Introduction

A large proportion of youth in the juvenile justice system have disabilities (U.S. Department of Education, 2014). Research indicates that the prevalence of youth with disabilities in these settings is four to five times greater than the prevalence of youth with disabilities in public schools (Quinn, Rutherford, Leone, Osher, & Poirier, 2005). National reports indicate that approximately a third of youth in juvenile correctional facilities have a disability, the highest percentage being those with emotional disturbance (48 percent) and learning disabilities (39 percent) (Quinn et al., 2005).

Juvenile justice facilities often face challenges for providing special education services and meeting the needs of youth with disabilities. This is in part due to the complexities of the population (e.g., the high numbers of youth with disabilities and the high mobility of youth), the physical context (e.g., restrictions associated with providing education in a secured facility), and the system (e.g., poor linkages among schools and juvenile justice facilities, including inability of facilities to get records of previous educational placements) (Houchins, Jolivette, Shippen, & Lambert, 2010). In addition, there are also challenges associated with reintegrating these students into school or community settings following a stay in a residential or juvenile corrections facility (e.g., Trout, Hagaman, Casey, Reid, & Epstein, 2008). Furthermore, youth with disabilities in the juvenile justice system are at risk for a range of negative outcomes, including academic failure, dropout, recidivism, and unemployment (e.g., Bullis, Yovanoff, & Havel, 2004; Zhang, Barrett, Katsiyannis, & Yoon, 2011). Researchers funded by the National Center for Special Education (NCSER) have sought to improve academic and social/behavioral outcomes for youth in juvenile justice facilities as well as transition outcomes for youth exiting these facilities.

NCSER has also funded projects focused on preventing the involvement of youth with and at risk for disabilities in the juvenile justice system by addressing key risk and protective factors across the individual, peer, family, and school domains. For instance, previous research has indicated that cognitive and behavioral risk factors, such as poor social skills, impulsivity, and disruptive and externalizing behavior problems are associated with youth violence and delinquency (e.g., Hawkins et al., 2000; Loeber, 1990) and may be especially salient for youth with disabilities that, by definition, include these characteristics (Leone, Rutherford, & Nelson, 1991). Academic risk factors including suspension, academic failure, and dropout have also been associated with juvenile delinquency (e.g., Christle, Jolivette & Nelson, 2005) and may be more commonly experienced by youth with disabilities due to exclusionary discipline policies (e.g., zero-tolerance policies) and a lack of appropriate educational supports. The presence of such cognitive, behavioral, and academic risk factors may contribute to a trajectory that leads youth with academic and behavioral problems out of the classroom and into the juvenile justice system (Wald & Losen, 2003).

This summary describes (1) NCSER-funded projects that have sought to address risk factors for involvement in juvenile justice settings through middle and high school-based prevention and intervention efforts and (2) projects aimed at improving outcomes for youth with or at risk for disabilities in the juvenile justice system. Given that the juvenile justice system encompasses a wide range of facilities (e.g., juvenile correctional institutions and specialized treatment facilities; Hockenberry, Sickmund, & Sladky, 2016), this summary will describe NCSER-funded projects that address the needs of juvenile offenders in both non-secure residential treatment facilities and secure juvenile correction settings.
Addressing Risk Factors for Involvement in the Juvenile Justice System

NCSER has funded several projects aimed at preventing or reducing cognitive, behavioral, and academic risk factors for juvenile violence and delinquency and bolstering protective factors, such as family engagement, for at-risk youth, including those with or at risk for disabilities.¹

Improving Social Skills and Reducing Problem Behavior through Universal and Targeted Prevention in Middle School and High School

NCSER has supported research that addresses risk factors for involvement in the juvenile justice system, by developing and evaluating programs that aim to promote social skills and reduce aggressive behavior in early adolescence. Terri Sullivan and colleagues at Virginia Commonwealth University developed a school-wide violence prevention model to promote social and emotional competence and reduce problem behaviors (e.g., bullying, externalizing behavior). The model incorporated elements of a social-emotional skill-building program, Second Step (Committee for Children, 2008) and a comprehensive bullying prevention program, the Olweus Bullying Prevention Program (Olweus & Limber, 2007). The violence prevention model was designed to meet the needs of adolescents with disabilities, by providing explicit social skills training and incorporating components of effective instructional practices for youth with disabilities into the development of this intervention. The results of a pilot randomized trial showed promise for the combined intervention (i.e., Second Step plus the Olweus Bullying Prevention Program) compared to Second Step alone, but differed for youth with and without disabilities. Among students without disabilities, those who received the combined intervention reported greater increases in anger regulation than those in the comparison condition; among youth with disabilities, greater increases in social skills were found for students in the combined intervention than students in the comparison condition (Sullivan, Sutherland, Farrell, Taylor, & Doyle, 2016).

Howard Wills at the University of Kansas is currently developing the Middle School Class-wide Function-related Intervention Teams (MS CW-FIT), a multi-tiered intervention that is based on an elementary school program (CW-FIT) evaluated through two previous NCSER-supported projects. MS CW-FIT will include a universal component to improve communication and self-management skills and prevent problem behaviors as well as a targeted component for students who need additional behavioral supports. In the final year of the project, the research team will evaluate the promise of the universal and targeted components for improving outcomes for students with or at risk for emotional behavioral disorders. Stephen Smith at the University of Florida developed and is currently assessing the promise of I Control, a program designed to improve the executive functioning skills (e.g., impulse inhibition, working memory) and subsequent social, emotional, and academic competence of middle school students with emotional and behavior disorders.

Carl Sumi at SRI International is currently assessing the efficacy of a middle school-based intervention, Cognitive Behavioral Intervention for Trauma in Schools (CBITS), for improving social skills and academic outcomes and reducing trauma symptoms and problem behaviors among students.

¹Although not directly aimed at preventing involvement in the juvenile justice system, these projects address key risk factors that are directly related to involvement.
who have experienced acute or chronic trauma. **CBITS** was designed to be implemented by school-based mental health professionals and to include sessions on relaxing, reducing negative thoughts and improving self-concept, and utilizing positive coping strategies and social problem solving to regulate anger and impulsivity and improve peer and family relationships.

Brigid Flannery at the University of Oregon adapted a promising model of behavior support – schoolwide positive behavior support – at the elementary and middle school for implementation at the high school level. The model was designed to reduce disruptive behavior and subsequently improve academic outcomes for all high school youth and especially those at risk for academic and behavioral challenges. It involves the formation of a schoolwide leadership team, commitment from at least 80 percent of the staff to actively support and participate in the program, the identification of areas of concern and successes through a self-assessment of current disciplinary policies, and regular data collection. The model also includes professional development to train teachers on the use of evidence-based strategies and coaching to ensure appropriate implementation and school team functioning.

**Engaging Families to Reduce Problem Behavior in Middle School**

Other NCSER-funded projects have focused on the role of families and parent-school partnerships in addressing problem behaviors and improving social and academic outcomes among youth with behavior or academic problems. John Seeley at the Oregon Research Institute tested the effectiveness of the **Positive Family Support (PFS)** model, under scaled-up conditions in middle schools implementing school-wide and individual positive behavior supports (PBS). **PFS** is a three-tier model that emphasizes efficient service delivery to parents of students at risk for academic or behavior problems. The first tier (universal level) includes a school-based Family Resource Center which provides information on PBS, parenting skills, and behavior support. The second tier (selected level) involves implementation of a version of the **Check-In/Check-Out** system (Crone, Hawken, & Horner, 2010) that includes a family incentives component in addition to the standard program that involves students and teachers working together to achieve behavioral goals. The third level (indicated level) offers more intensive supports for high-risk students through **Family Check-Up** (Dishion & Stormshak, 2007) meetings which target family management and socialization practices. To assess the effectiveness of **PFS** when implemented under routine conditions, the independent evaluation team utilized a cluster randomized controlled trial, randomly assigning 41 schools to the intervention or wait-list control group. Results of the effectiveness study indicated that there were no main effects of the intervention, but that level of risk did moderate the effect of the intervention on parent-reported negative school contacts (i.e., frequency of school contact with a parent about their child's negative behavior). Specifically, students at higher risk for behavior problems in intervention schools showed significantly lower parent-reported negative school contacts than students at higher risk in the control schools (Smolkowski et al., 2017).

Kristin Duppong Hurley at the University of Nebraska, Lincoln is currently assessing the efficacy of **Parent Connectors**, a parent-to-parent intervention designed to support the families of middle-school youth with emotional disturbance (ED), as these youth often experience negative education outcomes and low levels of family involvement in their education. The intervention employs parents who successfully navigated services for their middle school student with ED to help other parents navigate school and community-based mental health services for their adolescent. Results from the efficacy trial will indicate whether the program reduces parent strain and increases self-efficacy,
improves parent and adolescent engagement in educational and mental health services, and improves youth’s behavioral (e.g., social skills and problem behaviors) and academic outcomes.

S. Andrew Garbacz at the University of Madison, Wisconsin is developing and testing the promise of Conjoint Behavioral Consultation (CBC) in reducing disruptive behavior and improving social and academic outcomes for middle school students with or at risk for serious ED. CBC is an existing service delivery model that partners parents, educators, and other key stakeholders in data-based problem solving and implementation of evidence-based interventions to reduce disruptive behavior and support learning. Although CBC has been evaluated for younger children demonstrating disruptive behavior, there have been limited efforts to refine and test this model for middle school youth.

**Preventing Dropout among High School Students**

Previous research has indicated that school dropout is associated with juvenile delinquency and thus places youth at risk for involvement in the juvenile justice system (e.g., Christle, Jolivette & Nelson, 2005). In an effort to contribute to the knowledge base around effective practices for reducing dropout risk for high school students, Carl Sumi at SRI International evaluated the efficacy of the Check & Connect intervention (Sinclair, Christenson, Evelo, & Hurley, 1998; Sinclair, Christenson, & Thurlow, 2005) for improving behavioral and academic outcomes for ninth grade students with ED. The Check & Connect program is a comprehensive intervention designed to increase school engagement and academic achievement for among high school students at high risk for academic failure and dropout. The foundational component of the intervention is the development of a relationship between a student and a mentor. All students in the program meet with their mentor regularly to address school work, staying in school, and problem solving. In addition, students who show signs of increasing disengagement receive more intensive intervention that is tailored to address the specific issues identified through monitoring data. Analyses are underway to determine the impact of the program on student outcomes.

Greg Roberts at the University of Texas at Austin evaluated two intervention programs for ninth and tenth grade students with low literacy who are at risk for dropping out: (1) an intensive, tailored reading program and (2) a dropout prevention program (i.e., a modified version of Check & Connect; Anderson, Christenson, Sinclair, & Lehr, 2004). A randomized controlled trial compared reading and retention outcomes of students with disabilities who participated in the two-year intervention program (i.e., the reading program alone or the combined reading and dropout prevention program) versus those in the comparison condition (i.e., business-as-usual control condition or the dropout program alone). Results indicated that students in the intervention group showed significantly greater improvements in reading comprehension than those in the control condition. Findings also indicated that 88 percent of students who received the intervention were enrolled in school at the end of 11th grade, compared to 79 percent of students in the comparison condition (Vaughn et al., 2015).
Improving Outcomes for Youth With or At Risk for Disabilities in Juvenile Correction Facilities

NCSER has also funded four projects to support the development and testing of innovative interventions to improve the social, behavioral, and academic outcomes of incarcerated youth with and at risk for disabilities and facilitate a positive transition back to school or to employment settings.

Improving Literacy Skills

Literacy instruction is critical for youth in juvenile correction settings as a substantial number of these youth demonstrate poor literacy skills (e.g., Krezmien, Mulcahy, & Leone, 2008) and the risk of recidivism is higher for youth who exit these settings with poor literacy skills (e.g., Duncan, Kennedy, & Patrick, 1995). In Project LIBERATE (Literacy Instruction Based on Evidence through Research for Adjudicated Teens to Excel), David Houchins at Georgia State University refined and is currently assessing the promise of a reading intervention package, including the Read 180® (Scholastic Research, 2007) and System 44® programs (Scholastic Research, 2010), for male youth ages 12-19 in juvenile correction settings. The Read 180® program is a teacher-led literacy program that focuses on reading comprehension, grammar, writing, and vocabulary. The System 44®, a computer program focused on phonics skills. The intervention package includes computer software that adapts to each student's progress as well as textbooks, trade books, and supplemental worksheets and is designed to be implemented through whole- and small-group instruction, computerized instruction, and independent reading.

Implementing Positive Behavior Supports

Positive behavior support (PBS) practices include strategies to understand why students engage in problem behaviors (e.g., aggression, property destruction, substance use) as well as strategies to prevent these behaviors and promote positive behavior. PBS practices are widely used in school settings and have led to beneficial student outcomes including reduced disciplinary incidents, increased instruction time, and improved academic performance (e.g., Nelson, Martella, & Marchand-Martella, 2002). Jeffrey Sprague at the University of Oregon is extending and adapting the PBS model to better meet the complex and diverse needs of youth in juvenile correction settings and to change the pervasive practice of punishment as the primary strategy to accomplish compliance with rules and routines. Sprague developed a modified version of the PBS model that includes the following components: (1) universal facility-wide PBS systems (e.g., behavioral expectations, positive reinforcement systems, and systematic supervision), (2) Response to Intervention problem solving using data-based decision making, (3) mentorship related to self-management and problem solving, (4) Functional Behavioral Assessment and individualized support plans, and (5) measures to assess the fidelity of implementation. The research team is currently assessing the feasibility and promise of the modified PBS model for improving behavioral and educational outcomes for youth in juvenile correction settings.

Developing Employment-Related Skills

Youth with disabilities in juvenile justice settings typically have poor employment opportunities after incarceration (e.g., Bullis, Yovanoff, Mueller, & Havel, 2002), which can contribute to recidivism and
other negative outcomes. Yet, transitional programs aimed at reintegrating these adolescents back into society often lack adequate training in employment-related skills. To strengthen employment-related skills training for these youth, Deanne Unruh at the University of Oregon adapted the curriculum, Working at Gaining Employability Skills (WAGES), which was originally designed to address locus of control, teamwork, communication, and problem solving among high school students and not specifically aimed at youth in juvenile correction settings. Unruh adapted the curriculum to suit implementation in a secure setting, align with the cognitive behavioral therapy language used during the adolescents’ treatment sessions, incorporate employment-related skills salient for youth in juvenile correction settings, and be implemented in a brief format. The impact of the adapted curriculum on employment-related skills, employment, and recidivism rates is currently being rigorously tested for youth with disabilities that have exited youth correctional facilities.

**Supporting the Transition of Youth With or At Risk for Disabilities in Residential Treatment Facilities**

NCSER has also funded several projects focused on supporting youth who are transitioning out of residential treatment facilities. These facilities typically provide intensive academic and behavioral services to at-risk youth and their families and often include a large number of youth with disabilities as well as juvenile offenders (Hockenberry et al., 2016). The transition from a residential treatment facility back into school and the community presents several challenges. For example, often there is limited coordination between the facility and the school and few educational and family support services for youth who are reintegrating. As a result, youth departing from such facilities are at risk for school failure and dropout (e.g., Trout et al., 2008). NCSER has funded several projects that aim to intervene during this critical transition and provide support for students to successfully reintegrate back into school.

Michael Epstein and Alexandra Torkelson-Trout at the University of Nebraska, Lincoln developed On the Way Home: A Family-Centered Academic Reintegration Intervention Model (On the Way Home) to support adolescents with high-incidence disabilities in reintegrating into the home and school settings following a stay in a residential treatment facility. On the Way Home is a 12-month aftercare program that incorporates three evidence-based components: (1) Check & Connect (Christenson, Evelo, Sinclair, & Thurlow, 1997), (2) Common Sense Parenting (Burke & Herron, 1996), and (3) a homework intervention. The program engages the settings, supports, and people that are essential to the reintegration process in order to prevent academic failure, school dropout, or reentry into the residential treatment facility. Results of a pilot test indicated that youth who participated in On the Way Home were significantly less likely to drop out of school or leave home and return to the residential treatment facility or jail than youth who did not participate in the program (Trout et al., 2013). The program’s efficacy for improving short- and long-term parent and adolescent outcomes is currently being evaluated.

Rohanna Buchanan at the Oregon Social Learning Center developed, On Track, a program to promote the successful transition from a highly structured treatment setting to the middle school setting for students with ED. On Track is designed to support this transition through the implementation of behavioral progress monitoring, parent support, skills coaching, and case management prior to and after the transition. The program’s promise for improving students’
transition outcomes and reducing problem behaviors and improving parent outcomes is currently being analyzed.

Final Comments

Youth with disabilities in the juvenile justice system face many challenges and are at risk for a variety of negative outcomes (Bullis et al., 2004; Zhang et al., 2011). As such, there is a critical need for research on this vulnerable population. The research funded by NCSER has focused on preventing or intervening on risk factors associated with involvement in the juvenile justice system, including dropout, trauma symptoms, aggression, and other problem behaviors; as well as promoting protective factors such as social and emotional competence, school engagement, and family involvement. As a result, NCSER researchers have developed programs that show promise for improving the social skills and academic outcomes of adolescents with or at risk for disabilities. NCSER researchers have also developed and tested programs to improve services and outcomes for youth in and exiting juvenile justice settings. Conducting research with youth involved in the juvenile justice system is complex and presents many challenges owing to the nature of the population, the physical context, and features of the system and its connection to educational settings (Houchins et al., 2010). Despite these challenges, NCSER researchers have developed programs that show promise for improving employment outcomes for youth with disabilities in juvenile justice facilities and supporting the successful transition out of residential treatment facilities. NCSER-funded researchers have made important contributions to our understanding of promising programs targeting youth involved in the juvenile justice system and those at risk for involvement. Continued exploration, development, and evaluation of programs addressing the needs of youth with or at risk for disabilities involved or at risk for involvement in the juvenile justice system as well as the professionals who work with these youth is critical. As NCSER-funded projects are completed, the results will further inform the next steps in preventing youth with or at risk for disabilities from entering the juvenile justice system and improving academic, social, behavioral, and transition outcomes for youth involved in this system.
References


