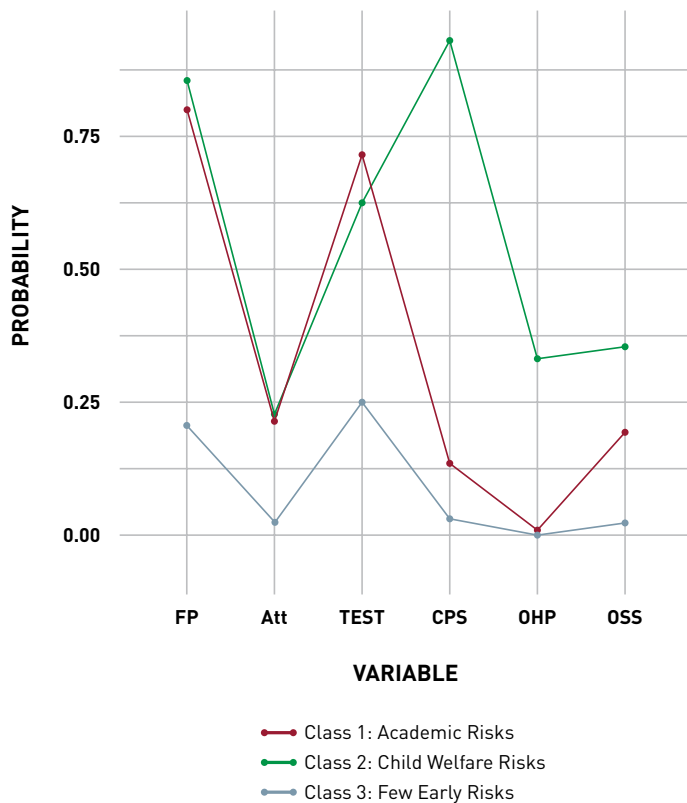
Note. FP: Family Poverty; Att: Low Attendance; TEST: Poor Achievement; CPS: Child Protection Services; OHP: Out-of-Home Placement; OSS: School Discipline (Out-of-School Suspension)

Juvenile Justice Outcomes across Latent Classes

Results from the logistic regression model indicated significant differences in juvenile justice involvement across latent classes (Table 1). To be specific, youth with HID in the class of *Academic Risks* (Class 1) were nearly four times more likely to be involved with the juvenile justice system compared to those in the *Few Early Risks* class (OR = 3.9, $p<.001$, 95%CI: 1.23, 12.69). The odds of juvenile justice involvement were 19 times higher for youth with HID in the class of *Child Welfare Risks* than those in the *Few Early Risks* class (OR = 19.4, $p<.001$, 95%CI: 9.47, 40.10). Regarding covariates, male youths (OR = 3.1, $p<.001$, 95% CI: 1.89, 4.89), as well as those identifying as Black (OR = 2.9, $p<.001$, 95% CI: 1.99, 6.51) or Native American (OR = 2.6, $p<.001$, 95% CI: 1.69, 3.91), were each approximately three times more likely to become involved with the juvenile justice system, in comparison to their respective counterparts.

The findings of the study confirm that youth with high-incidence disabilities (HID) are a heterogeneous group, differing in terms of various risks associated with involvement in multiple systems early in their lives. This study identified three meaningful subgroups of youth

with HID based on underlying patterns of early risks they experience: few early risks, academic risks, and child welfare risks. The findings also suggest that such within-group differences account for the varying developmental outcomes observed among these youths. The three distinct patterns of early risks lead to different outcomes in juvenile justice involvement: youth with HID who face academic challenges and child welfare system involvement are more likely to be involved with the juvenile justice system than those with low risks. Consistent with the previous research on risks for systems involvement (Murray, 2003), the unique patterns of early risks among youth with disabilities were determined by well-known risks factors for juvenile justice system involvement including family socioeconomic status (SES), academic problems, restrictive IEP placement, child maltreatment, and out-of-home placement.

THIS STUDY IDENTIFIED THREE MEANINGFUL SUBGROUPS OF YOUTH WITH HID BASED ON UNDERLYING PATTERNS OF EARLY RISKS THEY EXPERIENCE: FEW EARLY RISKS, ACADEMIC RISKS, AND CHILD WELFARE RISKS. THE THREE DISTINCT PATTERNS OF EARLY RISKS LEAD TO DIFFERENT OUTCOMES IN JUVENILE JUSTICE INVOLVEMENT: YOUTH WITH HID WHO FACE ACADEMIC CHALLENGES AND CHILD WELFARE SYSTEM INVOLVEMENT ARE MORE LIKELY TO BE INVOLVED WITH THE JUVENILE JUSTICE SYSTEM THAN THOSE WITH LOW RISKS.

YOUTH WITH HID IN THE CLASS OF ACADEMIC RISKS (CLASS 1) WERE NEARLY 4 TIMES MORE LIKELY TO BE INVOLVED WITH THE JUVENILE JUSTICE SYSTEM COMPARED TO THOSE IN THE LOW EARLY RISKS CLASS (OR = 3.9, $p<.001$). THE ODDS OF JUVENILE JUSTICE INVOLVEMENT WERE 19 TIMES HIGHER FOR YOUTH WITH HID IN THE CLASS OF CHILD WELFARE RISKS THAN THOSE IN THE LOW EARLY RISKS CLASS (OR = 19.4, $p<.001$).

Table 1. Association between Three Latent Classes and Juvenile Justice Outcomes

	OR (95% CI)	
Sex (Ref. Female)		
Male	3.05 (1.89, 4.89)	***
Race (Ref. White)		
Black	2.87 (1.99, 6.51)	***
Hispanic	1.75 (1.20, 2.55)	
Native	2.57 (1.69, 3.91)	***
Asian	0.3 (0.09, 0.95)	
Class (Ref. Class 3[a])		
Class 1[b]	3.94 (1.23, 12.69)	***
Class 2[c]	19.44 (9.47, 40.10)	***

Note. [a]Low Risk; [b]Academic Risks; [c]Child Welfare Risks; ***$p<0.001$

Conclusion

The purpose of this study was to identify patterns of early risk factors in youth with HID and to investigate the association between identified patterns of early risk factors and juvenile justice outcomes. The child welfare risks identified in this study are particularly concerning due to their significant impact on juvenile justice system involvement among youth with HID. Children's disabilities may be present at birth or may emerge as a result of adverse childhood experiences. An impairment in functioning caused by childhood abuse and neglect may interfere with the subsequent developmental process resulting in developmental delays and lifetime disabilities. Due to the bidirectional nature in the relationship between disability and child welfare system involvement, youth with HID and their families may find it difficult accessing appropriate and early interventions.

Additionally, a lack of coordinated care between child-serving systems may contribute to an increased risk for juvenile justice system involvement. Youth with HID tend to present multiple needs across life domains including behavioral, health, emotional, and educational functioning. Each system often lacks the full array of services required to adequately address child's multiple developmental, health, disability needs. Competing demands between systems can also result in disability sensitive and appropriate services being unavailable or uncoordinated for youth and families.

Thus, the underlying patterns of early risks identified in this study can provide valuable implications for policies and practices. The patterns of early risks experienced by youth with HID may explain the process though which those youth become involved with the juvenile justice system. Policies should advocate for a coordinated, holistic approach that bridges the gaps between services and resources in education, child welfare, and juvenile justice systems. For effective early assessment and intervention, such an approach should involve trainings for educators, child welfare workers, and juvenile justice personnel to be sensitive to signs of disabilities and risks. Early intervention, tailored to the unique challenges each youth faces, can significantly reduce the likelihood of negative outcomes such as juvenile justice involvement.

LIMITATIONS

The scope of this study was limited to risk factors available in the administrative data. Previous research has identified co-occurring risk factors such as psychiatric diagnosis, parental issues, and environmental conditions among youth with HID. Additional risks included in the analysis could alter the underlying patters of early risks. Replicating this study with more contextual factors would enhance our understanding of youth with HID who are at risk of juvenile justice involvement.

References

Haight, W., Kayama, M., Kincaid, T., Evans, K., & Kim, N. K. (2013). The elementary-school functioning of children with maltreatment histories and mild cognitive or behavioral disabilities: A mixed methods inquiry. *Children and Youth Services Review, 35*(3), 420-428. https://doi.org/10.1016/j.childyouth.2012.12.010.

Kim, B. K. E., Johnson, J., Rhinehart, L., Logan-Greene, P., Lomeli, J., & Nurius, P. S. (2021). The school-to-prison pipeline for probation youth with special education needs. *American Journal of Orthopsychiatry, 91*(3), 375. https://doi.org/10.1037/ort0000538.

Murray, C. (2003). Risk factors, protective factors, vulnerability, and resilience: A framework for understanding and supporting the adult transitions of youth with high-incidence disabilities. *Remedial and special education, 24*(1), 16-26. https://doi.org/10.1177/074193250302400102.

Quinn, M. M., Rutherford, R. B., Leone, P. E., Osher, D. M., & Poirier, J. M. (2005). Youth with disabilities in juvenile corrections: A national survey. *Exceptional children, 71*(3), 339-345. https://doi.org/10.1177/001440290507100308.

Sabornie, E. J., Cullinan, D., Osborne, S. S., & Brock, L. B. (2005). Intellectual, academic, and behavioral functioning of students with high-incidence disabilities: A cross-categorical meta-analysis. *Exceptional Children, 72*(1), 47-63. https://doi.org/10.1177/001440290507200103.

Young, N. A. E. (2021). Childhood Disability in the United States: 2019. *American Community Survey Briefs*, U.S. Census Bureau, ACSBR-006, Washington, DC. https://www.census.gov/library/publications/2021/acs/acsbr-006.html.

The Center for Advanced Studies in Child Welfare (CASCW) is a resource for child welfare professionals, students, faculty, policy-makers, and other key stakeholders concerned about child welfare in Minnesota. **Minn-LInK** is a unique collaborative, university-based research environment with the express purpose of studying child and family well being in Minnesota using state administrative data from multiple agencies.

For more information, contact **Kristine Piescher (Editor)** at **612-624-4231** or email at *cascw@umn.edu*