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psanantonio@csrincorporated.com

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Editorial Office: **CSR, Incorporated**
4250 N. Fairfax Drive, Suite 500
Arlington, VA 22203
Phone: 703-312-5220
Fax: 703-312-5230

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William S. Davidson, Michigan State University, East Lansing, Michigan*

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Editor's Note

We are pleased to present the 9th *Journal of Juvenile Justice (JOJJ)*. The first part of this issue explores the impact trauma has on children and adolescents, as well as the importance of a trauma-informed juvenile justice system. Olafson and colleagues discuss collaborative efforts among those working on the front lines in juvenile justice, child welfare, schools, and mental health to help at-risk youth who are experiencing trauma-related behavioral and psychological problems. The authors also identify tools, such as cross-system, specialized trauma training, that have resulted in positive outcomes in the rehabilitation of traumatized youth.

Although the results of these collaborations have been promising, a key challenge is the lack of consensus on exactly what a trauma-informed justice system should entail. To answer this question, Dierkhising and Branson outline a research and policy agenda comprising four core domains of a trauma-informed juvenile justice system: (1) screening, assessment, and intervention; (2) workforce development; (3) vulnerable populations; and (4) system reform. With these essential elements as a foundation, researchers and those in the field can further identify common language and goals.

In the article by Ford and colleagues, the authors focus on the psychosocial aspect of juvenile delinquency and the development and implementation of psychosocial interventions for traumatized youth who are involved in the juvenile justice system.

In addition to these featured articles, this issue also includes studies on the relationship between acute and chronic effects of alcohol and drug use and offense type among juvenile offenders; the effect of ethnic/racial socialization on recent aggressive behaviors; gender and the risk for recidivism in truancy court; and a pilot study of an instrument to assess the probation officer's knowledge of youth with intellectual disabilities.

We are interested in your feedback on the issue and encourage you to consider publishing your research in the *JOJJ*. Submissions are accepted on a rolling basis. Manuscripts for the 10th and 11th issues slated to be published in fall 2016 and spring 2017, respectively, are currently being accepted. We look forward to hearing from you.



Patricia San Antonio, PhD
Editor in Chief, *JOJJ*

Trauma-Informed Collaborations Among Juvenile Justice and Other Child-Serving Systems: An Update

Erna Olafson, Cincinnati Children's Hospital Medical Center, Cincinnati, Ohio

Jane Halladay Goldman, UCLA-Duke University National Center for Child Traumatic Stress, Los Angeles, California

Carlene Gonzalez, National Council of Juvenile and Family Court Judges, Reno, Nevada

Erna Olafson, Clinical Psychiatry and Pediatrics, Cincinnati Children's Hospital Medical Center, and the University of Cincinnati Medical School; Jane Halladay Goldman, Service Systems Program, UCLA-Duke University National Center for Child Traumatic Stress; Carlene Gonzalez, National Council of Juvenile and Family Court Judges.

Correspondence concerning this article should be addressed to Erna Olafson, University of Cincinnati College of Medicine, 311 Albert Sabin Way ML0539, Cincinnati, OH 45229. E-mail: erna.olafson@uc.edu

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Keywords: trauma-informed, cross-system collaboration, juvenile justice

Abstract

In order to address trauma among youth in the juvenile justice system, as well as those at risk for justice involvement, systems must engage in quality, meaningful collaboration to restore youths' faith in societal institutions as sources of protection and support. This paper describes a selection of trauma-informed collaborations that occur across the nation among stakeholders in juvenile justice, child welfare, schools, and mental health to assist youth in the juvenile justice system or those at risk for justice involvement. These collaborations include the Georgetown University Crossover Youth Practice Model (CYPM), Trauma Systems Therapy (TST), the Positive Student Engagement Model for School Policing, the Child Development Community Policing (CDCP) Program, and the Stark County Traumatized Child Task Force. This paper describes tools that have been developed to support these cross-system

collaborations and are central to developing a common understanding of trauma and how to address it across systems and disciplines. Themes that are identified as key ingredients in successful cross-system collaboration include effective leadership, engagement of stakeholders, development of shared goals, and evaluation of collaborative projects. The paper concludes with a summary of lessons learned from these programs, including the challenges inherent in taking locally successful trauma-informed interventions to scale nationally.

Introduction

The high rates of youth in the juvenile justice system who have experienced trauma have led to a call for earlier identification and treatment of these youth across child- and family-service systems, preferably before justice involvement is necessary (Stewart, 2013). Traumatic experiences

have profound effects on children's adjustment and development that may be exacerbated by adverse encounters with the social, educational, and legal institutions responsible for their safety and care. One of the core concepts of the National Child Traumatic Stress Network (NCTSN) for understanding traumatic stress responses in children and families is that "challenges to the social contract, including legal and ethical issues, affect trauma response and recovery" (NCTSN Core Curriculum on Childhood Trauma Task Force, 2012, p. 5). When there is an actual or perceived failure of child-serving institutions to provide justice and safety, a breach in the child's trust in the social contract can occur. Such a breach "may exert a profound influence on the course of children's post-trauma adjustment, and on their evolving beliefs, attitudes, and values regarding family, work and civic life" (NCTSN Core Curriculum on Childhood Trauma Task Force, 2012, p. 5). In order to uphold the social contract and prevent children from experiencing secondary posttraumatic complications, coordinated cross-system collaboration is needed to ensure safety and protection, address traumatic stress symptoms, and minimize re-traumatization (Stewart, 2013).

Common Themes

In exploring practices and interventions that encourage cross-system collaboration in systems of care for children, four common themes essential to fostering trauma-informed cross system collaboration emerged: effective leadership, stakeholder engagement, identification of shared outcomes, and evaluation. Effective leadership is essential throughout the project, from the initial vision and the identification and engagement of key stakeholders, to the creation of institutional structures to sustain trauma-informed practices once the initial team has done its work. Although one champion often emerges as the primary leader in such endeavors, having a group of leaders from all institutional levels is most effective in sustaining such efforts (Center for Technology

in Government, 2003). Key stakeholders vary by system, but collaborating through Memoranda of Understanding (MOU) and Multi-Disciplinary Teams (MDTs) is essential so that the transition to trauma-informed care is experienced as a joint effort, rather than as a top-down, organizational change. Central to this planning phase is the collaborative identification by key stakeholders of shared goals and outcomes (e.g., improving attendance within school systems or increasing safety in juvenile justice facilities). These collaborative efforts also allow for multiple groups (including community members) to impact policy reform (Herz & Ryan, 2008). Evaluation of the impact of cross-system collaboration informs future planning and increases the possibility of sustaining such efforts. Organizational change cannot depend on individual champions who first implement a practice but must be assured by convening the community to support these changes through public education and by institutionalizing these practices so that they become part of the daily routine within the target organizations.

Child-serving systems that should be brought into this collaborative project as early as possible include juvenile justice (law enforcement, the judiciary, attorneys, juvenile probation, diversion, and residential facilities), child welfare (child protection, foster and adoptive families), mental health, schools (teachers, administrators, and school resource officers), and advocates. This paper describes how stakeholders from these key systems have worked together with community partners to develop an approach to identify, assess, and provide therapeutic services to children and families who are experiencing trauma-related behavioral and psychological impairments by describing a selection of promising practices in cross-system collaboration.

Georgetown University Crossover Youth Practice Model

In collaboration with Casey Family Programs, the Center for Juvenile Justice Reform (CJJR) developed a practice model focused on issues

related to crossover youth, who are known to be in both the dependency and delinquency systems. The goals of the Crossover Youth Practice Model (CYPM) are to reduce: (a) the number of youth placed in out-of-home care, (b) the use of congregate care, (c) the disproportionate representation of children of color, and (d) the number of youth becoming dually adjudicated (Center for Juvenile Justice Reform, 2015). To date, nearly 90 jurisdictions in 20 states across the nation have participated in CYPM (Center for Juvenile Justice Reform).

Research suggests that cross-agency collaborative efforts that include reconciling agency missions and sharing information are needed to best serve the crossover youth population (Herz, Ryan, & Bilchik, 2010) and to use resources effectively across agencies (Petro, 2006). CYPM's three phases parallel the themes of this paper. These three phases focus on: (a) identification and decision-making; (b) joint assessment; and (c) coordinated care management, ongoing assessment, and permanency planning (Center for Juvenile Justice Reform, 2015). In Phase I of CYPM, commitment and leadership of participating agencies (e.g., judiciary, juvenile justice, child welfare, etc.) are crucial to successfully implementing CYPM. During this phase, stakeholders decide collaboratively on shared goals, such as defining the target population, establishing a protocol for identifying crossover youth as early as possible, developing trust between collaborative stakeholders, creating strategies for sharing information between agencies (e.g., developing a MOU), and identifying possible funding services available to crossover youth.

Because crossover youth are at heightened risk of entering the juvenile justice system from the child welfare system, many aspects of CYPM exemplify trauma-informed practices. The principles of CYPM focus on identifying at-risk youth as early as possible and diverting them from the juvenile justice system by offering evidence-based therapeutic services. In collaboration with the NCTSN, CJJR developed a trauma-informed training module

as part of CYPM to address behavioral health and trauma. In this training module, participants who represent multiple systems of care within a community walk through the case of a crossover youth and work together to identify points where earlier identification, intervention, and communication among systems could have created a more positive outcome for the youth (Marrow, Pynoos, Decker, & Halladay Goldman, 2012). The work of the CJJR has been highlighted in a three-part webinar series hosted by the NCTSN on trauma-informed practices (The National Child Traumatic Stress Network, n.d.). The series discusses decision-making points in cases of crossover youth, trauma-informed interventions for youth, and the impact of the federal programs at the local level. The CYPM structure (including behavioral health and trauma modules) helps to decrease the likelihood of youth being re-traumatized in the system(s) by making key stakeholders cognizant of aspects of youth's personal history such as exposure to traumatic stressors, as well as societal factors that may place youth of color, in particular, at a greater risk of both traumatic events and being funneled into the juvenile justice system.

In Phase II of the CYPM, collaborative efforts of multidisciplinary stakeholders come to the forefront. During this phase, processes and policies are developed to outline inter-agency contact, decide which assessment tools to utilize, conduct joint screening/assessments, and coordinate case planning (including identifying and funding evidence-based services) for youth and their families. In Phase III of CYPM, child welfare and juvenile justice agencies continue to participate in coordinated case management by MDTs, including ongoing assessment and concurrent planning. Much of the CYPM framework parallels Siegel and Lord's (2004) suggestions for improving court practices and programs, which focused on five core areas: (a) screening/assessment, (b) case assignment, (c) case flow management, (d) case planning/supervision, and (e) interagency collaboration. A few examples of ways to improve case flow management for crossover youth

include joint pre-hearing conferences, combining dependency and delinquency hearings, and adopting time-certain hearing schedules (Siegel & Lord, 2004). In many jurisdictions, permanency roundtables or benchmark conferences (which include judges) are held to discuss permanency of a youth. In some instances, permanency pacts are developed to identify individuals who will provide the youth with ongoing support when transitioning from care.

Casey Family Programs, in collaboration with the CJJR, recently published an evaluation of the CYPM. Haight, Bidwell, Marshall, and Khatiwoda (2014) discuss findings from participants of a 2-year long ethnographic study on the CYPM and reported structural changes that improved services for youth and families, as well as procedural changes that allowed for information sharing across departments and organizations. Participants also noted improvements in professional support and relationships among cross-system stakeholders. Allowing stakeholders and families to have a voice in the process as well as offering adequate support and training to front-line workers were identified as crucial elements for implementing CYPM changes. In addition to evaluating CYPM efforts, many jurisdictions have documented their system reform efforts, which include forming joint protocol manuals (New York City Administration for Children's Services, Department of Probation and Family Court, 2014). Documenting steps in the process helps to ensure that a jurisdiction will sustain reform efforts as it becomes daily practice.

Trauma Systems Therapy

Trauma Systems Therapy (TST) is a promising, cross-systems comprehensive approach to enhance recovery for youth who have experienced trauma. TST recognizes and addresses the interaction between a child and his/her traumatic stress response, the physical environment that may serve to shift a child into a state of emotional dysregulation, and the social environment (i.e., system of care) that may be inadequate in helping

the child navigate his/her stress response. TST has been utilized with various youth populations, including those associated with the child welfare and juvenile justice systems (e.g., those residing in congregate care settings; New York University School of Medicine Child Study Center, n.d.).

Implementing TST within an organization or community starts with an Organizational Planning Process. This planning begins by engaging leadership in a process that parallels engaging children and families into treatment, followed by an exploration of the primary issue or source of pain to determine whether TST is a good fit to address that "organizational pain." TST engages key stakeholders by relying on the development of a core MDT to implement TST in the community. This process includes not only the usual MDT participants (i.e., psychiatrist, psychologist, and social worker) but also a home-based team and a child advocacy attorney. The attorney's role might include education advocacy for a child failing out of a school system due to the intrusion of traumatic stress symptoms, immigration advocacy for a child who is undocumented and about to be deported, or school-discipline advocacy for a youth who is about to be referred by the school to law enforcement. The attorney can work with multiple systems involved in a family's life and help the providers understand the impact of the traumatic experiences and symptoms, as well as how the system's involvement could support that child's recovery. The Organizational Planning Process includes an assessment of which of these team components can be fulfilled within the organization and which must include cross-system community stakeholders. The implementation team then engages with those community partners by identifying shared goals and outcomes and developing specific collaborative agreements that outline how they will work together to meet those goals for the children and families they jointly serve.

TST utilizes a youth-centered approach that recognizes and addresses the role of system involvement in a child's recovery from posttraumatic

stress and the essential need for cross-system collaboration (Saxe, Ellis, & Brown, 2015). This focus on the youth and system allows for opportunities to rebuild the social contract that is so essential to trauma recovery, particularly with youth involved in the child welfare and juvenile justice systems. Like other models, TST offers wrap-around services for children and youth, but the multidisciplinary case plan revolves around the youth's traumatic history when making recommendations for the most appropriate services. TST is currently being implemented in 14 states and the District of Columbia. In a district-wide project in Washington, DC, team members reported that the model provided a pathway for collaboration that they had not previously experienced, possibly due to TST's explicit emphasis and guidance on collaboration. TST suggests that no single provider can possibly meet all of a child's needs. In order to break down the learned helplessness of the participating agencies' staff, which developed following multiple previously failed partnership attempts, TST lays the groundwork for successful cross-system collaboration by allotting time to carefully build partnerships with key players. TST is also sustained through flexibility and ongoing consultation. Participants have developed an innovative, collaborative community of stakeholders that meets monthly via phone to receive peer and faculty consultations on balancing fidelity with adaptability. This has led to sustained adaptations of the model into areas including child welfare, substance abuse, school, and refugee settings. The developers are currently piloting a web-based data collection system that will allow for more systematic evaluation of the model across sites (A. Brown, personal communication, March 26, 2015).

Positive Student Engagement Model for School Policing

In recent years, schools have become a major "feeder" system for youth (especially youth of color) into the juvenile justice system (Fabelo et al., 2011). Research has shown that the zero

tolerance, or "Broken Windows" approaches used in the 1990s to handle minor school infractions (e.g., smoking, fighting, etc.), have violated the social contract by playing a role in the increased number of out-of-school (OOS) suspensions and expulsions (Poe-Yamagata & Jones, 2000). The severity of the punishments associated with zero tolerance policies and subsequent practices have resulted in a significant number of students being arrested and referred to the juvenile justice system (Wald & Losen, 2003; Fabelo et al., 2011). To the extent that this pipeline reflects a failure of child-serving systems to provide justice and safety, it represents a challenge to the social contract that could not only traumatize affected youth but also breach their trust in the social contract.

In response to the school-to-prison pipeline, the Multi-Integrated Systems Approach (now referred to as the Positive Student Engagement Model for School Policing) was developed by Judge Steven Teske, the Chief Judge of the Juvenile Court of Clayton County, GA. These efforts encourage the use of restorative rather than punitive practice (Holtham, 2009). As a collaborative leader, Judge Teske brought key stakeholders together to engage in a dialogue about the importance of collaborative reform efforts related to the consequences of zero tolerance policies. One of the accomplishments of the group was to draft a MOU between stakeholders on the *School Reduction Referral Protocol* (Strategies for Youth, 2012a) that implemented a three-tier process for handling specific misdemeanor offenses (Strategies for Youth, 2012b). A second MOU focused on (a) the development of a multidisciplinary panel of stakeholders that would make referrals to the court and (b) services that would be offered to youth and their families. Teske and Huff (2010) stress the importance of judicial officers facilitating discussions between stakeholders to support shared collaborative goals and outcomes, which include diverting low-risk youth to alternative programs and developing written protocols to ensure compliance and sustainability of such efforts.

Evaluation of the multidisciplinary protocol indicates significant community impact. Data suggests that since implementing the protocol, OOS suspensions, school referrals, and delinquent felony rates have decreased, while graduation rates have increased by about 20% (Teske, 2011; Teske, Huff, & Graves, 2013). A report from the Annie E. Casey Foundation associates a 70% reduction in local detention populations and a more than 40% decrease in the number of youth in out-of-home placements in Clayton County, GA, with the implementation of these reform efforts (Annie E. Casey Foundation, 2013). In an effort to apply trauma-informed knowledge, Judge Teske and Clayton County have more recently implemented a System of Care (SOC) organization that supports the objectives of the Juvenile Detention Alternative Initiative (Clayton County System of Care, 2015). The logic model for the SOC organization takes a trauma-informed approach by including needs assessments and developing personalized SOC plans for system-involved youth. These plans include mental health services, mentoring, tutoring, cultural empowerment, job skills, and parent education.

The Child Development Community Policing Program

Partnerships between law enforcement and mental health systems provide unique opportunities to reach children and families as soon as a crisis or traumatic event occurs, and to potentially foster children's perception that societal institutions, such as the police, have the capacity to improve their situation and make them safer. In order to build such a partnership, the Child Development Community Policing (CDCP) Program was developed by the Yale Child Study Center in New Haven, CT, in collaboration with the New Haven Police Department. The elements of the model were developed from the work that mental health practitioners and police officers did while riding together in police cars, particularly attending to needs of children and youth who were present when the police were responding to, for example, domestic violence calls. As the police officers and

mental health practitioners figured out how to best help youth who had experienced traumatic stressors, they took note of their most effective practices and developed the CDCP model (Marans, Murphy, Casey, Berkowitz, & Berkman, 2006). CDCP has been successfully implemented and sustained in New Haven, CT; Providence, RI; and Charlotte-Mecklenburg County, NC (H. Hahn, personal communication, April 24, 2015).

The elements of CDCP include: an immediate, on-scene response to violent and catastrophic events, as well as a follow-up response to such events; seminars for officers on child development, human behavior, trauma, and collaborative responses; seminars for clinicians on basic police practices; clinician/police ride-alongs that build working relationships and a shared knowledge base; and weekly case conferences to address the specific needs of referred families. Specific response protocols have been developed for the acute on-scene response, provision of brief treatment with coordinated case management (i.e., Child and Family Traumatic Stress Intervention), follow-up with victims of domestic violence, provision of ongoing mental health treatment, canvassing of neighborhoods following community violence, and death notifications to families. These interventions are aimed at all children and families who come in contact with the police, including those experiencing domestic violence, as well as youth who exhibit delinquent or at-risk behaviors.

Through the CDCP model, youth may be identified relatively early as having experienced traumatic stressors and being in need of services. This approach, upon provision of physical and psychological safety, may allow youth to develop a different conceptualization of the police and mental health team. The promotion of a youth's more positive perception of the police and system involvement, therefore, may maintain or repair a youth's social contract. This may occur when a family feels safer and receives treatment for domestic violence issues, or when the police and mental health partners canvass a neighborhood

after a violent incident and thus promote feelings of safety, protection, and engagement. Rather than excusing a youth's behavior, the model encourages law enforcement and mental health systems to work together to examine a range of interventions to assist the youth.

The successful implementation of CDCP relies on the development of shared goals, such as improving the safety and well-being of a community, and the active engagement of key stakeholders through their intense interaction and frequent participation in team meetings and co-trainings. In Providence, RI, the collaboration began with strong, effective, and committed leadership from mental health and police participants. Such partnerships have been successfully sustained through major leadership shifts. Participants believe that this has occurred because all partners at all levels have witnessed the benefits to their community; have felt more effective in their own professional roles; and have integrated their collaborative practices into each partner organizations' policies, procedures, and cultures (S. Erstling, personal communication, March 26, 2015).

Court and Mental Health Collaborations

Proactive collaboration between the court system and the local mental health system has also shown promise for prevention, as well as for treatment. "A juvenile court judge enjoys a unique ability to act as a community convener," noted Judge Michael L. Howard and psychologist Dr. Robin Tener, as they described their work in a large Ohio county (Howard & Tener, 2008, p. 29). The Stark County Traumatized Child Task Force, founded by Judge Howard and community partners in 2001 when Howard was still a magistrate, fostered not only a trauma-informed juvenile court system but also a trauma-informed surrounding community. From 2001 onward, Judge Howard and his team worked to convene the community by inviting national speakers, such as Dr. Bruce Perry, to present community seminars about trauma, followed by breakout discussion groups. They also pulled together leadership

from almost every local child-serving agency to take part in this community convening, followed by invitations to join the planning task force. By 2004, Howard campaigned for judge and won election on a platform that included taking better care of local youth through a teen court program that included a focus on trauma treatment. As a result of the continuing, mostly unfunded work, many of the community organizations that joined the task force now routinely screen children and youth. When a history of trauma exposure is identified, youth and their caregivers are referred for a thorough traumatic stress evaluation (M. L. Howard, personal communication, July 7, 2015). This process provides a variety of opportunities to educate children and their families about the effects of traumatic stress and the need for trauma-focused treatment and prompts communication among the systems involved in treating such youth. For those youth who are involved with the juvenile court system, the court intervenes to support trauma-focused treatment not only with potential delinquency cases but also with protection cases in dependency court. Because this work began before trauma treatment had become mainstream in U.S. mental health agencies, Howard and Tener noted, "Yet, in our community, the juvenile court, rather than the mental health providers, has been the driving force in raising trauma awareness" (Howard & Tener, 2008, p. 31). As the work of the task force has continued, these initial efforts have expanded to system-wide awareness and action, including increasing leadership by mental health systems.

Judge Howard argued that in order to be sustained, trauma-informed approaches cannot depend on the vision of a single individual, a "champion," but must be institutionalized. Since 2008, Judge Howard and fellow stakeholders on the Stark County Traumatized Child Task Force have partnered with the NCTSN to institutionalize trauma awareness in all the regional systems that serve children and youth who may be traumatized, including schools; the local Red Cross; court personnel and court volunteers; the county

mental health board; and members of probation, child welfare, and local mental health agencies (M. Howard, personal communication, April 17, 2015). Judge Howard reports that more could still be done to bring law enforcement fully on board. He reports success in the schools by integrating trauma-responsive approaches into an ongoing state-mandated program, the Ohio Department of Education's Positive Behavior Intervention. Howard reports that to "sell" this to school administrators and teachers, the key stakeholders in the task force argued that integrating trauma work into their behavior interventions might well improve test scores. In collaboration with the NCTSN, trauma screening and treatment have also been institutionalized and evaluated in the local juvenile justice residential treatment program for clinicians and staff (Olafson et al., 2016).

The work in Stark County has served as a model for using the community convening power of the judiciary to foster trauma-informed dependency and delinquency court systems nationwide. It remains to be seen how such local efforts, dependent as they are on personal relationships in a small area, might be brought to scale in larger regional, or even national, trauma-informed projects.

Tools to Sustain Trauma-Informed, Cross-System Practices

In addition to the interventions described above, there are a number of tools that are useful for sustaining trauma-informed practices within organizations. The key is to provide specialized trauma training, as well as to enhance the abilities of the various systems to effectively communicate with each other.

Specialized Trauma Training

Interventions are most effective when all family members, court staff, case workers, residential treatment staff, probation officers, teachers, and community volunteers who are engaged with traumatized youth (a) understand how trauma

might impact a child or youth and (b) are able to provide support, understanding, and recommendations for helping the youth re-regulate. Research showed that a trauma-focused treatment combined with trauma training for staff resulted in positive outcomes for youth residing in moderate-high security correctional facilities (Marrow, Knudsen, Olafson, & Bucher, 2012; Olafson et al., 2016). These outcomes included reduced levels of depression in youth participating in such interventions, less threatening behavior by youth toward staff, decreased use of physical restraint and seclusion, and increased levels of hope and optimism among youth (Marrow, Knudsen, Olafson, & Bucher, 2012; Olafson et al., 2016). In an environment where all parties recognize and respond to traumatic stress symptoms in a supportive manner, a youth can more easily begin to understand his or her trauma reminders and feel safe to engage in actions that lead to emotional and behavioral regulation. The NCTSN has created a number of curricula designed to foster trauma-responsive systems.

The *Child Welfare Trauma Training Toolkit* (Child Welfare Collaborative Group, National Child Traumatic Stress Network, & the California Social Work Education Center, 2013) is a curriculum aimed at child welfare caseworkers to increase their understanding of trauma, suggest concrete actions to address traumatic stress, and provide them with information to guide families to appropriate interventions. *Think Trauma*, a four-module trauma-informed milieu training for residential treatment staff, probation officers, and court personnel, addresses trauma psychoeducation, posttraumatic coping strategies to use with reactive traumatized youth, and secondary trauma in staff members (Marrow, Benamati, Decker, Griffin, & Lott, 2012).

Many youth who are in diversion programs, are on probation, or are at risk for juvenile justice involvement are cared for in homes by foster parents or family members who could benefit from guidelines about the impact of trauma on youth

and effective ways to respond. *Caring for Children Who Have Experienced Trauma: A Workshop for Resource Parents* (National Child Traumatic Stress Network, 2010), was co-created by NCTSN trauma experts and experienced foster parents and is used by child welfare agencies across the country. It combines trauma knowledge and peer support with opportunities to apply that knowledge to a child in the caregivers' home.

A partial list of other promising trauma-informed tools that provide trauma training/knowledge to specific groups of professionals with a goal of sustaining trauma-informed practices includes: *Cops, Kids & Domestic Violence* (National Child Traumatic Stress Network, 2006); trauma-informed guidelines for residential treatment facility staff to accompany dissemination of Trauma-Focused Cognitive Behavioral Therapy (Cohen, Mannarino, & Navarro, 2012); the *Child Trauma Toolkit for Educators* (National Child Traumatic Stress Network Schools Committee, 2008); *Ten Things Every Juvenile Court Judge Should Know About Trauma and Delinquency* (Buffington, Dierkhising & Marsh, 2010); and the *NCTSN Bench Card for the Trauma-Informed Judge* (National Child Traumatic Stress Network, Justice Consortium & National Council of Juvenile and Family Court Judges, 2013).

Lessons Learned

There are several lessons to be learned from this sampling of local and national attempts at cross-system collaboration. These collaborations grow naturally out of situations where professionals and staff from one system spend time with professionals and staff from another in cross-trainings, co-location of services, and regular cross-discipline meetings. Practices that promote cross-system collaborations might be started by an individual "champion," but they must be proven effective and institutionalized within each system's policies, procedures, funding, and practices in order to be sustained. The development, implementation, and sustainment of these practices must meaningfully involve families and community partners. They must also involve staff

at all levels, as frontline staff, in particular, have the most interaction with youth and families and are therefore likely to have the most impact on youth and families' perceptions of the agency. A key part of these approaches involves collaboration among service systems to improve the continuity of care; address trauma at the earliest point possible; prevent further trauma to the child and family; and develop a more robust, community-oriented response to caring for families that have experienced trauma. It remains to be seen whether successful local and regional efforts can be taken to scale nationally.

In addition, successful collaborations across systems require not only resources that translate methods and goals across disciplines, but resources that also provide clear and explicit role definitions, so that each player stays within her or his training and competence while working with interdisciplinary partners. Lessons learned should be shared across disciplines and are most effective when they are communicated by respected professionals within the targeted audience's own profession; thus, police officers learn well from other police officers (in trainings jointly presented by trauma experts), and judges learn well from other judges (also joined by trauma experts). The national collaboration among NCTSN, the National Council of Juvenile and Family Court Judges, the American Bar Association, and the Office of Juvenile Justice and Delinquency Prevention have led to a host of collaborative papers, fact sheets, webinars, and trainings in addition to the selection of resources listed above.

One theme across these collaborations is the assumption that staff members from all service systems use a trauma-informed approach when interacting with a youth and his or her family. As they attempt to identify whether trauma might be one underlying source of a youth's misbehavior, delinquency, or other presenting symptoms and then take steps to address that trauma, the youth in question will be more likely to engage with societal systems and view herself or himself

as part of the larger society. The isolation and withdrawal that occurs with untreated traumatic stress, together with the disengagement from systems that have not proven helpful within a youth's life, might possibly be prevented if a community takes a trauma-informed approach. If communities can model collaboration, engagement, and understanding across their systems, then youth and families might be more likely to engage with their communities rather than give up and disengage. This assumption is, however, currently untested; further research should explore a potential link between trauma-informed approaches, the degree of community connectedness, and the impact on rates of juvenile delinquency. If these connections are validated, there are methods such as the Breakthrough Series Collaboratives (Ebert, Amaya-Jackson, Markiewicz, Kisiel, & Fairbank, 2012) that bring communities together across systems by (a) providing support to help them implement training, policies, and procedures that support trauma-informed practices; and (b) facilitating evaluation of new practices via pilot testing and data collection on the short- and long-term impact of the new approaches that are instituted (Ebert et al., 2012). Such approaches would allow communities to look for a measurable impact on levels of delinquency in order to determine whether trauma-informed approaches across systems are indeed effective in reducing the number of youth with trauma histories who enter the juvenile justice system. Further, such measures could help determine whether these new approaches can sustain effectiveness over time.

The new prevalence of the interventions, practices, tools, and methodologies described above point to a shift in society's perceptions about the root causes of delinquency. More than that, this

new perception reflects an optimism that has emerged from seeing the results of treating traumatic stress in youth. Coupled with that optimism is the knowledge that youth can recover from their exposure to multiple and ongoing traumatic experiences.

About the Authors

Erna Olafson, PhD, PsyD, has doctorates in history and clinical psychology and is associate professor of clinical psychiatry and pediatrics at the University of Cincinnati College of Medicine and Cincinnati Children's Hospital Medical Center. She is co-director of the Center for Trauma Recovery and Juvenile Justice—a National Child Traumatic Stress Network Level II Center funded by SAMHSA—and has co-chaired the Network's Justice Consortium since 2004.

Jane Halladay Goldman, PhD, is the director of the Service Systems program at the National Center for Child Traumatic Stress, the coordinating site of the National Child Traumatic Stress Network. In this role, she coordinates projects related to creating trauma-informed child and family service systems within juvenile justice, child welfare, education, medical, and mental health settings, as well as coordinating services and care across systems.

Carlene Gonzalez, PhD, is a senior policy analyst in the Family Violence and Domestic Relations Division at the National Council of Juvenile and Family Court Judges (NCJFCJ). During her time at NCJFCJ, she has assisted on projects related to the CCC (Courts Catalyzing Change) Initiative, Trauma-Informed Courts, School Pathways to the Juvenile Justice System, the Military Summit, and Vision 21: Linking Systems of Care for Children and Youth.

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Looking Forward: A Research and Policy Agenda for Creating Trauma-Informed Juvenile Justice Systems

Carly B. Dierkhising, California State University, Los Angeles, Los Angeles, California
Christopher E. Branson, New York University School of Medicine, New York, New York

Carly B. Dierkhising, School of Criminal Justice and Criminalistics, California State University, Los Angeles; Christopher E. Branson, Department of Child and Adolescent Psychiatry, New York University School of Medicine.

Correspondence concerning this article should be addressed to Carly B. Dierkhising, School of Criminal Justice and Criminalistics, California State University, Los Angeles, 5151 State University Drive, Los Angeles, CA 90032. Email: cdierkh@calstatela.edu

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Abstract

The movement to create trauma-informed juvenile justice systems has made great strides in recent years. An integral part of this process is collaboration between traumatic stress experts and juvenile justice professionals in developing trauma-informed approaches to serve diverse populations across a range of jurisdictions and settings. In this article, we outline a research and policy agenda by highlighting four core domains of a trauma-informed juvenile justice system: (a) screening, assessment, and intervention; (b) workforce development; (c) vulnerable populations; and (d) system reform. The movement to create trauma-informed juvenile justice systems has progressed due to emerging research on the impact of exposure to traumatic stressors and subsequent posttraumatic stress reactions on youths' risk of involvement in the juvenile justice system, as well as studies on promising and evidence-based screening, assessment, and therapeutic interventions for traumatized adolescents. Most importantly, traumatic stress researchers and practitioners are moving beyond

the phase of educating juvenile justice stakeholders to actually disseminating and implementing trauma-informed practices; many jurisdictions are ready and willing to create and put into place such a system.

Introduction

Creating a trauma-informed juvenile justice system is not a rapid transformation and often requires a paradigm shift at multiple levels (e.g., law enforcement, courts, probation, diversion, detention, mental health services; Substance Abuse and Mental Health Services Administration [SAMSHA], 2014). To do it successfully, juvenile justice professionals and traumatic stress researchers need to collaborate in establishing shared goals and developing and evaluating trauma-informed approaches to serve diverse populations across a range of jurisdictions and settings. Stakeholders in both realms agree that improved adolescent well-being is an overarching goal, but they don't always agree on how to define well-being or the strategies for achieving this goal. The underlying premise of the

trauma-informed approach is that negative youth outcomes, including delinquency (i.e., behaviors that place youth at risk for juvenile justice involvement) and recidivism, are reduced primarily through strengthening youth resilience and reducing symptoms of posttraumatic stress and co-occurring mental health problems (Ford, Kerig, & Olafson, 2014). The overall aims of the juvenile justice system are to enhance public safety, reduce recidivism, and hold youth accountable for their actions. Moving forward, researchers need to illustrate how trauma-informed practices and policies can support the juvenile justice system's aims in a cost-effective manner in order to strengthen the case for implementing and sustaining a trauma-informed approach in juvenile justice systems.

There is evidence that goals are becoming increasingly aligned from both sides of the fence. Traumatic stress researchers are formulating research agendas that have direct relevance, at a practical level, to juvenile justice practices and policies. For instance, traumatic stress research and advocacy efforts have made a case for abandoning traumatizing practices in justice settings (Burrell, 2013; Dierkhising, Lane, & Natsuaki, 2014), implementing trauma screening and assessment (Kerig, 2013), and using trauma-informed treatment models in secure settings (Marrow, Knudsen, Olafson, & Bucher, 2012b; Ford & Hawke, 2012) in order to improve working conditions for staff and reduce youth recidivism and mental health problems. In addition, recent policies and recommendations from a growing number of juvenile justice stakeholders call for the adoption of trauma-informed practices (American Bar Association, 2014; International Association of Chiefs of Police, 2014; National Council of Juvenile and Family Court Judges, 2015). For example, the U.S. Attorney General's Defending Childhood Initiative calls for routine screening and assessment for trauma-related impairment in justice settings, reducing the use of harsh or coercive practices that may "trigger" or re-traumatize youth with prior trauma histories, protecting victims of commercial sexual exploitation, improving

the system's response to girls, and other recommendations for a trauma-informed approach to juvenile justice (Attorney General's National Task Force on Children Exposed to Violence, 2012).

A key challenge to establishing clear and shared goals in creating trauma-informed juvenile justice systems is the lack of consensus on the essential elements that constitute a trauma-informed juvenile justice system. Several recommendations have been proposed, with significant overlap among them (e.g., Attorney General's National Task Force on Children Exposed to Violence, 2012; Dierkhising, Ko, & Goldman, 2013a). Taking these recommendations into account, we have identified four common domains of a trauma-informed juvenile justice system that encompass a range of pragmatic policies and practices: screening, assessment, and intervention; workforce development; vulnerable populations; and system reform. This article delineates these domains and related practices and policies, identifies essential elements for future research and evaluation, and suggests ways that stakeholders and researchers can adopt a common language and common goals.

Screening, Assessment, and Interventions

A key element of trauma-informed systems is the provision of effective services to support youth recovery from trauma and traumatic stress (National Child Traumatic Stress Network [NCTSN], 2007). Clearly, juvenile justice systems must offer screening and assessment for trauma-related mental health issues in order to identify youth in need of trauma-informed services. Yet, many unanswered questions remain regarding how best to utilize the information gleaned from trauma-informed screening instruments and the most efficient and effective way to deliver or adapt services when youth are identified as having traumatic stress-related impairments (Kerig, 2013).

To create trauma-informed justice systems, it is typically recommended that juvenile justice professionals implement routine, if not universal, screening of youth for trauma exposure and PTSD

or related behavioral health needs (American Bar Association, 2014; NCTSN, 2007). However, state juvenile justice practitioners need research-based and logistically feasible guidance around how to implement this recommendation. This includes *when* to screen youth (i.e., pre- or post-adjudication); *who* should conduct the screenings (e.g., probation officers, court staff, intake unit); *which* screening tools work best at particular set points of contact (e.g., some take time to administer/score, which can burden busy front-line staff); and *how* youth are referred for services based on the results.

Screening must only take place if the information from it leads to specific actions. It has also been noted that jurisdictions must determine what type of information is needed as youth move through the system, particularly those on the front end of the system (Kerig, 2013). It may not be necessary, or trauma-informed, to have youth screened for exposure to a broad range of traumatic events at intake or pre-adjudication, given that a safe environment and rapport with staff is not likely to have been established at this point. What may be more important early on is screening for traumatic stress reactions and related functional impairments so that the psychosocial problems that brought the youth into contact with the system in the first place can be addressed. Research on the timing of screening, the subsequent services youth receive based on them, and whether the services improve outcomes, can help identify the cost-benefit ratio to justify screening efforts and service provision.

Youth who screen positive for trauma-related impairment should be referred for a comprehensive trauma-informed assessment to determine if a referral to trauma-informed treatment is warranted. In the juvenile justice system, assessment of youth offenders typically focuses on both criminogenic risk factors (i.e., factors significantly associated with risk of recidivism) and service needs (i.e., mental health issues or psychosocial difficulties). Although justice system researchers and professionals have typically conceptualized

criminogenic risk factors as distinct from mental health needs (Cauffman, Steinberg, & Piquero, 2005), accumulating evidence reveals an overlap between the former and the symptoms of post-traumatic stress. Structured risk assessment tools used in juvenile justice settings typically include items measuring individual factors, such as anger and impulsivity (Skeem, Scott, & Mulvey, 2014), and these difficulties in regulating behavior and emotions are highly similar to core symptoms of posttraumatic stress (e.g., hyperarousal, irritable behavior and angry outbursts, reckless behavior). Trauma exposure and posttraumatic stress are also significantly associated with other commonly assessed criminogenic risk factors, including substance use, callous-unemotional traits, peer problems, negative family relationships, and academic problems (Evans-Chase, 2014; Kerig & Becker, 2010). Additionally, some studies have shown that commonly used juvenile risk assessment tools are significantly less accurate at predicting recidivism among youth offenders with histories of trauma exposure than for offenders without prior exposure (Li, Chu, Goh, Ng, & Zeng, 2015; Onifade et al., 2014). This is particularly important, given that scores indicating higher criminogenic risk are used to justify placement of youth offenders in detention facilities to protect the public (Andrews & Dowden, 2006). Research is needed in two areas: (a) to examine whether incorporating assessment of trauma exposure and related impairment into criminogenic risk assessment tools increases their predictive validity, and (b) to further clarify the relationship between trauma/traumatic stress and established criminogenic risk factors. If assessment tools can show that some youth have deficiencies in self-regulation as a result of posttraumatic stress reactions rather than criminogenic risk factors, courts may be encouraged to divert these youth to community-based trauma-informed services, which promote development of self-regulation skills. This would require additional work in the pre-adjudication phase of court processing, so research is needed to determine if those costs can be justified by outcomes such as reduced incarceration and

recidivism. As it stands, incarceration is more costly than diverting youth to evidence-based treatment and fails to reduce recidivism (Justice Policy Institute, 2010).

Trauma-informed interventions (i.e., services designed to promote recovery from posttraumatic stress) have been shown to reduce PTSD symptoms and other behaviors (e.g., externalizing/aggression) that contribute to adolescents becoming involved in the juvenile justice system (Black, Woodworth, Tremblay, & Carpenter, 2012; Ford et al., 2014; Marrow et al., 2012b; Smith, Chamberlain, & Deblinger, 2012). However, few studies have examined these interventions' long-term impact on delinquency or recidivism. Additional studies with larger, multisite samples and longer follow-up periods are needed to clearly establish which trauma-informed interventions reduce delinquent behaviors and recidivism as well as co-occurring posttraumatic stress problems.

Youth with the most serious criminal offenses and/or highest levels of criminogenic risk tend to receive the most services in cash-strapped juvenile justice systems; meta-analytic research findings show the greatest reductions in recidivism, from a cost-benefit perspective, result from interventions targeting this group (Lipsey, 2009). Traumatic stress experts, however, emphasize providing intervention to youth based on severity of PTSD and associated symptoms and call for early intervention to prevent trauma-exposed youth from developing serious and wide-ranging deficits (Gerrity & Folcarelli, 2008). To reconcile these different priorities, studies are needed that evaluate the effectiveness and cost benefit of trauma-informed treatment for youth with varying levels of criminogenic risk and posttraumatic stress symptomatology.

Given the significant cost of implementing new interventions (i.e., trauma-informed treatment), research is needed to compare the effectiveness of trauma-informed services with other evidence-based interventions for justice-involved youth in reducing both criminogenic risk and

posttraumatic stress impairments. Such research will help clarify which youth stand to benefit most from what type of specific interventions (e.g., traditional or trauma-informed) and whether existing treatments for delinquent youth can effectively reduce traumatic stress. For example, research has shown that *Multidimensional Treatment Foster Care*, a widely used and evidence-based intervention for youth offenders requiring out-of-home placement, has been adapted effectively for youth with delinquency and co-occurring posttraumatic stress reactions, improving both outcomes (Smith et al., 2012).

Because youth can be involved in a variety of juvenile justice settings of different durations, researchers will need to develop and evaluate trauma-informed interventions of varying intensity and determine which ones are cost effective to deliver and which ones are most appropriate for various settings. Determining the ideal dose or length of trauma-informed interventions also requires consideration of legal and ethical issues. For example, manualized trauma-informed interventions for adolescents typically call for 10 to 24 weekly sessions (and additional sessions as needed), but this would not suit short-term programs, such as detention or pre-adjudication diversion programs. Youth charged with lesser offenses who demonstrate needs related to post-traumatic stress should not be kept in the justice system just so they can receive trauma-informed interventions (i.e., a net widening effect). For these youth, an appropriate intervention might be a single session of psychoeducation on trauma and a referral for voluntary trauma-informed interventions.

Another question for future research is where youth offenders should receive treatment. Many communities face a shortage of mental health providers, particularly those trained in evidence-based treatments for posttraumatic stress (Courtois & Gold, 2009; Shields, Delany, & Smith, 2015; U.S. Department of Health and Human Services, 2015). One study found that probation officers working in counties with a shortage of

mental health providers were significantly less likely to refer youth on their caseload for treatment (Wasserman et al., 2008). Training existing front-line staff (i.e., non-clinicians) to deliver interventions offers a cost-effective strategy for increasing the availability of trauma-informed services in juvenile justice settings. Quasi-experimental studies report positive results for paraprofessional-delivered interventions for youth in the justice system, including trauma-informed intervention groups in juvenile detention centers (Ford & Hawke, 2012). Additional research is needed to establish whether front-line justice staff (case managers, probation or correctional officers) can be trained to deliver skills-based, trauma-informed interventions safely and effectively. Such groups could serve youth with mild to moderate trauma-related impairment, while youth with more serious or complex trauma issues would still receive referral to community-based trauma-informed interventions or onsite contracted providers in the case of detention/corrections.

Workforce Development

Infusing trauma-informed practices throughout the juvenile justice system requires that staff members of all levels and disciplines are knowledgeable about childhood traumatic stress (SAMSHA, 2014). Youth involved in juvenile justice interact with several professionals who hold decision-making authority over their lives, the majority of whom are not trained in mental health or informed about the nature and impact of traumatic stress (Andersen, Papazoglou, Koskelainen, & Nyman, 2015; Levin & Greisberg, 2003; NCTSN, 2008). Judges, attorneys, probation officers, and case managers serve as “gatekeepers” to mental health services, so it is essential that they understand the potential benefit of trauma-informed interventions and recognize warning signs that a youth in front of them may be suffering from traumatic stress. Additionally, the justice system has historically used coercive practices to ensure youth compliance with the law and court

mandates, including the threat of incarceration for probation violations among youth in the community and the use of seclusion or restraint in secure facilities. Such practices may trigger or reactivate PTSD symptoms for youth with prior exposure to traumatic stressors, and this can contribute to what appears to be an unwillingness of the youth to engage responsibly in legally mandated rehabilitation (e.g., missing court to avoid possible incarceration, reacting aggressively to threats of probation violations; Ford, Chapman, Connor, & Cruise, 2012). Thus, staff should receive training on trauma-informed approaches for interacting with youth that are designed to help them prevent or respond effectively to youth violations of court mandates or program rules.

Several trauma-informed training curricula and intervention models have been developed for juvenile justice staff. These models focus on education on the impact of traumatic stress exposure and posttraumatic stress reactions on adolescent development and behavior, and provide specific skills for working with traumatized youth. Available resources range from best practice handouts for specific groups (e.g., National Child Traumatic Stress Network Justice Consortium, 2013) to multiday workshops designed to increase front-line juvenile justice professionals’ knowledge and teach specific skills to engage, de-escalate, and assist traumatized youth (Ford, 2014; Marrow, Benamati, Decker, Griffin, & Lott, 2012a).

The key research challenge is to determine which of these models are effective in different juvenile justice settings and with different populations, as none have been rigorously evaluated to see if they increase front-line professionals’ knowledge and skills around working with traumatized youth.

Future studies should evaluate the impact of various training models across different positions (judges, probation/correctional officers, case managers) and settings (courts, secure facilities, community-based programs). Such research

should evaluate whether training increases staff knowledge and buy-in for adopting trauma-informed practices and whether this, in turn, leads to changes in practice and youth outcomes. The primary outcomes of interest will and should differ across positions and settings. For example, a key goal of the trauma-informed approach is to reduce the use of harsh disciplinary practices in correctional settings (i.e., restraint) that may trigger a traumatic response or further traumatize youth; therefore, research must demonstrate that replacing such practices with trauma-informed approaches can improve youth outcomes without sacrificing staff and youth safety.

Workforce development is also needed to educate and shield front-line staff from the negative effects of working with youth who suffer from posttraumatic stress reactions. *Secondary traumatic stress* describes the psychological duress that results from learning about another person's traumatic experiences or experiencing that person's posttraumatic stress reactions in firsthand interactions (National Child Traumatic Stress Network Secondary Traumatic Stress Committee, 2011). Research reveals high rates of secondary traumatic stress reactions among juvenile justice professionals, including court and correctional staff (Denhoff & Spinaris, 2013; Levin et al., 2011). Secondary traumatic stress reactions increase the risk for burnout and turnover among justice staff (Denhoff & Spinaris, 2013; Lewis, Lewis, & Garby, 2013). High rates of turnover are a barrier to implementing and sustaining effective juvenile justice programs generally as well as trauma-informed practices specifically, because agencies cannot afford to continually provide intensive training to waves of new staff. Research studies, therefore, are needed to evaluate juvenile justice practices and policies designed to prevent, or enable staff to cope effectively with, secondary traumatic stress reactions. Although there are no well-established interventions for preventing or treating work-related traumatic stress reactions (Bercier & Maynard, 2014), promising practices that merit further investigation include staff

training on secondary trauma and working with trauma survivors, supervision and peer support groups on work-related trauma/stressors, and critical incident debriefing.

Vulnerable Populations

Disproportionate minority contact (DMC¹) and racial and ethnic disparities (RED²) are pervasive throughout juvenile justice systems and have contributed to a legacy of unjust treatment and historical trauma among minority youth and their families (Lacey, 2013). Reducing DMC was mandated under the Juvenile Justice and Delinquency Prevention Act (JJDP) in 1992 (Cabaniss, Frabutt, Kendrick, & Arbuckle, 2007), and while some jurisdictions have been successful in implementing strategies to reduce DMC/RED—of note is the work by the Models for Change DMC Action Network and the W. Haywood Burns Institute—progress has generally been slow.

Future research on DMC/RED would benefit from taking a trauma-informed approach to how DMC/RED impacts youth outcomes. For instance, minority youth who come in contact with the justice system are not blind to inequalities and are likely to view the system as unjust or discriminatory. Research shows that fairness is central to improving youth outcomes (National Research Council, 2014), and this must include minority youth perceptions of discrimination and fairness within the system. Traumatic stress researchers should investigate the impact of discrimination and fairness on outcomes among trauma-exposed youth in the juvenile justice system. Betrayal trauma theory, and the idea of institutional betrayal in particular, suggests that when institutions (and people) that are charged with protecting individuals fail to do so, it can elicit or exacerbate traumatic stress reactions (Smith & Freyd, 2014).

¹ This refers to the fact that minority youth are justice-involved in disproportionate amounts compared to their numbers in the general population.

² This refers to the fact that minority youth receive disparate treatment at all points of contact throughout the juvenile justice system, such as harsher sanctions for the same crimes, compared to White youth (Bell & Ridolfi, 2008).

Research also shows that youth who feel legal cynicism, which refers to the perception that judges, police, and other legal authorities are unfair or untrustworthy (Sampson & Bartusch, 1998), are more prone to criminal behavior and negative experiences with law enforcement (Fagan & Tyler, 2005). Future research should evaluate how DMC/RED in the juvenile justice system and the resultant stigma and discrimination experienced by youth of color relate to both criminogenic (e.g., recidivism, legal socialization, procedural justice) and psychological outcomes (e.g., posttraumatic stress impairment and related behavioral health problems). For example, debate has been intense in recent years about the use of “Terry” stops, in which police officers temporarily detain and search people they suspect are engaged in criminal activity (also known as “stop and frisk”; Geller, Fagan, Tyler, & Link, 2014). Critics point to statistics indicating that this tactic is disproportionately applied to young men of color in impoverished neighborhoods (New York Civil Liberties Union, 2011). A recent study of 18-to-26 year old males in New York City evaluated the impact of being subjected to stop-and-frisk encounters by police officers and found that young males stopped more frequently reported higher rates of PTSD symptoms (Geller et al., 2014). Notably, study participants who perceived fair treatment by police officers during stop-and-frisk encounters reported significantly fewer PTSD symptoms (Geller et al., 2014). This highlights the link between a person’s perceptions of treatment with significant psychological outcomes and shows how important interactions with those in authority are to psychological health.

Girls are another vulnerable population requiring individualized attention from a trauma-informed framework. Retrospective accounts of trauma histories of juvenile justice-involved girls reveal significantly higher rates of exposure to sexual abuse and assault compared to the trauma histories of juvenile justice-involved boys (Dierkhising et al., 2013b; Kerig & Ford, 2014). Because of the high rates of sexual trauma among girls, advocates

have suggested that the sexual violence to prison pipeline (Saar, Epstein, Rosenthal, & Vafa, 2015) is the more common trajectory into the system for girls compared to the way boys become involved in the juvenile justice system. These striking rates of sexual trauma, coupled with the additional unique needs girls bring with them into the system (e.g., pregnancy, high rates of family and intimate partner violence, anxiety/mood disorders), have resulted in a growing movement to provide gender-responsive programming for girls (Watson & Edelman, 2012). However, more research is needed to better understand the need for gender-responsive programming as well as to identify what programs specifically work for girls (Kerig & Schindler, 2013).

Commercial sexual exploitation of children (CSEC) is a special problem for juvenile justice systems, as these youth have traditionally been treated as criminals rather than victims of trauma (Institute of Medicine, 2013). Unfortunately, the prevalence of CSEC and the need for prevention and intervention has far outpaced our understanding and implementation of appropriate responses (Rafferty, 2013). In relation to the juvenile justice system, the practice and policy priority is to ensure that CSEC survivors are referred to trauma-informed services and diverted out of the system whenever possible (Institute of Medicine, 2013). To achieve this, professionals working with children must use validated risk assessments that can identify CSEC victims so that they can consider alternate sanctions and implement intervention services. For instance, the Vera Institute of Justice (2014) developed a screening and assessment tool to identify CSEC victims, but it has yet to be validated in a juvenile justice setting.

A growing number of jurisdictions have developed systemic responses to serving CSEC youth, yet there is significant variation in the criteria used to identify youth at risk for or involved in sexual exploitation as well as the system response to such youth (Shared Hope International, 2014). For instance, in Los Angeles County, a specialized court addresses youth at risk for sexual

exploitation, which is primarily determined by prior or current charges for prostitution or admissions following arrest for prostitution (California Courts: The Judicial Branch of California, n.d.). Youth who voluntarily enter the program receive victim-centered services and may have their criminal charge dropped once they complete probation.

Future research must evaluate whether approaches to screening and service provision for sexually exploited youth within juvenile justice systems improve youth safety and reduce psychological and legal problems. Engaging these youth in sustained services is a very difficult challenge due to their tendency to return to exploitive relationships and settings (Walker, 2013). Research is needed to determine whether trauma-informed interventions can enhance engagement with CSEC youth in rehabilitative services and reduce their entrapment in revictimization.

System Reform

Physical and psychological safety during stays in residential juvenile justice facilities is essential to a trauma-informed approach and the basis for recovery from traumatic stress impairment. Physical safety (i.e., being free from victimization and abuse) during institutional stays is also a constitutional right for all youth (Dierkhising et al., 2014). Unfortunately, there is consistent evidence that many youth are not, and do not feel, safe during residential placement (Burrell, 2013; Dierkhising et al., 2014; Mendel, 2011). Youth with traumatic stress histories are also found to be more vulnerable to victimization in facilities, and victimization during residential placement (by staff or peers) has been associated with increased posttraumatic stress symptoms and continued criminal involvement following release (Dierkhising et al., 2014).

The Prison Rape Elimination Act (PREA) established a set of required practices and standards that institutions must follow and meet to prevent sexual victimization during residential stays

(Burrell, 2013). However, youth report a broad range of victimization, beyond sexual assault and exploitation, during residential stays (Beck, Harrison, & Guerino, 2010). Future research should evaluate strategies and practices aimed at reducing all types of victimization in juvenile justice facilities so that broader guidelines and oversight can be established. For instance, research could examine whether trauma training and/or nonpunitive disciplinary responses (e.g., de-escalation, rapport-building) improve youth safety. Implementing a trauma-informed care initiative has been shown to reduce the use of seclusion/restraint and youth disciplinary infractions in three out of four studies in secure juvenile justice facilities (Elwyn, Esaki, & Smith, 2015; Ford & Hawke, 2012; Marrow et al., 2012b; Olafson et al., 2016). Similarly, studies in inpatient mental health settings have shown that trauma training leads to reductions in seclusion and improvements in patients' self-reported sense of safety in the unit (Muskett, 2014).

Youth perceptions of psychological safety are also relevant to a trauma-informed approach (NCTSN, 2007). Longitudinal research indicates that youths' positive perceptions of their residential stays (safety, fairness, and order) are related to better youth outcomes (Schubert, Mulvey, Loughran, & Losoya, 2012). Future research should focus on the youth voice and their perceptions of safety during their institutional and justice-related experiences. Research findings such as these could inform (a) the feasibility of implementing specific trauma-informed interventions in justice settings to ensure that youth feel safe enough to participate in treatment; (b) staff training on trauma, safety, and rapport-building; and (c) legal and legislative opportunities to continue to support and uphold youths' constitutional rights to be free from cruel and unusual punishment.

Cross-system collaboration is another core element of a trauma-informed approach, given that trauma-exposed youth tend to be involved in multiple service systems, including child welfare, special education, and mental health/substance

abuse treatment (Dierkhising et al., 2013a). Unfortunately, cross-system collaboration is especially difficult within justice systems, because of legal protections regarding information sharing between agencies; this often means that pertinent information about a youth's mental health, service needs, and well-being are not available to other providers working with the youth (Stewart, 2010). For example, dually involved youth³ have some level of contact with the child welfare system because of a case of abuse or neglect, and some level of contact with the juvenile justice system (Abbott & Barnett, 2015). They are, by definition, a trauma-exposed population (Herz, Ryan, & Bilchik, 2010) and are in need of a trauma-informed approach. As trauma-informed practice with dually involved youth is rare, given the complexities of information sharing across systems and other systemic challenges (e.g., consistent use of multidisciplinary case management), these youth often become a hidden population (Herz et al., 2010). In addition, compared to the general juvenile justice population, the dually involved youth population has a higher prevalence of girls (Herz & Ryan, 2008; Saar et al., 2015), even greater racial disparities (Herz & Ryan, 2008; Ryan, 2011), and a higher risk for CSEC (Dierkhising, Geiger, Hurst, Panlilio & Schelbe, 2015). Future research that explores strategies to successfully identify this hidden population is needed to be able to direct them to appropriate trauma-informed services.

Some jurisdictions have found success in streamlining information sharing through coordinated case planning and systems integration initiatives. For instance, the Center for Juvenile Justice Reform's *Crossover Youth Practice Model* (Abbott & Barnett, 2015) helps jurisdictions improve information sharing for youth involved in both the dependency and delinquency systems so that multiple providers (e.g., child welfare workers,

³ Crossover youth is the umbrella term for youth who have been exposed to maltreatment and are later or concurrently involved in delinquent activities. Dually involved youth are a subset of the crossover population and are youth who have some level of formal system involvement with both child welfare and juvenile justice systems (Abbott & Barnett, 2015).

probation officers, education specialists, and mental health service providers) can communicate and establish a common and agreed-upon case plan. This process has the potential to decrease the workload for justice practitioners as well as reduce retraumatization for youth. Future research should evaluate the role of multidisciplinary teams and information sharing in enhancing traumatized youths' recovery and stable transition out of the system. In addition, researchers could consider the utility of including a trauma expert or, at the very least, consider how information about the youth's trauma history and traumatic stress symptoms guides service and disposition recommendations for dually involved youth. Policy analyses will also be useful in evaluating whether easing restrictions on information sharing or building coordinated data systems can reduce service system involvement and improve child well-being for those involved in multiple systems.

Family engagement and partnership is a struggle for most juvenile justice jurisdictions. This struggle can be traced back to one of the guiding doctrines of the juvenile court, *parens patriae*, which determines that the state can take guardianship of youth, establish them as wards of the court, and make decisions on their behalf (American Bar Association, n.d.). This doctrine essentially makes the court the child's parent with or without the consent of the child's actual guardian or parents. This process can be quite demeaning and shameful for families and is often counterproductive to family participation in the child's rehabilitation or recovery. Indeed, families report feeling stigmatized, blamed, and mistreated by the system (Rozzell, 2013) on top of often experiencing their own trauma histories and traumatic stress, which can be exacerbated through their child's system-involvement.

Future research should explore strategies for promoting family engagement while focusing on reducing stigmatization of families and eliminating barriers to family engagement. For instance, one survey found that three out of four family

members reported barriers to visiting their children during residential stays, such as not having the time, money, or access to transportation (Justice for Families, 2012). Family visitation during residential stays has been shown to reduce behavioral incidents among youth and improve academic performance (Agudelo, 2013). Further, the Justice for Families study (2012) found that many families want to be included in treatment and decision making for their children. Practices and policies that reduce stigmatization and include families in their children's case planning and treatment may reduce the potential for retraumatization from system involvement. Restrictive definitions of families also create a barrier to family engagement. Policies that broaden the definition of family are needed so that important caregivers and people in the children's support system can visit and be engaged with them during their system involvement.

Recommendations for Implementation Research

Initiatives to implement trauma-informed practices within juvenile justice will need to include strategies to address the many potential barriers to systemic change. Systems or organizations looking to implement these practices should begin by conducting a needs assessment to determine their readiness for change, identify trauma-informed practices already in place, and prioritizing areas of focus (Marsh, Dierkhising, Decker, & Rozniak, 2015). A handful of assessment tools and procedures have been developed to measure and evaluate agencies' or systems' use of trauma-informed practices, although only two were created specifically for juvenile justice (Branson, 2015; Marsh et al., 2015). Research reveals that the success of such initiatives is strongly influenced by the context and characteristics of targeted service settings, including staff-level factors (e.g., whether staff supports trauma-informed practice or whether staff experiences burnout or lots of turnover) and agency factors (e.g., leadership, organizational culture; Aarons, Hurlburt, & Horwitz, 2011). Accordingly,

several researchers have noted the need to develop implementation strategies that either fit with the unique characteristics and constraints of targeted service settings or can be modified to increase system readiness to adopt new practices (Aarons et al., 2011). For example, Taxman, Henderson, Young, and Farrell (2014) found that consultation focused on creating an organizational climate conducive to change led juvenile justice case managers to adopt mental health services and practices at higher levels than consultation focused solely on increasing staff skill with these practices. Moving forward, researchers and juvenile justice professionals should collaborate to develop and evaluate strategies for increasing organizational readiness for change and promoting the sustained adoption of trauma-informed practices. Implementation strategies will probably need to be tailored for different justice settings (e.g., courts, probation, law enforcement, diversion, and detention/correctional facilities). The contextual factors that most influence implementation success are also likely to vary across settings (e.g., geographical size, access to resources, administrative buy-in or support, intervention fidelity, local policies).

Conclusion

Most central to the sustainability of trauma-informed juvenile justice systems is building a solid empirical foundation on the utility of these strategies through program evaluation, needs assessments, and process evaluations that include both trauma-related and justice-related outcomes. Because jurisdictions vary greatly in their legal requirements, resources (financial, staff size, type of staff), geographical limitations, or advantages, it is all the more important for researchers to investigate how to tailor trauma-informed care initiatives to fit the unique needs and characteristics of different settings. As we continue to evaluate trauma-informed practices in juvenile justice settings, we must also consider the utility of employing multiple practices compared to a few. In other words, is there a

tipping point for becoming a trauma-informed system? It is probable that practices build on one another. Understanding the cumulative effect of these practices and policies will further support the widespread adoption and sustainability of a trauma-informed approach within juvenile justice systems.

About the Authors

Carly B. Dierkhising, PhD, is an assistant professor in the School of Criminal Justice and Criminalistics at California State University, Los Angeles. Her

primary areas of research include trauma, juvenile justice, adolescent development, and delinquency, as well as developing trauma-informed systems.

Christopher E. Branson, PhD, is an assistant professor of child and adolescent psychiatry at the New York University School of Medicine. His research focuses on implementing and evaluating trauma-informed systems change in juvenile justice, the link between traumatic stress and delinquent behavior, and treatment of co-occurring disorders among youth offenders.

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Psychosocial Interventions for Traumatized Youth in the Juvenile Justice System: Research, Evidence Base, and Clinical/Legal Challenges

Julian D. Ford

University of Connecticut School of Medicine, Farmington, Connecticut

Patricia K. Kerig

University of Utah, Salt Lake City, Utah

Neha Desai

National Center for Youth Law, Oakland, California

Jessica Feierman

Juvenile Law Center, Philadelphia, Pennsylvania

Julian D. Ford, Department of Psychiatry, University of Connecticut School of Medicine; Patricia K. Kerig, Department of Psychology, University of Utah; Neha Desai, National Center for Youth Law, Oakland, California; Jessica Feierman, Juvenile Law Center, Philadelphia, Pennsylvania.

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Correspondence concerning this article should be addressed to Julian D. Ford, 263 Farmington Ave., MC1410 UConn Health Center, Farmington, CT 06030. E-mail: jford@uchc.edu.

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Abstract

Psychosocial interventions for posttraumatic stress reactions increasingly are recognized as a key component in the provision of juvenile justice services. This article provides an overview of the research; clinical and legal successes; and challenges emerging from the development, evaluation, and implementation of trauma-focused psychosocial therapeutic interventions (TF-PTI) in juvenile justice systems. Four TF-PTI models that have empirically demonstrated effectiveness with justice-involved youth are

described. Clinical and legal precautions are discussed to inform practitioners, policymakers, administrators, and the judiciary when utilizing or adopting these and other TF-PTIs as one component of trauma-informed juvenile justice programming. The review highlights potential benefits that may accrue to public safety, as well as to the health and positive development of youth and families when juvenile justice programs provide access to evidence-based TF-PTIs in a systematic, equitable, and culturally competent manner.

Introduction

Psychosocial interventions for posttraumatic stress reactions increasingly are recognized as a key component in the provision of services to youth involved in or at risk for involvement in the juvenile justice system (Danielson, Begle, Ayer, & Hanson, 2012; Ford, Chapman, Mack, & Pearson, 2006; Ford, Kerig, & Olafson, 2014; Kerig, 2012). Research has demonstrated that more than 80% of juvenile justice-involved youth report a history of exposure to at least one traumatic event at some point in their lives (e.g., childhood maltreatment, domestic or community violence, severe accidents, traumatic deaths of family or friends), and typically these youth have endured multiple types of traumatic exposure (Abram et al., 2004; Dierkhising et al., 2013; English, Widom, & Brandford, 2002; Ford, Hartman, Hawke, & Chapman, 2008; Ford, Grasso, Hawke, & Chapman, 2013; Stimmel, Cruise, Ford, & Weiss, 2014; see Kerig & Becker, 2010, 2012, 2014 for reviews). Such polyvictimization places youth at significant risk for ongoing emotional, developmental, academic, and behavioral problems. Persistent posttraumatic stress can lead to serious long-term mental health problems for youth, including posttraumatic stress disorder (PTSD), substance abuse, anxiety, disordered eating, depression, self-injury, conduct problems, and revictimization, all of which further increase the likelihood of involvement in delinquency, crime, and the justice system (Becker & Kerig, 2011; Ford, 2010; Ford et al., 2006; Ford, Elhai, Connor, & Frueh, 2010; Ford et al., 2013).

In addition to the preponderance of youth entering the justice system with histories of prior exposure to traumatic events, the juvenile justice system itself may expose youth to additional traumatic stressors, such as peer violence, abuse by staff, and shackling and restraints (Dierkhising, Lane, & Natsuaki, 2014; Mendel, 2011). Retraumatization of youth in justice settings increases their risk for PTSD and could also cause problem behaviors that may endanger other youth and adults (DeLisi et al., 2010; Ford &

Blaustein, 2013). Therefore, effective therapeutic interventions provided on a timely basis and matched to the specific needs and life circumstances of each traumatized youth are an essential component of a trauma-informed juvenile justice system. To this end, this article provides an overview of the state of the art in current research on the development and implementation of psychosocial interventions for traumatized youth who are involved in the juvenile justice system or are at risk due to delinquency.

Working With Traumatized Youth in the Juvenile Justice System: Six Challenges

A growing evidence base supports in general the effectiveness of therapeutic interventions for adolescent PTSD and the related psychosocial problems that follow from exposure to traumatic stress (e.g., Cary & McMillen, 2012; Connor, Ford, Arnsten, & Greene, 2014; de Arellano et al., 2014). However, there are several reasons why justice-involved youth might be considered a special population in need of services targeted specifically to their needs and characteristics. These youth and the professionals and staff who work with them face six key challenges: (a) the overrepresentation of youth of color and of lesbian, gay, bisexual, transgender, questioning, and gender nonconforming (LGBTQ/ GNC) youth in the juvenile justice system; (b) the high prevalence of traumatic exposure and polyvictimization among justice-involved youth; (c) the adverse impact that PTSD symptoms have on youth participation in and benefit from rehabilitative services; (d) the difficulty of involving family and other support system members in justice-involved youth services; (e) justice-involved youths' ongoing risk of exposure to violence, losses, and other threats that can reactivate or exacerbate PTSD symptoms; and (f) the potentially coercive context of involuntary rather than voluntary participation created by law enforcement and judicial mandates on youth. These six challenges' relevance to providing targeted services addressing youth PTSD and associated psychosocial and behavioral

problems are described in more detail in the paragraphs below.

First, the disproportionate minority contact with law enforcement has led youth from underserved communities of color to be overrepresented in U.S. juvenile justice systems and to receive disparate responses (e.g., more frequent arrests and confinement, harsher legal sanctions) at each level of that system. Additionally, LGBTQ/GNC youth are disproportionately represented in the juvenile justice system. It is estimated that about 5–7% of the national youth population identifies as LGBTQ (Office of Juvenile Justice and Delinquency Prevention [OJJDP], 2014), but about 20% of all youth in the juvenile justice system identify as LGBTQ/GNC (Brown, Canfield, & Irvine, 2014). Among girls in juvenile detention, an astonishing 40% identify as LGBTQ/GNC (Irvine, 2015). Researchers believe the true percentage of LGBTQ/GNC youth among justice-involved populations is even greater because many youth avoid disclosing their sexual orientation or gender identity to reduce the risk of discrimination or abuse (OJJDP, 2014). Given these overrepresentations, effective interventions for these youth and their families (who are frequently economically disadvantaged as well) need to be designed and implemented so as to mitigate the risks of disparate treatment (e.g., to reduce the likelihood of these youth being stigmatized or subjected to disproportionate sanctions), as well as to be culturally competent, relevant to diverse populations (e.g., subgroups of youth of color of different linguistic or cultural backgrounds and of LGBTQ youth based upon different forms of sexual identity), and accessible in ways that might challenge traditional methods of mental health service delivery.

Second, research suggests that youth in the justice system differ from their peers by virtue of the number, kinds, and multiplicity of traumatic exposure they have endured (Ford et al., 2010; Ford et al., 2013). For example, in one of the few studies to directly compare justice-involved and community youth, Wood and colleagues (2002)

found that detained youth had on average experienced twice as many traumatic events as their high school peers. In particular, justice-involved youth reported a significantly greater likelihood than community youth of having lost a loved one to a violent death, having witnessed someone being killed, having both witnessed and experienced sexual assault, and having someone threaten their lives with a knife or gun. Even higher rates of traumatic stressor exposure and posttraumatic stress reactions are found among the subset of youth in the justice system who are gang-involved (e.g., Harris et al., 2012), especially among gang-involved girls (e.g., Kerig, Chaplo, Bennett, & Modrowski, in press; Kerig & Ford, 2014). Thus, interventions for justice-involved youth must be prepared to respond to significant levels of polyvictimization and revictimization and the resulting complex developmental dysregulations that ensue from exposure to chronic interpersonal traumatic stressors among these youth (Ford & Cloitre, 2009; Ford, Chapman, Connor, & Cruise, 2012; Kerig, Vanderzee, Becker, & Ward, 2012).

Third, a growing body of work is emerging that suggests traumatic stress reactions may contribute to youths' involvement in the justice system through specific posttraumatic mechanisms. In particular, recent theory and research has emerged suggesting that, beyond symptoms such as reexperiencing and hyperarousal, which are commonly understood and readily recognized as posttraumatic reactions, many justice-involved youth display another constellation of symptoms that is more vulnerable to misidentification. Posttraumatic coping strategies involving experiential avoidance—including emotional numbing, acquired callousness, dissociation, and self-harming behavior—are frequently seen among youth in the justice system and have been implicated specifically in adolescent delinquency (Allwood, Bell, & Horan, 2011; Bennett, Kerig, Chaplo, McGee, & Baucom, 2014; Bennett & Kerig, 2014; Bennett, Modrowski, Kerig, & Chaplo, 2015; Ford et al., 2006; Kerig, Bennett,

Thompson, & Becker, 2012; Plattner et al., 2003). Research also shows that this spectrum of post-traumatic reactions may complicate treatment due to being disproportionately associated with difficult comorbid problems such as substance abuse (Carrion & Steiner, 2000) and suicidality (Bennett et al., 2014) and can interfere with the effectiveness of evidence-based traumatic stress interventions (Taylor et al., 2001). Therefore, these symptoms may require special attention in treatments for justice-involved adolescents.

Fourth, it may be challenging to include caregivers and other supportive adults in treatment, especially for youth with behavioral/emotional problems (Garfinkel, 2010) and those placed outside the home, particularly in facilities geographically distant from their home communities. Anecdotal reports suggest that this may be a particularly acute problem for girls: Because the number of system-involved girls tends to be low, some jurisdictions economize by closing small local girls' units to merge them into larger facilities that are miles, or even states, away from the girls' home communities, creating significant barriers to caregiver involvement (Smith, Leve, & Chamberlain, 2011). The inclusion of caregivers has been empirically demonstrated to enhance the effectiveness of traumatic stress treatment for youth (Cohen & Mannarino, 2000), but interventions targeting justice-involved youth may have to meet the challenge of achieving positive outcomes in their absence or with limited involvement on their part.

Fifth, whereas some therapy models advise clinicians to begin trauma-focused components only when a youth is in a position of safety, this may not be realistic when working with traumatized justice-involved youth. Many of these youth are living in, or are returning to, communities with high rates of violence, and youth in detention or secure care may be witnesses to or victims of recurring potentially traumatizing events while institutionalized. Moreover, incarceration itself may threaten youth safety (Aebi et al., 2015). For these youth, traumatic stress treatment must be designed and

delivered in order to assist them in therapeutic processing of traumatic memories from the distant past as well as intrusive memories, re-experiencing of recent traumatic events, and ongoing traumatic exposures (Ford & Cloitre, 2009).

And sixth, many of these youth may not perceive participation as—and it may not in actuality be—wholly voluntary. Research on informed assent shows that youth often do not believe they have the right to choose when participation is invited by an adult in authority (Bruzzese & Fisher, 2003), and some institutional programming is indeed compulsory. Further, in some jurisdictions, judges and probation officers mandate psychosocial interventions, including traumatic stress treatment, in disposition plans for youth (Kendall, 2007). Even when traumatic stress treatment is not technically mandatory, justice staff may expect, and youth may assume, that therapists will provide regular reports about youths' progress. This may undermine the perceived voluntariness of the treatment and may threaten youths' perceived or actual privacy, especially when traumatic stress treatment requires them to provide a detailed narrative account of their experiences. Although other kinds of psychosocial interventions for justice-involved youth have demonstrated that their effectiveness is not reduced when delivered in contexts of court-mandated treatment compared with voluntary treatment (e.g., Alexander, Robbins, Waldron, & Neeb, 2013), this issue may complicate traumatic stress treatment in ways that have not been assessed.

In summary, given these ways in which the juvenile justice system presents a distinctive context for traumatic stress treatment—both regarding the presenting problems of this population of traumatized youth and their families and the challenges of service delivery—it is important that interventions be tried, tested, and proven effective in this context. We therefore will review the evidence base for treatments targeting traumatic stress that have evidence of efficacy or effectiveness specifically in a juvenile justice context.

The Evidence Base Supporting Psychosocial Interventions for Traumatized Juvenile Justice-Involved or Delinquent Youth

We identified four therapeutic psychosocial interventions that have published peer review reports of randomized trial efficacy or quasirandomized design effectiveness studies with youth involved in juvenile justice systems. Each of these interventions provides a detailed manual with step-by-step instructions designed to guide training of interventionists, the delivery of each session and activity, and the monitoring of fidelity and competence of implementation.

Trauma Affect Regulation: Guide for Education and Therapy (TARGET)

TARGET (Ford, 2015) is a 4–12-session educational and therapeutic intervention for traumatized youth and adults designed to be provided in either a one-to-one or group format by behavioral health clinicians. Nonclinical line staff are trained to serve as coleaders in the group modality in juvenile justice settings, as well as to deliver TARGET on a 24-hour, 7-days a week basis as a milieu intervention in congregate programs (Ford & Blaustein, 2013; Ford & Hawke, 2012). When delivered in the group format, either one leader or two coleaders may conduct groups of 4 to 10 youth. TARGET groups are designed to be gender-specific, with discussion topics and activities tailored to boys' and girls' differing interests and experiences, but both genders receive the same core skills set.

TARGET teaches a seven-step sequence of self-regulation skills summarized by the acronym FREEDOM. The first skills, **F**ocusing and **R**ecognizing triggers, provide a foundation for shifting from stress reactions driven by hypervigilance to proactive emotion regulation. Four subsequent skills are designed to enable participants to differentiate **E**motions, **E**valuative cognitions, **D**eliberate goals, and **O**ptions for action, and to determine whether they are based on stress reactions or are grounded in the participants' core personal values. A final skill, **M**aking a contribution,

is intended to enhance participants' reflective mentalizing skill (Allen, Fonagy, & Bateman, 2008) by providing a practical approach to monitoring day-to-day applications of the first six FREEDOM steps and recognizing how this enriches the lives of participants and other people.

A randomized clinical trial with justice-involved girls with dual diagnosis PTSD, substance use, or other disorders (e.g., oppositional-defiant, depressive, panic) showed that a 10-session individual TARGET intervention was superior to relational psychotherapy in reducing PTSD and depression and improving emotion regulation (Ford, Steinberg, Hawke, Levine, & Zhang, 2012). Additional evidence for TARGET's effectiveness as a group and milieu therapeutic intervention with detained boys and girls was provided by two quasi experimental studies. These studies in secure juvenile detention facilities and locked inpatient units in juvenile justice mental health centers showed reductions in violent behavioral incidents and coercive restraints and in PTSD and depression symptoms, and increased hope/engagement in rehabilitation following TARGET's delivery (Ford & Hawke, 2012; Marrow, Knudsen, Olafson, & Bucher, 2012).

Trauma and Grief Components Therapy for Adolescents (TGCTA)

TGCTA (Layne, Saltzman, Pynoos, & Steinberg, 2002) is a four-module 8- to 24-session group psychosocial intervention first developed for, disseminated to, and evaluated in a randomized trial for adolescent war survivors in Bosnia in the 1990s (Layne et al., 2008). It has since been implemented successfully in open trials with detained youth in Ohio (Olafson et al., 2016), urban, gang-involved, and at-risk youth in California (Saltzman, Pynoos, Layne, Steinberg, & Aisenberg, 2001), and delinquent youth in Delaware schools (Grasseti et al., 2014). In both the randomized trial in Bosnia and the open trial research studies in the United States, TGCTA was associated with reduced PTSD, depression, and maladaptive grief reactions and improved

behavior (Layne et al., 2008; Olafson et al., 2016; Saltzman et al., 2001).

TGCTA's four modules address: (a) foundational knowledge and skills to enhance posttraumatic emotional, cognitive, and behavioral regulation and to improve interpersonal skills; (b) group sharing and processing of traumatic experiences; (c) group sharing and processing of grief and loss experiences; and (d) resumption of adaptive developmental progression and future orientation. Each session contains step-by-step instructions for implementation, including suggested scripts for the exact language to use while conducting groups. Groups of 8 to 10 youth are generally led by two coleaders. Although single gender groups are recommended, some implementers have reported successful implementation with mixed gender groups.

TGCTA is similar to TARGET in several respects, including educating youth about the role that traumatic experiences and posttraumatic stress reactions can play in behavioral, emotional, interpersonal, and legal problems; and providing youth with skills for recognizing, coping actively and nonavoidantly with, and reducing the distress associated with posttraumatic stress reactions. Where TARGET emphasizes processing of current episodes of posttraumatic stress reactions using the FREEDOM skills, TGCTA emphasizes processing memories of past traumatic experiences as a means to reduce the distress elicited by those memories and the self-defeating avoidance that occurs when traumatized youth feel unable to tolerate posttraumatic stress reactions. TGCTA also provides a unique module designed to enable youth to process grief associated with traumatic losses.

Cognitive Processing Therapy (CPT)

CPT is offered as both a one-to-one or group treatment that teaches cognitive restructuring skills designed to enable clients to examine and rework beliefs about their self/identity, relationships, the world, and their futures, which may

have become maladaptive as a result of traumatic experiences (Resick & Schnicke, 1993). Two versions of CPT have been developed and tested. The original CPT was designed to enable traumatized clients to create, with the supportive guidance of a therapist, a detailed spoken and written account (referred to as a narrative) of a specific traumatic event. Over the course of 16 to 20 sessions, the narrative is used as a basis for the client to revise core personal beliefs about the meaning of the traumatic experience in light of a new ability to recall the event without avoidance, hyperarousal, or intolerable emotional distress. An alternate form, CPT-C, involves creating what is referred to as an impact statement, a brief written summary describing the effect that the traumatic event has had on the client's life, without requiring a detailed narrative account. Research suggests that the two versions are equally effective and that CPT-C may be advantageous by facilitating more rapid treatment gains with fewer dropouts from therapy (Resick et al., 2008; Walter, Dickstein, Barnes, & Chard, 2014).

The efficacy of CPT with traumatized youth has been demonstrated in a randomized clinical trial that included adolescents (e.g., Chard, 2005), and a revised version of CPT has been developed specifically for youth (Matulis, Resick, Rosner, & Steil, 2014). This longer (31 session) developmentally adapted CPT includes emotion regulation and interpersonal effectiveness skills that are similar in intent—although different in actual practice—to those in TARGET. The adapted CPT showed evidence of reductions in PTSD and depression in an open trial with 10 female and 2 male adolescents who had child abuse-related PTSD (Matulis et al., 2014). Of particular relevance to the current review of evidence for the treatment's effectiveness with justice-involved youth, an 8-session group version of CPT with incarcerated boys was found to be superior in reducing PTSD and depression symptoms as compared to a control condition in which youths received the standard facility services while they waited to receive CPT (Ahrens & Rexford, 2002).

Trauma-Adapted Multidimensional Treatment Foster Care (TA-MTFC)

MTFC was developed to provide an alternative to residential care for youth with chronic and severe antisocial behavior and mental health problems that put them at high risk for future incarceration or hospitalization (Chamberlain, Saldana, Brown, & Leve, 2011). With the active support of a clinical team, therapeutic foster parents are trained to implement a highly structured behavioral program in the home that includes active adult monitoring, fair and consistent discipline, provision of a positive relationship with a caregiving adult, and redirection toward prosocial activities and away from antisocial peers. Randomized controlled trials have shown high levels of effectiveness in reducing youths' delinquent behaviors and mental health problems (Chamberlain, Leve, & DeGarmo, 2007; Chamberlain et al., 2011).

MTFC research also revealed gender differences related to girls' high rates of mental health disorders, family discord, and traumatic stress exposure (Chamberlain & Moore, 2002). Consequently, a gender-responsive version of the intervention was developed that was further enhanced by the inclusion of trauma-focused modules based on the principles of Trauma-Focused Cognitive Behavioral Therapy (Cohen, Mannarino, & Deblinger, 2006). The trauma-related components focus particularly on psychoeducation about traumatic stress exposure and reactions, and they affect regulation, healthy sexuality, and the development of adaptive skills for coping with traumatic stress. A small randomized clinical trial involving 30 adolescent girls with histories of justice involvement found that, at a 12-month follow-up session, girls who received the integrated MTFC plus traumatic stress treatment demonstrated significantly lower levels of trauma-related mental health problems and delinquent behavior when compared to girls assigned to standard juvenile justice programming (Smith, Chamberlain, & Deblinger, 2012).

Next Steps for TF-PTIs With Youth in Juvenile Justice Systems

TARGET, TGCTA, CPT, and TA-MTFC have shown evidence of success in enabling justice-involved and delinquent youth to cope effectively with and be less distressed by PTSD and related posttraumatic symptoms, as well as in improving their ability to regulate their emotions (TARGET), succeed in school (TGCTA), and safely and optimistically participate in juvenile justice detention and inpatient psychiatric programs (TARGET). Thus, psychosocial therapeutic interventions appear to provide a basis for helping traumatized justice-involved or high-risk youth to manage, and potentially overcome, posttraumatic stress problems. In so doing, the interventions also potentially enhance youths' ability to engage in rehabilitation, resume involvement in prosocial activities, and avoid reoffending (Ford & Hawke, 2012; Layne et al., 2008).

Although promising, in many respects the evidence-based TF-PTIs available for justice-involved youth are still at an early stage of development (Ford & Blaustein, 2013). Most have been subjected to a limited number of clinical trials, often conducted by the developers; thus, broader dissemination and replication showing evidence of effectiveness across diverse participants and contexts are needed. Most also are designed to be provided only to youth, despite evidence that supportive family involvement is an important protective factor mitigating against delinquency (Garfinkel, 2010). TA-MTFC is a positive exception in that it includes family therapy and services in the foster home. Other TF-PTIs that have been designed or adapted to provide family systems therapy (e.g., Ford & Saltzman, 2009) should be evaluated in the context of juvenile justice service planning—and specifically tested in conjunction with evidence-based, in-home family therapy models for delinquent youth, such as multisystemic therapy, multidimensional family therapy, and functional family therapy.

In addition, deeper research probes into the mechanisms underlying the treatments'

effectiveness will be important for revealing the critical ingredients and components that might be streamlined for greater efficiency and cost effectiveness. Dismantling studies that distinguish these factors might address questions, such as which presumed therapeutic components most significantly influence TF-PTI outcomes (e.g., psychoeducation, trauma memory processing, emotion regulation skills, self-monitoring, social support/modeling, presence of a caring adult role model/mentor). Clinical trials comparing the outcomes achieved by different forms of service delivery also would inform us of the relative benefits of group approaches compared with individual approaches for increasing engagement, preventing dropouts, and achieving positive outcomes. Such trials would also determine whether milieu reinforcement of TF-PTIs by juvenile justice staff (or by parents, teachers, mentors, or peers in home and community settings) is either a helpful catalyst or a requirement for sustained generalization of behavior change (Ford et al., 2012). Drawing on the TA-MTFC example, research is needed to determine whether and under what circumstances TF-PTIs can be an adjunct to, integrated with, or a prerequisite for other evidence-based interventions targeting youth problem behavior. For example, once youth who receive a TF-PTI are coping effectively with the aftermath of trauma, would they be more receptive to commonly offered juvenile justice programs targeting other noncriminogenic or criminogenic risk, need, or responsivity factors (Ford, Chapman, Connor, & Cruise, 2012)?

Clinical and Legal Challenges in Delivering TF-PTIs for Justice-Involved Youth

A long-standing problem for evidence-based practice is the gap between what is proven effective in the laboratory and what is available to clients in “real world” settings (Weisz, Ng, & Bearman, 2014). Advances in implementation science have made it clear that effective interventions for youth need to be not only developed

but also disseminated in ways that ensure fidelity and sustainability (Stirman et al., 2012; Weisz et al., 2014). This may prove particularly challenging in juvenile justice settings in which there are stakeholders at many levels of the system—legislators, judges, administrators, attorneys, probation officers, line staff—whose buy-in may prove essential for initial and sustained TF-PTI implementation. Further, ongoing fidelity monitoring is essential to the sustainability of evidence-based treatments (Scheirer & Dearing, 2011). Therefore, stakeholders in systems of care must be educated about the need for trauma-informed interventions as well as be willing to find strategies to bear the costs of investing in a high-quality, enduring, and accessible method for delivering TF-PTIs to justice-involved youth and families. Collaborative partnerships that cross the aisles traditionally separating the judicial, mental health, and correctional components of the justice system may be the key to success (Olafson, Goldman, & Gonzalez, 2016).

Crafting appropriate interventions for justice-involved youth requires an examination of broader questions of law and policy, including: (a) the social structures that lead youth into the justice system, particularly in light of the challenges to accessing high-quality, voluntary care outside the justice system; (b) the stage at which traumatic stress services are most likely to be effective for youth in the juvenile justice system; and (c) the potential legal risks of traumatic stress treatment and the relevant legal protections that should accompany such treatment.

Addressing Traumatic Stress Before Youth Become Embedded in the Juvenile Justice System

Although high-quality targeted interventions within juvenile facilities are essential, policymakers should begin their consideration of such services within the broader social and economic context leading young people into justice systems. Far too many youth who have mental health needs, particularly those of color or from poor

families, are referred into the juvenile justice system unnecessarily (Mallett, 2015). Many of these youth receive no mental health treatment, and others are involuntarily placed in mental health services when they could be better served by voluntary mental health treatment in the community (Garcia, Greeson, Kim, Thompson, & Denard, 2015). Youth incarceration rates in the United States are dramatically higher than in any other country in the world. The rate at which the United States holds young people in locked facilities is estimated to be five times that of South Africa, which has the second highest rate of incarcerated youth among all nations (Mendel, 2011). The most recent data available show that, despite a reduction of more than 40% over a 10-year period (from 96,531 incarcerated or detained youth in the United States in 2003 to 54,148 in 2013), thousands of youth still are confined in juvenile justice residential facilities every year in the United States (OJJDP, n.d.); many countries do not incarcerate children or adolescents at all (Mendel, 2011).

Juvenile justice systems in the United States also arrest, adjudicate, and confine young people of color at disproportionate rates, despite evidence of similar offending behavior among other racial groups (Lauritsen, 2005). In 2013, more than two-thirds of incarcerated youth were Black, Hispanic, American Indian, or of mixed racial background (OJJDP, n.d.). Moreover, at least one study found that “[t]he likelihood that disorders would be detected or treated was ... lower among racial/ethnic minorities” than among white peers (Teplin et al., 2013, p. 11). In addition to ensuring access to traumatic stress services in facilities, state and local policies should prioritize ensuring youth access to high-quality voluntary mental health services in the community, reducing racial disparities in the juvenile justice system, and permitting secure care placement only when necessary for public safety.

Thanks to successful reform efforts nationally, many juvenile justice systems have developed effective and efficient alternatives to incarcerating youth (Mendel, 2014).

As this juvenile detention reform has decreased the number of incarcerated juvenile justice youth, it has become increasingly important to explore avenues for providing traumatic stress interventions for nonincarcerated juvenile justice youth and for offering any needed treatment at the earliest possible juncture in the trajectory of a youth’s justice-system involvement (American Academy of Child and Adolescent Psychiatry, 2005). This may include offering voluntary traumatic stress treatment to youth who are in diversion programs or home on probation. It is also important to look even further upstream (e.g., troubled youth identified in school systems), particularly for the many youth who are at risk for becoming involved in both the juvenile justice and child welfare systems.

Addressing Traumatic Stress With Dual Status Youth

An overwhelming percentage of youth in the juvenile justice system have a history of childhood abuse and/or neglect; many of these youth also were involved with the child welfare system (Widom, 2003). Youth who become involved in both the child welfare and juvenile justice systems are often referred to as “dual status” youth. This is not a monolithic group. In fact, as awareness and research on dual status youth have grown, so too has the terminology used to describe them.

“Dually identified youth” refers to youth who are currently involved in the juvenile justice system following an arrest and were formerly involved in the child welfare system due to a report of parental neglect or maltreatment. Youth in juvenile detention facilities are more likely to have experienced abuse or neglect (and related types of victimization in their families and communities; Ford et al., 2013) than other youth in national samples (Ford et al., 2010). As a result, many of these justice-involved youth were involved in child protection investigations, and in some instances, they were placed in foster homes or congregate care facilities for their own safety prior to coming to the attention of the law enforcement and juvenile justice systems.

By contrast, “dually adjudicated youth” refers to youth who have formal (compared with informal involvement, such as diversionary), concurrent involvement with both systems (Herz et al., 2012; Wiig, Tuell, & Heldman, 2013). This refers to youth who were adjudicated dependent because of abuse or neglect and are also adjudicated delinquent. A third category, “dually involved youth,” includes youth who have concurrent involvement with both the child welfare and juvenile justice systems, though involvement with one or both systems may be informal (e.g., youth adjudicated dependent and placed in a group home, arrested by law enforcement but placed in a diversionary program by a probation officer) (Wiig et al., 2013). Thoughtful cross-system collaboration can support early and effective interventions before youth formally enter the juvenile justice system and can prevent or reduce juvenile justice system–involvement for youth with traumatic stress-related behavioral and emotional problems (Ford et al., 2006). Cross-system collaboration involves proactive sharing of information (within the bounds of legally mandated privacy regulations) and coordinated planning of services by personnel and agencies serving dual-involved youth (Marans, Berkowitz, & Cohen, 1998; Morrissey, Fagan, & Coccozza, 2009). The key systems with which youth in the juvenile justice system often are involved include (but are not limited to) law enforcement, child welfare, schools, developmental disabilities services, mental health services, pediatrics services, community recreational programs, homelessness services, and family/social services.

Juvenile justice and child welfare systems can take numerous steps to ensure that such cross-system collaboration occurs. First, when youth enter the juvenile justice system, stakeholders can commit to identifying whether youth have current or prior child welfare involvement. Early identification is a critical step forward, given that in most jurisdictions, this information is not identified or shared. Staff must exercise caution to ensure that this sensitive information is

appropriately shared (i.e., consistent with state and federal protections and ethical boundaries). Second, once a youth referred to the juvenile justice system is identified as having current or historical involvement with the child welfare system, both systems can work together to explore whether underlying traumatic stress problems can be addressed without the youth becoming more deeply embedded into the juvenile justice system. Third, both child welfare and juvenile justice systems can explore ways in which they can build high-quality TF-PTIs into the infrastructure of their response to dual-status youth. This will require a sustained, coordinated effort between the systems and a deep commitment to improving outcomes for dual-status youth.

Providing youth access to TF-PTIs is an important element of a broader strategy to disrupt the child welfare to juvenile justice pipeline. Indeed, an emphasis on earlier intervention may help persuade decision makers to invest in TF-PTIs and to sustain such methods. As efforts evolve to reform treatment for dual status youth, researchers should track data to highlight what common sense suggests: Earlier intervention is more effective and efficient than services or treatment provided after problems become chronic and severe. Such data will further support endeavors to develop thoughtful TF-PTI-related policies.

Addressing Traumatic Stress When Youth Are Intensively Involved in Juvenile Justice

Once youth formally enter the juvenile justice system, policymakers and practitioners face challenges related to the legal risks that can be posed by traumatic stress treatment; policies are needed to ensure that treatment can be provided to youth safely and without negative repercussions. A review of case law has revealed that judges may consider evidence of childhood trauma histories as aggravating factors in juvenile disposition, transfer decisions, and adult sentencing (Feierman & Fine, 2014). Moreover, treatment and screening that involve discussion

of a youth's trauma history may inadvertently elicit information about past incidents of juvenile or criminal offending. Therefore, policies are needed to ensure that youth can participate fully in TF-PTI without self-incrimination (National Juvenile Defender Center, 2014). Screening or treatment provided during detention or in a diversion program pose particular risks to a youth's delinquency adjudication hearing. However, even after adjudication, youth may reveal past actions that could lead to further adjudications or to a lengthier or more secure disposition. Protections in state law are the most effective way to protect confidential information (Rosado & Shah, 2007). Such policies protect young people from being penalized for full participation in treatment as well as protect the mental health providers and their relationships with the youth and capacity to provide effective treatment.

Additionally, policymakers and mental health providers can ensure that youth are not penalized for failing to comply with treatment or not benefitting from treatment. Except for the four methods described in this review, TF-PTIs have been developed and tested almost exclusively with youth who are voluntarily seeking therapy free from the chronic stress of juvenile justice sanctions, are living with parent(s) or other adult primary caregivers who can participate supportively, and are not currently exposed to additional traumatic stressors. In contrast, in secure facilities, youth who are mandated to participate in treatment are in restrictive settings, are detached from caregivers and family, have reduced protection from further traumatic exposures, and are at risk for punitive sanctions. Indeed, because many juvenile systems have indeterminate sentencing, with release granted when the young person demonstrates appropriate rehabilitation (Nurse, 2010), a youth's failure to comply with and show evidence of benefiting from treatment will often lead to additional time in the system and specifically in secure facilities. Even in the juvenile justice systems with determinate sentences or

guidelines, a youth's failure to comply can lead to "time adds" or can push a young person's disposition to the outer range of the guidelines. Although it is reasonable to encourage young people to participate in traumatic stress treatment, the treatments must be delivered in ways that avoid penalizing young people for whom coping with ongoing stressors—of both the traumatic and chronic day-to-day types—is a more pressing challenge than addressing the effects of past traumatic events.

Practitioners should also be aware of the requirements around mandatory reporting of child abuse, and policymakers should ensure that such requirements are carefully tailored to promote confidential communications between young people and mental health professionals. To effectuate these goals, policy makers can craft laws designed to protect young people from abuse so that these statutes are not used to impose juvenile or criminal sanctions on young people. Thus, for example, sexually active minors could be protected from being considered "offenders," and thus triggering mandatory reporting for the purposes of statutory rape or child abuse (Mallie, Viljoen, Mordell, Spice, & Roesch, 2012). It is particularly vital that young people have the opportunity for open dialogue with their mental health professionals about their own sexual activity without risk of punitive consequences. Legal statutes could also provide exceptions for the mandatory reporter requirement when mental health professionals are treating juvenile clients who are victims of sexual abuse, including statutory rape. These clients, especially, need the opportunity to seek counseling and pursue sanctions against abusers when they decide to do so.

Summary and Conclusion

Although there is a rapidly growing array of evidence-based and evidence-informed, gender sensitive, developmentally appropriate, and ethnoculturally acceptable therapeutic interventions for the treatment and rehabilitation of complexly

traumatized children and adolescents (Ford & Courtois, 2013), only four trauma-focused psychosocial therapeutic interventions have been adapted for and tested empirically with youth involved in the juvenile justice system. Because the potential benefits to youth and to juvenile justice systems of effective trauma-focused psychosocial therapeutic interventions are substantial, implementation and rigorous evaluation of the evidence-based models are a priority for the clinical and justice fields.

Therapeutic interventions that help to establish a safe milieu and prevent potentially traumatizing (or traumatic stress reactivating) sanctions (e.g., incarceration, physical restraints, seclusion) to enable young people to recover from emotional and behavioral problems caused by posttraumatic stress, are essential not only for youth but also their families and communities, and the law enforcement, court, and juvenile justice staff and professionals who work with them. When post-traumatic emotional and behavioral problems are effectively addressed in all services and programs within the juvenile justice system, everyone—troubled youth and their families, adults who are responsible for public safety, and entire communities—may become safer and healthier.

About the Authors

Julian D. Ford, PhD, is a clinical psychologist and professor in the University of Connecticut School of Medicine Department of Psychiatry and School

of Law. He is the principal investigator and director of the Center for Trauma Recovery and Juvenile Justice in the National Child Traumatic Stress Network.

Patricia K. Kerig, PhD, is a professor of clinical psychology in the Department of Psychology at the University of Utah. Her research and applied work focuses on uncovering sources of risk and resilience for traumatized youth, particularly those involved in the justice system.

Neha Desai, JD, is a staff attorney with the National Center for Youth Law and formerly the policy advisor of Santa Clara County's Dually Involved Youth Initiative. She engages in litigation; amicus efforts; and policy advocacy regarding children in dependency proceedings, commercially sexually exploited children, immigrants and refugees, asylum seekers, and battered women at the federal level and in several state and county court systems.

Jessica Feierman, JD, is associate director at the Juvenile Law Center and adjunct professor in the Temple University School of Law and the University of Pennsylvania School of Law. She engages in litigation and amicus efforts related to juvenile life without parole, institutional conditions, and adult sentencing. She also is involved in policy advocacy and public education on the juvenile justice and child welfare systems, with a particular focus on the impact of trauma and adolescent development on juvenile and child welfare policies.

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Acute and Chronic Effects of Substance Use as Predictors of Criminal Offense Types Among Juvenile Offenders

Albert M. Kopak

Western Carolina University, Cullowhee, North Carolina

Steven L. Proctor

Carlos Albizu University—Miami Campus, Miami, Florida

Albert M. Kopak, Department of Criminology & Criminal Justice, Western Carolina University; Steven L. Proctor, Clinical Psychology Department, Carlos Albizu University—Miami Campus.

Correspondence concerning this article should be addressed to Albert M. Kopak, Belk 410-E, Department of Criminology & Criminal Justice, Western Carolina University, Cullowhee, NC, 28723. E-mail: amkopak@wcu.edu

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Abstract

Our understanding of the relationships between substance use and offending generally includes the findings that alcohol use is correlated with violent crime and drug use is typically related to certain drug offenses (e.g., possession). However, most of the research underlying current knowledge has focused on adults, and few if any studies specify types of offenses. The current study was designed to fill the apparent gaps in the research literature by utilizing data from the Survey of Youth in Residential Placement in a more detailed examination of the complex relationships between acute and chronic effects of alcohol use, drug use, and offense type among juvenile offenders. Multinomial logistic regressions indicate that acute effects (i.e., being under the influence of drugs or a combination of alcohol and drugs) are most likely to be associated with detention for drug offenses. Chronic effects, including frequency of alcohol use and substance-related problems, are significantly more likely to be associated with detention for violent

offenses (i.e., robbery, assault with a weapon, murder, rape, or kidnapping) relative to drug offenses. These results have important implications for the assessment and treatment of substance use among juvenile offenders detained for both drug-related and violent offenses.

Introduction

Substance use is a widespread problem among youth involved in the juvenile justice system. According to the National Center on Addiction and Substance Abuse (CASA, 2004), it is estimated that just over 78% of juvenile arrests in 2000 involved adolescents who (a) were under the influence of alcohol or illicit drugs while committing an offense, (b) were arrested for a substance-related offense (e.g., liquor law violations and drug possession), (c) had reported social problems related to their substance use, or (d) had tested positive for drugs at the time they were taken into custody. Therefore, 1.9 million youth who came into contact with the criminal justice system were also affected in some way by

substance use. This segment of the population may be most at risk for long-term, substance-related problems, including the development of a substance use disorder (American Psychiatric Association, 2013; Teplin et al., 2005). The consequences of prolonged substance use may also contribute to the continuation of problem behavior into later stages of life, especially compared to youth who come into contact with the criminal justice system and do not have a history of substance use (Menard, Mihalic, & Huizinga, 2001; Tarter, Kirisci, Mezzich, & Patton, 2011).

Beyond the obvious need for early intervention and prevention programming to address substance use and dependence among juvenile offenders, there are additional costs associated with overlooking these issues. A considerable amount of criminal justice resources are allocated toward detaining juvenile offenders in various stages of the criminal justice process—from offenders with substance use problems to those awaiting adjudication, or those who are serving sentences. Estimates from detailed budget information from 45 states in 2004 revealed that juvenile justice corrections expenditures were approximately \$3.6 billion for those offenders who experienced problems related to substance use (CASA, 2004). This figure underscores the importance and desperate need for additional research in this area to gain a better understanding of the complex links between the consequences of substance use and offending in order to progress toward more efficient and responsive policies.

According to Goldstein's (1985) tripartite framework, substance use may precede or accompany crime in at least three ways. That is, substance-driven offending can be economically, systemically, or psychopharmacologically motivated. Economic motivations for crime (e.g., robbery or burglary) may be based on securing financial resources that are needed to obtain drugs. In comparison, systemic crime is characteristic of broader involvement in illicit drug markets (e.g., victimization of one drug dealer by another

dealer). Most importantly, at least with respect to the current study, psychopharmacologically driven crime stems specifically from the ingestion of specific substances.

The psychopharmacological effects of certain substances vary significantly and are associated with different types of criminal activity. The acute effects of alcohol, for instance, follow a biphasic time course that typically results in initial feelings of euphoria or relaxation at small doses, but larger doses can lead to memory impairment, behavioral disinhibition, and possibly severe withdrawal (Oscar-Berman & Marinkovic, 2007). These effects have profound implications for certain types of offenses, especially violent confrontational encounters such as assault (Felson & Staff, 2010).

A significant amount of work has examined the relationship between alcohol and several different types of delinquency and criminal offending among adolescents. One study involving students in New York state schools, for example, found that youth who had higher daily average alcohol consumption were more likely to be involved in general delinquent activities (e.g., carrying a weapon, skipping school, beating someone up; Barnes, Welte, & Hoffman, 2002). Findings from the Pittsburgh Youth Study (PYS) highlight the relationship between alcohol and violence: 35% of male youth (ages 11 to 20 years) in the sample reported involvement in violence, and among this group, 93% had ever used alcohol, while 86% had used alcohol frequently (Wei, Loeber, & White, 2004). Alcohol use has also been linked to certain types of violence in the PYS sample, with male youth most likely to report strong-arming, fighting, and attacking others while under the influence of alcohol (White, Tice, Loeber, & Stouthamer-Loeber, 2002).

In comparison, the psychopharmacological effects of illicit drugs may be more likely to lead to other types of crime among juvenile offenders. For instance, marijuana, the most prevalent illicit drug used by adolescents (Johnston, O'Malley,

Miech, Bachman, & Schulenberg, 2014), affects nearly every bodily system. The short-term pharmacokinetic effects of marijuana include a sense of euphoria linked to decreased anxiety, lowered alertness, increased sociability, and other effects that are characteristic of central nervous system depressants (Ashton, 2001). Although these effects are presumably less likely to lead to aggressive interpersonal types of crime, research has shown that they are in fact associated with non-violent offenses such as theft and property damage (French et al., 2000) and drug-related offenses such as simple possession (Kopak & Hoffmann, 2014a).

In addition to the short-term effects of substance use, which are directly attributed to being under the influence of a given substance, juvenile offenders may experience notable long-term consequences of chronic substance use, which are likely associated with certain types of crime. Research conducted in a national, school-based sample of adolescents found that prolonged alcohol use increased the odds that adolescents became involved in serious violence compared to non-users (Maldonado-Molina, Reingle, & Jennings, 2011). Related to this increased involvement for violent behavior, national data from the United States and a cohort study from New Zealand both found that adolescents' frequent and heavy alcohol use significantly contributed to involvement in property and violent crime (Fergusson & Horwood, 2000; Popovici, Homer, Fang, & French, 2012). Likewise, chronic juvenile offenders in the Pathways to Desistance Study, in comparison, were more likely than less frequent offenders to exhibit high levels of substance use, including alcohol (Mulvey, Schubert, & Chassin, 2010). These findings are consistent with a growing body of research that shows that alcohol use in adolescence is associated with increased levels of aggression and contributes to a continuous cycle of alcohol use and violence that can persist into later adolescence (Felson, Teasdale, & Burchfield, 2008; Huang, White, Kosterman, Catalano, & Hawkins, 2001). In

addition, heavy and chronic alcohol use is associated with higher levels of antisocial behavior (Hussong, Curran, Moffitt, Caspi, & Carrig, 2004), which likely increases the probability that adolescents may become engaged in violent offending.

Chronic substance use may also contribute to a number of additional social problems related to offending behaviors. For instance, persistent substance-using adolescents may be unable to manage their responsibilities at home, at school, and at work, leading them to experience social conflict with their parents (Caffrey & Erdman, 2000), quit a job (Hoffmann, Dufur, & Huang, 2007), and disengage from school (Henry, Knight, & Thornberry, 2012). Recurrent substance use may also lead to strain in social relationships to the point where friends and family members share concern with adolescents over their problematic patterns of use (Neff & Waite, 2007). These problems may be the product of heavy and prolonged substance use, which can also lead to polysubstance use (Martin, Kaczynski, Maisto, & Tarter, 1996; Newcomb & Bentler, 1988), dangerous forms of substance use (e.g., excessive frequent use and use in compromising situations; Trocki, Michalak, & Drabble, 2012), as well as the increased potential for the development of tolerance and withdrawal (Rose, Lee, Selya, & Dierker, 2012). Together, these negative consequences of chronic substance use may converge in such a way that they set adolescents on a course toward serious forms of offending.

Although this body of research suggests that different forms of substance use and substance-related problems are enmeshed with juvenile offending, these relationships have not been examined in detail among detained youth in criminal justice custody. The primary objective of the current study is to replicate and extend current research regarding the acute and chronic psychopharmacological effects of substance use and examine how these effects are related to certain types of offending in a national sample of detained juvenile offenders. Based on existing research, which has largely been conducted with

community samples and localized samples of criminal justice-involved youth, it was hypothesized that both the acute and chronic effects of being under the influence of alcohol at the time of offense would be related to a greater likelihood of detention for a violent offense. Conversely, both the acute and chronic effects of being under the influence of drugs at the time of the offense were expected to be related to a greater likelihood of detention for a non-violent property or drug-related offense.

Methods

Data

Archival data from the Survey of Youth in Residential Placement (SYRP), a representative survey of youth in the custody of the juvenile justice system, were utilized for the present study's planned analyses. The SYRP was developed by the Office of Juvenile Justice and Delinquency Prevention from 2000 to 2001. The SYRP was administered in a representative selection of state and local facilities identified by the Census of Juveniles in Residential Placement (CJRP) and the Juvenile Residential Facility Census (JRFC) projects (Sedlak & Bruce, 2010). Data were made publicly available in 2013 and have been archived in the National Archive of Criminal Justice Data at the Inter-university Consortium for Political and Social Research at the University of Michigan.

The sample of detained youth included in the SYRP was drawn from eligible juvenile custody facilities in the United States. A two-stage, probability-proportional-to-size (PPS) sampling design (Levy & Lemeshow, 2008) was implemented beginning with the 3,893 facilities that were part of the CJRP in August 2001 and September 2002. The original sampling frame was designed according to facility security level, size (i.e., number of youth in residence), geographic region, proportion of female youth, proportion of adjudicated youth, average length of stay, and type of facility (i.e., public vs. private and whether or not

it was a detention center) (Sedlak et al., 2012). Of the 290 facilities initially identified for study participation, a net sample of 204 facilities across 36 states participated in the study.

The PPS method was utilized to generate a representative sample of detained youth. This method was based on classifying youth according to facility stratum. Sampling proportions were computed to extrapolate youths' representativeness from a given facility (based on the list of CJRP and JRFC facilities) to the population of youth in custody. Parental consent was obtained *in loco parentis* by 48% of facilities, 38% required written parental consent, 9% required passive consent (which consisted of a response only for the denial of participation), 4% required a combination of consent procedures depending on the types of youth, and 1% required verbal parental consent. Facilities obtained the appropriate form of consent prior to data collection (Sedlak & Bruce, 2010).

Interviews were conducted in an audio-enhanced, computer-assisted, self-interview (ACASI) format. This method allowed youth to respond to interview questions via a laptop computer with pre-recorded interviewer prompts that guided them through the process. Benefits derived from this particular interview format include the ability to elicit sensitive information from participants due to its maximization of privacy (Gribble et al., 2000) and address problems associated with low levels of literacy.

Sample

A total of 7,073 detained youth completed the survey and were included in the archival data set. However, 128 youth were excluded due to missing data for select variables of interest to the current study's aims. Specifically, 71 respondents did not have complete data for the indicator of alcohol and drug use frequency in the months prior to the offense for which they were detained, 27 respondents did not have complete data regarding the specific offense that resulted in their detention, and 30 respondents were missing information on key control measures. Thus, the

total net sample for the present study included 6,945 youth, with an estimated weighted population size of 99,388, according to the sampling design.

Measures

Outcome measure. The key outcome variable of interest in the current study was offense type. The SYRP included a nominal indicator of the most serious offense for which youth were currently detained. Based on official records, this offense profile was collapsed into six categories: (a) murder, rape, or kidnapping; (b) robbery or assault with a weapon; (c) burglary, arson, theft, or other property offense; (d) public disorder or assault without a weapon; (e) drug offenses; and (f) technical violations or other offenses. Burglary, arson, theft, and other property offenses represented the largest proportion of current profiles, with 24% of youth being detained for these crimes. This was followed in sequence by robbery or assault with a weapon (20%); technical violations or other offenses (20%); public disorder or assault without a weapon (17%); murder, rape, or kidnapping (10%); and drug offenses (9%; which included driving a car under the influence of drugs or alcohol).

Substance use indicators. Several indicators of substance use from the SYRP were utilized in the current study's analyses. Acute substance use effects were represented with a series of items to assess whether youth were under the influence of certain substances at the time they committed their offenses. One item, used to assess alcohol use at the time of the offense, asked youth, "Were you under the influence of alcohol (or drugs) during this crime?" Respondents indicated whether or not they were indeed under the influence of alcohol or drugs, and three mutually exclusive measures were created. One measure was coded "0" for those who were not under the influence of alcohol at the time of the offense and "1" for those who were under the influence of alcohol at the time of the offense. A second comparable measure was coded "0" for those who were not

under the influence of drugs at the time of the offense and "1" for those who were under the influence of drugs at the time of the offense. A third measure was coded "0" for those who were not under the influence of alcohol or drugs at the time of the offense and "1" for those who reported they were under the influence of both alcohol and drugs at the time of the offense.

Chronic problems typically associated with substance use were assessed with a series of five questions including, "In the few months before you were (put in this facility/taken into custody) ... was using alcohol or drugs keeping you from meeting your responsibilities at school, home, or work?"; "... did your parents or friends think you drank too much?"; "... did you get in trouble when you were high or had been drinking?"; "... did you use alcohol and drugs at the same time?"; and "... had you been so drunk or high that you couldn't remember what happened?" Negative responses to these five items were coded "0" and positive responses were coded "1." The scores were then summed to create an additive scale of substance-related problems indicative of chronic issues related to substance use.

Another set of indicators of the chronic effects of substance use included in the current study were related to youths' recent frequency of alcohol and drug use. These measures were assessed with the items, "In the few months before you were (put in this facility/taken into custody), about how often were you drunk or very high from drinking alcohol beverages?" and "In the few months before you were (put in this facility/taken into custody), about how often did you use drugs?" Response options included "1 (Never)," "2 (About once a month)," "3 (About once a week)," "4 (Several times a week)," and "5 (Every day)."

Covariates. Several important background factors known to be associated with substance use and offending patterns among juveniles involved in the criminal justice system were included as control variables in the current study. Given the well-established link between prior offending and the

likelihood of current imprisonment among juvenile offenders, an indicator was included to assess how many prior convictions detained youth had in their individual offending history (Myner, Santman, Cappelletty, & Perlmutter, 1998). Youth were asked, "Not counting the conviction that led to your stay here, how many times have you been convicted of a crime?" Responses ranged from none to five or more times.

It is also fairly well understood that adolescent delinquency is deeply rooted in social connections through co-offending with accomplices (Reiss, 1988; Warr, 2002). Thus, an indicator of co-offending was included with the item, "Did you commit this crime with someone else?" The binary response set (i.e., 0 = No and 1 = Yes) was used to specify whether or not youth had been in the company of others at the time of the offense.

Several demographic factors that are interrelated to adolescents' involvement in certain types of offenses were also included in the current study. For instance, evidence shows that participation in certain types of crime can be age-specific (Steffensmeier, Allan, Harer, & Streifel, 1989). To account for this potential contributing factor, a continuous measure of youths' ages at the time of the interview was included. A dichotomous measure of adolescents' sex ("0 Male," and "1 Female") was also incorporated, given the distinct patterns of offending and juvenile adjudication between male and female youth (Freiburger & Burke, 2011; Siegel & Senna, 2000; Steffensmeier & Allan, 1996).

In addition, the level of educational attainment was included as a covariate, given that education has been shown to be a critical element related to juvenile delinquency (Blomberg, Bales, Mann, Piquero, & Berk, 2011). A binary measure of education level was created to determine if adolescents had less than a high school education (coded "0") or had some educational experience at the high school or an equivalent level (coded "1").

Race and ethnicity are also important variables to consider in the analysis of juvenile justice

issues. Recent research has shown that racial and ethnic minority youth are more likely to come into contact with the juvenile justice system, experience variable legal discretion, and receive disproportionate sentences compared to White youth (Kempf-Leonard, 2007; Parsons-Pollard, 2011). These factors were considered by creating a set of four dummy variables, with one each for White youth, Black youth, and Hispanic youth, and one combined for Asian, Pacific Islander, Native American, and multi-racial youth (due to the small numbers in each of these categories).

Analyses

The SYRP data set's inherent unequal probability of selection requires the application of appropriate analytical methods. Failure to take the sampling design into account during analyses is likely to result in deflated standard errors leading to biased estimates (Levy & Lemeshow, 2008). To address these unequal chances of being selected for inclusion in the study (based on size of facility, demographic makeup of the facility, and other factors, such as oversampling female and Hispanic youth), analysis of the SYRP must include the use of 74 replicate weights to compute accurate variance estimates (Sedlak et al., 2012).

This stratified sampling design requires the use of appropriate methods using the replicate weights to properly execute standard error estimation procedures. Jackknife estimation (Rust & Rao, 1996; Wu, 1986) is the method of choice to accurately calculate standard errors within the two-stage PPS design that served as the basis for the SYRP. This approach involves the computation of the population standard error using information drawn from across several subsamples within the original data (Levy & Lemeshow, 2008). All multivariate regression analyses were conducted with STATA 11 using the *svy jackknife* command (StataCorp, 2009).

Multinomial logistic regression models were selected as the method of choice in the current study for a number of important reasons. These

models allow for the analysis of comparisons between multiple dependent variable categories, which is well suited to the comparison of offense types in the context of the present study. These models also allow flexibility in specification of contrasts between categories, allowing for estimation of comparisons between multiple sets of categories in a single dependent variable (Hedeker, 2003). In the current study, this involved the simultaneous estimation of the significance of predictors in one offense type category in contrast to another. For example, juvenile offenders in detention for robbery or assault were compared to those in detention for drug offenses. Finally, multinomial logistic regression results can be expressed in terms of relative risk, which in the current study involved the comparison of the probability of being charged with a violent offense against the probability of being charged with a drug offense, thus offering ease of interpretation (Menard, 2002).

Results

Descriptive statistics. The sample of 6,945 detained youth was predominantly composed of male adolescents (76%). Black youth represented the largest racial group (32%), followed by White (28%), Hispanic (28%), and Asian, Pacific Islander, Native American, and multi-racial youth (12%), respectively. The mean age of youth was 16.15 years ($SD = 1.57$) and most (79%) had some educational experience at the high school level. Slightly less than half (47%) of the sample had no prior criminal convictions prior to their detainment. However, if youth had a prior conviction, it was likely they had several, with a mean of 3.26 ($SD = 1.65$). Over half (54%) reported they had been with an accomplice at the time of the offense.

Substance use was fairly prevalent and somewhat frequent in the sample. The majority (75%) of adolescents reported that they had used alcohol sometime in the past, and data indicated the mean frequency of use approached “once a week” ($M = 1.95$, $SD = 1.52$) for these adolescents.

Drug use was more frequent, on average, with youth reporting they had used more than “once a week” ($M = 2.61$, $SD = 1.39$). The relatively high frequency of both alcohol and drug use was likely related to a similar level of substance use problems experienced by youth, with the mean number of problems falling above 2 ($M = 2.25$, $SD = 1.70$). Although the largest proportion of youth (56%) reported that they were not under the influence of alcohol or drugs at the time of their offense, 21% reported they were under the influence of both alcohol and drugs, 5% reported they were under the influence of alcohol, and 18% reported they were under the influence of drugs at the time of their offense.

Multinomial logistic regression analyses. A multinomial logistic regression model was estimated, with juvenile offenders in detention for drug offenses serving as the reference group. The overall statistical test, outlined by Bayaga (2010), was conducted to assess the relationship between the variables in the model ($-2\loglikelihood = 11147.97$, $\chi^2(70) = 1756.80$, $p < .000$). This information rendered support for the presence of a significant relationship between the independent variables and the dependent variable.

The effects of both acute and chronic substance use on juvenile offending after adjustment for relevant covariates are presented in Table 1. The acute effect of being under the influence of alcohol was not significantly associated with any offense comparison. In contrast, adolescents who were under the influence of drugs were significantly less likely to be detained for a number of different types of offenses relative to drug offenses. Specifically, adolescents under the influence of drugs at the time of their offense were less likely than those who were not under the influence of drugs at the time of their offense ($RRR = 0.32$, $95\% \text{ CI} = 0.24 - 0.42$) to be in detention for technical or other violations relative to a drug offense. This pattern was also observed for adolescents who were under the influence of drugs at the time of their offense and the likelihood they were detained for robbery or assault

with a weapon ($RRR = 0.49$, $95\% CI = 0.37 - 0.64$); burglary, arson, theft, or other property offense ($RRR = 0.41$, $95\% CI = 0.32 - 0.53$); public disorder or assault without a weapon ($RRR = 0.40$, $95\% CI = 0.29 - 0.56$); or murder, rape, or kidnapping ($RRR = 0.23$, $95\% CI = 0.16 - 0.34$) compared to a drug offense.

There was also a clear pattern regarding the specific type of offenses committed among detainees who were under the influence of both alcohol and drugs at the time of their offense. Reports of using drugs and alcohol immediately prior to the offense were significantly associated with a lower likelihood that adolescents were in detention for technical or other violations relative to drug offenses ($RRR = 0.32$, $95\% CI = 0.21 - 0.49$); burglary, arson, theft, or other property

offenses ($RRR = 0.56$, $95\% CI = 0.41 - 0.78$); public disorder or assault without a weapon ($RRR = 0.64$, $95\% CI = 0.41 - 0.99$); and murder, rape, or kidnapping ($RRR = 0.69$, $95\% CI = 0.48 - 0.99$).

Alcohol use frequency was significantly associated with two offense type comparisons. An increase in the frequency of alcohol use was significantly associated with the likelihood that an adolescent was in detention for robbery or assault with a weapon relative to a drug offense ($RRR = 1.13$, $95\% CI = 1.01 - 1.26$). An increase in alcohol use frequency also corresponded with an elevated risk that an adolescent would be detained for public disorder or assault without a weapon relative to a drug offense ($RRR = 1.16$, $95\% CI = 1.07 - 1.25$).

Table 1. *Multinomial Regression Results Predicting Offense Type*

Variable	Technical violation or other vs. drug offense			Robbery or assault with weapon vs. drug offense			Burglary, arson, theft, or other property offense vs. drug offense		
	Coefficient (SE) ^a	Relative risk ratio	95% C.I.	Coefficient (SE) ^a	Relative risk ratio	95% C.I.	Coefficient (SE) ^a	Relative risk ratio	95% C.I.
Constant	2.79(.86)**	--	--	1.14(.82)	--	--	2.90(.64)**	--	--
Age	-0.04(.05)	0.96	0.87 – 1.06	-0.06(.04)	0.94	0.86 – 1.03	-0.10(.04)**	0.91	0.84 – 0.98
Female	0.67(.17)**	1.96	1.39 – 2.76	-0.11(.20)	0.89	0.60 – 1.34	-0.01(.20)	0.99	0.66 – 1.47
Education	-0.13(.18)	0.88	0.62 – 1.25	-0.01(.17)	0.99	0.71 – 1.38	-0.16(.17)	0.85	0.60 – 1.21
Hispanic	-0.05(.17)	0.95	0.68 – 1.34	0.33(.18)	1.38	0.98 – 1.97	-0.08(.14)	0.92	0.70 – 1.21
Black	-0.58(.17)**	0.56	0.40 – 0.78	0.36(.19)	1.44	0.98 – 2.11	-0.50(.15)**	0.61	0.45 – 0.82
Other race	-0.17(.22)	0.85	0.55 – 1.30	0.32(.19)	1.36	0.95 – 2.00	-0.22(.25)	0.80	0.48 – 1.32
Prior arrests	0.03(.03)	1.03	0.96 – 1.10	0.05(.03)	1.06	0.99 – 1.13	0.06(.03)*	1.07	1.01 – 1.13
Accomplices involved	-0.44(.13)**	0.64	0.49 – 0.84	1.06(.09)**	2.90	2.42 – 3.47	1.22(.12)**	3.38	2.67 – 4.28
Under influence:									
Alcohol	-0.52(.42)	0.60	0.26 – 1.39	0.79(.46)	2.21	0.88 – 5.51	0.22(.37)	1.25	0.59 – 2.63
Drugs	-1.14(.14)**	0.32	0.24 – 0.42	-0.72(.14)**	0.49	0.37 – 0.64	-0.89(.13)**	0.41	0.32 – 0.53
Both	-1.13(.21)**	0.32	0.21 – 0.49	0.04(.19)	1.04	0.71 – 1.52	-0.57(.16)**	0.56	0.41 – 0.78
Frequency of use:									
Alcohol	0.09(.06)	1.10	0.89 – 1.23	0.12(.06)*	1.13	1.01 – 1.26	0.04(.04)	1.04	0.96 – 1.14
Drugs	-0.28(.05)**	0.75	0.68 – 0.84	-0.25(.06)**	0.78	0.70 – 0.87	-0.19(.07)**	0.83	0.73 – 0.95
Substance use problems	-0.06(.05)	0.96	0.86 – 1.04	0.10(.04)**	1.10	1.02 – 1.19	-0.02(.05)	0.98	0.89 – 1.08

Note. * $p < .05$; ** $p < .01$.

^a Jackknife standard errors reported to address the Population Proportional to Size sampling methods.

Drug use frequency was universally associated with the type of offenses for which adolescents were detained. An increase in the frequency of adolescents' drug use was associated with a lower relative risk of being detained for technical or other violations relative to drug offenses ($RRR = 0.75$, 95% CI = 0.68 – 0.84). Increased frequency of drug use also significantly lowered the relative risk of being detained for robbery or assault with a weapon compared to a drug offense ($RRR = 0.78$, 95% CI = 0.70 – 0.87) and lowered the relative risk of detention for burglary, arson, theft, or other property offense relative to a drug offense ($RRR = 0.83$, 95% CI = 0.73 – 0.95). Increased frequency of drug use also lowered the risk of detention for public disorder or assault without a weapon ($RRR = 0.69$, 95% CI = 0.62 – 0.77), as well as murder, rape, or kidnapping ($RRR = 0.65$, 95% CI = 0.56 – 0.75) relative to drug offenses.

The measure of substance use problems was associated with two of the offense type comparisons. For every additional substance use problem experienced by adolescents, the relative risk associated with detention for robbery or assault with a weapon compared to a drug offense increased by a factor of 1.10 ($RRR = 1.10$, 95% CI = 1.02 – 1.19). Similarly, for every additional substance use problem, the risk of detention for murder, rape, or kidnapping relative to a drug offense increased by a factor of 1.18 ($RRR = 1.18$, 95% CI = 1.05 – 1.34).

Table 1. (continued) Multinomial Regression Results Predicting Offense Type

Variable	Public disorder or assault without weapon vs. drug offense			Murder, rape, or kidnapping vs. drug offense		
	Coefficient (SE) ^a	Relative risk ratio	95% C.I.	Coefficient (SE) ^a	Relative risk ratio	95% C.I.
Constant	3.50(.58)**	--	--	2.74(1.77)	--	--
Age	-0.13(.04)**	0.87	0.81 – 0.94	-0.05(.11)	0.95	0.77 – 1.18
Female	0.69(.19)**	2.00	1.38 – 2.89	-1.38(.22)**	0.25	0.16 – 0.39
Education	-0.16(.14)	0.85	0.65 – 1.12	-0.38(.17)*	0.68	0.49 – 0.95
Hispanic	0.04(.16)	1.04	0.75 – 1.44	-0.40(.18)*	0.67	0.46 – 0.96
Black	-0.12(.13)	0.89	0.68 – 1.16	-0.83(.20)**	0.43	0.30 – 0.65
Other race	0.02(0.19)	1.02	0.70 – 1.48	-0.06(.21)	0.94	0.62 – 1.42
Prior arrests	0.03(.03)	1.03	0.97 – 1.08	-0.04(.04)	0.96	0.89 – 1.03
Accomplices involved	0.28(.14)*	1.32	1.01 – 1.73	0.12(.14)	1.13	0.86 – 1.49
Under influence:						
Alcohol	0.50(.49)	1.66	0.62 – 4.42	-0.39(.48)	0.68	0.26 – 1.76
Drugs	-0.91(.16)**	0.40	0.29 – 0.56	-1.46(.19)**	0.23	0.16 – 0.34
Both	-0.45(.22)*	0.64	0.41 – 0.99	-0.37(.18)*	0.69	0.48 – 0.99
Frequency of use:						
Alcohol	0.15(.04)**	1.16	1.07 – 1.25	0.02(.06)	1.02	0.89 – 1.16
Drugs	-0.36(.05)**	0.69	0.62 – 0.77	-0.43(.07)**	0.65	0.56 – 0.75
Substance use problems	0.04(.05)	1.04	0.94 – 1.14	0.17(.06)**	1.18	1.05 – 1.34

Note. * $p < .05$; ** $p < .01$

^a Jackknife standard errors reported to address the Population Proportional to Size sampling methods.

Discussion

The main objective of the current study was to determine the extent to which both acute and chronic effects of substance use were associated with certain types of offenses among detained juvenile offenders. The observed findings clearly indicate that, indeed, acute and chronic effects of substance use significantly influenced the types of offenses for which juvenile offenders were detained. The first important finding indicated offending under the influence of drugs was universally associated with a lower likelihood of being detained for any offense other than a drug offense. In other words, being under the influence of drugs at the time of offense was systematically more likely to increase the probability of

detention primarily for a drug offense compared to all other offense types.

Reports of being under the influence of both drugs and alcohol at the time of arrest was associated with a substantially lower likelihood of being detained for almost any other type of offense compared to a drug offense; the exception being robbery or assault. This finding appears to have captured the link between poly-substance use and the probability that adolescents were charged with drug-related offenses at the time of their arrest. Research conducted with adult offenders has shown that polysubstance use is associated with higher rates of offending, presumably increasing the likelihood that multiple drug users come into contact with law enforcement officials (Bennett & Holloway, 2005). It is also possible that polydrug-using adolescents were simply more likely to have an illegal drug in their possession when they came into contact with police. An officer would have discovered the drug during a search, and this likely led to a drug offense charge. Both of these explanations have merit, but future research should focus more specifically on rate and type of offense among polydrug-using juvenile offenders to better understand and empirically substantiate this relationship.

The chronic effects associated with alcohol use frequency were associated with only certain types of offenses (i.e., public disorder and robbery/assault with a weapon). This finding supports prior research conducted on the link between alcohol use and offending. For example, community samples of boys (ages 16 to 19 years) demonstrated that being under the influence of alcohol was significantly related to whether adolescents were involved in interpersonal crimes (e.g., attacking and hitting or aggravated assault; White et al., 2002; Zhang, Wieczorek, & Welte, 1997). Similar results have also been found among incarcerated adults, who were significantly more likely to be incarcerated for physical assault or other violent offenses as opposed to a drug offense if they were under the influence

of alcohol at the time of their arrest (Collins & Schlenger, 1988; Felson & Staff, 2010; Sevigny & Coontz, 2008; Zhang et al., 1997). This corroboration of the alcohol use–violent crime nexus among juvenile offenders further reinforces the need to adequately assess and address alcohol use patterns among juvenile detainees in order to provide the most comprehensive intervention and treatment programs for violent offenders.

In contrast to alcohol use, drug use frequency was systematically related to a lower risk of being detained for any other offense other than a drug offense. Unsurprisingly, both the acute and chronic effects of drug use were associated with an increased likelihood of being detained for a drug offense compared to the other offense categories. The findings related to the relationships between drug use and drug offenses are consistent with prior work, which has shown a preponderance of drug possession charges are significantly associated with indicators of persistent heavy drug use (Kopak & Hoffmann, 2014a). Of particular interest, a sizable portion (almost 1 in 10 detainees) of the sample in the current study was held for a drug offense, and drug use frequency was a leading factor related to their detention. This suggests that a comprehensive assessment of juvenile offenders' drug use patterns is of paramount importance, and early intervention, prevention, and treatment programs should target adolescents detained for drug-related offenses, given that this particular subgroup of at-risk, yet low-level, offenders likely experiences drug use problems. Given the nature of the offending pattern related to drug use frequency observed here, effective interventions designed to curtail problematic drug use among juvenile offenders may impact not only short-term recidivism rates but may also reduce the likelihood of persistent offending into early and later adulthood (Wiesner, Kim, & Capaldi, 2005).

An equally important finding was that the chronic effects of substance use (i.e., frequency of substance use problems) only predicted higher risk of being detained for the most serious types

of offenses (i.e., robbery or assault with a weapon; and murder, rape, and kidnapping) compared to drug offenses. The physical and social problems attributed to substance use assessed in the current study were proximal indicators of recurrent substance use despite experiencing several negative consequences related to use. Consistent with prior work, these indicators have been found to be similarly related to offense types among adults involved in the criminal justice system (Kopak & Hoffmann, 2014b; Kopak, Vartanian, Hoffmann, & Hunt, 2014). The juvenile offenders in this sample appear to be following suit and may be most likely to persist in their serious violent behavior, especially if their substance use is not properly addressed (Swahn & Donovan, 2004; White, Lee, Mun, & Loeber, 2012). Thus, given the finding that juvenile offenders with the most problematic patterns of substance use were involved in the most violent types of offending, consideration of substance use problems in this population should be a focal point in efforts to reduce violence.

Strengths and Limitations

Although this study has several strengths, including most notably a national and diverse sample of juvenile offenders, there are limitations that must be acknowledged. This sample of detained youth only includes adolescents in the custody of the criminal justice system and does not include those who have offended but have not had contact with the criminal justice system (i.e., “high-rate winners”; Chaiken & Chaiken, 1990). It is also important to note that the indicators of the chronic effects of drugs and alcohol (i.e., substance-related problems) were designed in such a way that they did not allow for the distinctions of problems specifically related to drugs or to alcohol (e.g., “was using alcohol or drugs...”). Future research in this area should separate measures of chronic substance use problems to provide more detailed information about the connections between drug- and alcohol-related problems as they contribute to certain types of offending patterns.

Conclusion

Overall, the evidence indicates that acute and chronic effects of substance use are important factors related to the detention of juvenile offenders for certain types of offenses. The findings reported here need to be taken into consideration with this youthful offending population, especially with respect to intervention and treatment programming (Andrews, Bonta, & Hoge, 1990; Marlowe, Festinger, Dugosh, Lee, & Benasutti, 2007; Taxman & Thanner, 2006). Implementation of appropriate substance use assessment and treatment protocols are critical to effective judicial decision-making for this special population (National Institute of Drug Abuse, 2006). Alternatives to detention, especially those that offer substance use treatment options, must also be made available to juvenile offenders. Based on the observed findings, significant reductions in offending are unlikely to be realized unless treatment programs are utilized within this population. Promotion of “evidence-based sentencing” for juvenile offenders can also be used to address some of the underlying substance use problems related to the offenses that led to detention (Marlowe, 2011).

About the Authors

Albert M. Kopak, PhD, is an assistant professor in the Department of Criminology and Criminal Justice at Western Carolina University. He received his PhD in justice studies from Arizona State University. His research focuses on a variety of factors related to substance use disorders, such as involvement in the criminal justice system and treatment outcomes.

Steven L. Proctor, PhD, is an assistant professor of psychology at Albizu University–Miami Campus. His line of research focuses on the evaluation of addictions assessment procedures, instruments, and treatment outcomes.

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Examining the Influence of Ethnic/Racial Socialization on Aggressive Behaviors Among Juvenile Offenders

*Tamika C. B. Zapolski, Crystal A. Garcia, and G. Roger Jarjoura
Indiana University–Purdue University, Indianapolis, Indiana
Katherine S. L. Lau and Matthew C. Aalsma
Indiana University School of Medicine, Indianapolis, Indiana*

Tamika C. B. Zapolski, Department of Psychology, Indiana University–Purdue University Indianapolis; Katherine S. L. Lau, Section on Adolescent Medicine, Department of Pediatrics, Indiana University School of Medicine; Crystal A. Garcia, School of Public and Environmental Affairs, Department of Criminal Justice, Law, and Policy, Indiana University–Purdue University Indianapolis; G. Roger Jarjoura, School of Public and Environmental Affairs, Department of Criminal Justice, Law, and Policy, Indiana University–Purdue University Indianapolis; and Matthew C. Aalsma, Section on Adolescent Medicine, Department of Pediatrics, Indiana University School of Medicine.

Correspondence concerning this article should be addressed to Tamika C. B. Zapolski, Department of Psychology, Indiana University–Purdue University Indianapolis, 402 N. Blackford Street, LD124, Indianapolis, IN 46202. E-mail: tzapolsk@iupui.edu

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Abstract

Risk assessment instruments are commonly used within the juvenile justice system to estimate a juvenile's likelihood of reoffending or engaging in aggressive or violent behavior. Although such instruments assess a broad range of factors, the influence of culture is often excluded. The current study examines the unique effect of ethnic/racial socialization on recent aggressive behaviors above and beyond three well-established risk and protective factors: delinquency history, moral disengagement, and social support. Participants were 95 juveniles who were either on probation or in detention centers in three Midwestern counties and who completed structured surveys related to personal experiences within and outside of the juvenile justice system. The findings provided partial support for our hypotheses: Consistent with previous findings, delinquency history and moral disengagement were

significant predictors of recent aggressive behavior. Furthermore, when ethnic/racial socialization was added to the model, promotion of mistrust provided additional predictive validity for aggressive behavior above and beyond the other factors assessed. Based on these findings, the inclusion of education on culture may prove to be an important supplement to established intervention tools for juvenile offenders.

Background

Violence or aggressive behavior among youth is a significant public health concern, with recent statistics estimating that youth are involved in 1 in 13 arrests for murder and approximately 1 in 5 arrests for robbery, burglary, and larceny-theft (U.S. Department of Justice, 2013). Violence involving youth is the third leading cause of death for individuals aged 15 to 24 (Centers for Disease Control, 2015). While the trend for

violent crimes among youthful offenders has demonstrated marked decreases for more than two decades (Puzzanchera, 2013), concern about juvenile crime is warranted given that recidivism rates among youthful offenders still remain high—ranging from 50% to 80% (Seigle, Walsh, & Weber, 2014). Moreover, others have suggested that youth who persist in their delinquent behavior are responsible for a majority of crimes committed by juveniles and, later, by adult offenders (Moffitt, 1993). Juvenile delinquency is also associated with a number of adverse consequences during adolescence, including depression (Cleverley, Szatmari, Vaillancourt, Boyle, & Lipman, 2012; Fite, Raine, Stouthamer-Loeber, Loeber, & Pardini, 2010), substance abuse (Tiet, Wasserman, Loeber, McReynolds, & Miller, 2001; Fite et al., 2010), antisocial behavior, psychopathy, conduct problems (Fite et al., 2010), and contact with the juvenile justice system (Borum & Verhaagen, 2006; Loeber & Farrington, 2000), as well as a number of adverse health, educational, and social consequences observed in adulthood (Osgood, Foster, & Courtney, 2010; Tarolla, Wagner, Rabinowitz, & Tubman, 2002). Thus, understanding the risk factors associated with the likelihood of continuing aggressive or criminal behavior among juvenile offenders is a major concern for juvenile justice stakeholders.

Based on this need, decades of research within the justice sector have focused on the construction of reliable and valid measurements that assess risk for general, violent, and nonviolent behaviors among juvenile offenders (Fazel, Singh, Doll, & Grann, 2012; Olver, Stockdale, & Wormith, 2009; Schmidt, Campbell, & Houlding, 2011). The most commonly utilized assessment tools include the Youth Level of Service/Case Management Instrument (YLS/CMI) (Hoge & Andrews, 2002), Psychopathy Checklist-Youth Version (PCL: YV; Neumann, Kosson, Forth, & Hare, 2006), and the Structured Assessment of Violence Risk in Youth (SAVRY; Borum, Bartel, & Forth, 2006). The YLS/CMI is designed to assess general recidivism, containing 42 dichotomous

items that fall into eight broad domains: Offense History, Family Circumstances/Parenting, Education, Peer Relations, Substance Abuse, Leisure/Recreation, Personality/Behavior, and Attitudes/Orientation (Hoge & Andrews, 2002). The PCL: YV assesses psychopathic traits for juveniles aged 12 to 18, containing 20 items that fall into four domains: Interpersonal, Affective, Behavioral, and Antisocial (Neuman et al., 2006). Lastly, the SAVRY is designed to assess risk for violent and nonviolent recidivism among juveniles aged 12 to 18, containing 24 items that fall into four domains: Historical, Social/Contextual, Individual/Clinical, and Protective Risk (Borum, Bartel, & Forth, 2006).

Ethnic/Racial Socialization and Aggressive Behavior

Interestingly, one domain associated with aggressive behavior that has not been explicitly measured by any of the instruments presented is the influence of culture, specifically ethnic/racial socialization (Caughy, Nettles, O'Campo, & Lohrfink, 2006; Davis & Stevenson, 2006; Hughes, Rodriguez, Smith, Johnson, Stevenson, & Spicer, 2006; Hughes, Witherspoon, Rivas-Drake, & West-Bey, 2009). Ethnic/racial socialization can be defined as the process by which children and young adults learn about and learn how to manage ethnic, racial, and cultural diversity (Hughes et al., 2006; Priest et al., 2014). Drawing from the phenomenological variant of ecological systems theory (PVEST) that emphasizes the development and consequences of youths' beliefs about race and ethnicity (Rivas-Drake, Hughes, & Way, 2009), ethnic/racial socialization has been associated with several positive outcomes including positive ethnic identity development (Else-Quest & Morse, 2015), academic achievement (Huynh & Fuligni, 2008), and lower prevalence of internalizing (e.g., anxiety, depression) and externalizing (e.g., aggression) problems (Caughy et al., 2006; Davis & Stevenson, 2006; Hughes et al., 2006). These findings have shown to be consistent across a variety of ethnic groups, including youth of European descent (Else-Quest & Morse, 2015; Hamm, 2001; Priest et al., 2014).

Although ethnic/racial socialization has been examined in the literature as a unidimensional construct, it has been conceptualized as containing three distinct dimensions: cultural socialization, preparation for bias, and promotion of mistrust (Hughes & Chen, 1997). Cultural socialization refers to promoting cultural pride, teaching cultural knowledge, and practicing cultural traditions. Preparation for bias provides children with an awareness of race and prejudice and focuses on developing appropriate coping skills to manage such situations. Promotion of mistrust emphasizes the need for individuals to exercise caution toward people from different ethnic, racial, or cultural backgrounds and suggests that some groups should not be trusted. These three dimensions of ethnic/racial socialization have also been shown to differentially predict mental health and behavioral outcomes among youth. Specifically, the cultural socialization dimension is associated with more positive outcomes (Hughes et al., 2006; Johnston, Swim, Saltsman, Deater-Deckard, & Petrill, 2007; Liu & Lau, 2013; Stevenson, Herrero-Taylor, Cameron, & Davis, 2002), whereas preparation for bias and promotion of mistrust are associated with poorer outcomes (Bynum, Burton, & Best, 2007; Caughy et al., 2006; Chávez & French, 2007; Hughes et al., 2006; Huynh & Fuligni, 2008; Liu & Lau, 2013).

Specifically related to aggressive or antisocial behavior, research examining its association with dimensions of ethnic/racial socialization has only been conducted among general population youth, with no current study to date including youth involved in the justice system. The most consistent finding within this literature has been the negative effect of promotion of mistrust on aggressive behavior (Biafora, Warheit, Zimmerman, & Gil, 1993; Caughy et al., 2006; Hughes et al., 2009). However, findings for the dimensions of cultural socialization and preparation for bias have been mixed. Although some researchers have found a protective effect of cultural socialization on youth aggression (Stevenson, Herrero-Taylor, Cameron, & Davis,

2002), more recent research has found no relationship between the two factors (Caughy et al., 2006; Hughes et al., 2009). Similarly, mixed findings have been found for preparation for bias, although there is more evidence supporting a negative effect of preparation for bias on aggression among youth (Caughy et al., 2006; Hughes et al., 2009; Stevenson et al., 1997).

Current Study

Thus, the current study aims to expand the current literature on risk for aggression and violence among juvenile offenders by examining the specific influence of ethnic/racial socialization above and beyond three risk/protective factors: delinquency history, moral disengagement, and social support, which resemble previously identified factors based on domains from the YLS/CMI (i.e., offense history, personality/behavior, attitudes/orientation, and family circumstances/parenting), PCL: YV (i.e., behavioral and interpersonal), and SAVRY (i.e., historical, individual/clinical, and protective). In line with previous findings, we hypothesize that delinquency history and moral disengagement will be positively associated with recent aggressive behavior (within the last 30 days), and social support will be negatively associated with aggressive behavior. When ethnic/racial socialization is added to the risk model, we hypothesize that differences will be observed based on each dimension: preparation for bias and promotion of mistrust will be associated with increased risk for aggressive behavior. However, due to mixed findings with cultural socialization, the effect is hypothesized to be either null or negatively associated with aggression. The goal of this study is to highlight the additive effect of cultural variables in the assessment of risk for aggressive behavior among juvenile offenders, which can subsequently inform prevention and intervention programs and policies focused on system-involved youth.

Methods

Participants

Juvenile offenders were recruited from three counties and selected based on their geographic and population variability within a Midwestern state. Of the potential participants recruited for the study, a total of 112 juveniles met inclusion criteria and completed the survey (a 53% response rate). Reasons for non-participation included: disconnected phone numbers; subjects were not present at the probation offices or in detention centers during the span of time that the data was collected; and parent(s) or youth refused to participate. For the current study, 17 participants were excluded from the data analyses due to missing data for the aggressive behavior scale (the measure of interest in this study). The final sample consisted of 95 youth (72% males) who were either on probation (52%) or held in local detention centers (48%). Participants ranged in age from 13 to 18 years ($Mean = 16.3$, $SD = 1.15$). Participants were asked to state each ethnic/racial background they identified with, thus the cumulative percentages are greater than 100. The sample composition was primarily White (63%), followed by Black (35%) and Hispanic/Latino (4%). No significant differences were found among demographic variables between the youth excluded from the analyses because of missing data and those who were retained in the sample utilized for this particular analysis.

Procedures

Data collection commenced after receiving approval from the University Institutional Review Board. A parent study was conducted through which court records were collected for every case referred to county juvenile courts across 92 counties over a 5-year period (2005–2009). The current study is based on follow-up data gathered by researchers who worked directly with local justice actors to recruit system-involved youth on probation and in detention centers in three of the original 92 counties. These three counties

were selected based on their geographic and population variability. Data collection occurred over 2 to 3 days in each jurisdiction; thus data collection was time limited. Youth on probation and in detention in the three target counties were eligible to participate if they met the following inclusion criteria: (a) they were present at the detention center or at their scheduled appointment with a probation officer during the days of data collection, (b) parental consent was received prior to the data collection, and (c) they voluntarily agreed to participate in the study. The study questionnaire was programmed into a Web-based survey tool, Qualtrics, and was administered via a WiFi-enabled iPad. Research staff informed the participants that the normal procedure was to read the questions aloud, but participants could choose to “opt-out” if they preferred to complete the questionnaire on their own. Upon completion of the survey, participants received a \$10 Walmart gift card (given immediately to those on probation and placed in the personal belongings of those in detention).

Measures

Demographic and Background Information.

Participants were asked to provide demographic information by indicating their date of birth (converted to age in years), gender, ethnic/racial identity, and legal status (meaning currently detained or on probation and not related to immigration status).

Aggression-Problem Behavior Frequency Scale

(Henry & Farrell, 2004), an 18-item measure that assesses the frequency of physical aggression, non-physical aggression, and relational aggression. Participants indicate how many times they have engaged in each aggressive behavior in the last 30 days. They can respond: “Never” (1), “1–2 times” (2), “3–5 times” (3), “6–9 times” (4), “10–19 times” (5), or “20 or more times” (6). There are three subscales: Physical aggression (7 items), Non-physical aggression (5 items), and Relational aggression (6 items). Subscales are summed for a composite score, with higher scores indicating

higher levels of aggressive behavior. In the current study, the internal consistency reliability estimate was high ($\alpha = .93$), slightly higher than alphas published in previous studies, which ranged from .79 to .86 (Farrell, Kung, White, & Valois, 2000; Sullivan, Esposito, & Farrell, 2003; Sullivan, Farrell, & Kliewer, 2006).

Self-Reported Delinquency-Problem Behavior Frequency Scale (Henry & Farrell, 2004) is an 8-item measure that assesses the frequency of delinquent behaviors. Participants respond to how often, in their lifetimes, they have done each of the activities listed. They can respond "0," "1–2 times," "3–5 times," "6–9 times," "10–19 times," or "20 or more times." A composite score is used to assess delinquency frequency, with higher scores indicating higher levels of delinquency. In the current study, the internal consistency reliability estimate was high ($\alpha = .83$), comparable to estimates found in previous samples, which ranged from .77 to .79 (Farrell et al., 2000; Sullivan et al., 2006).

Moral Disengagement Scale (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996), a 32-item scale that assesses proneness to moral disengagement. The scale assesses eight domains of moral disengagement: moral justification, euphemistic language, advantageous comparison, displacement of responsibility, diffusion of responsibility, distorting consequences, attribution of blame, and dehumanization. Each domain consisted of four items that were assessed using a 3-point Likert scale of "Agree" (1), "Neither agree nor disagree" (2), or "Disagree" (3). Items were reverse coded so that higher scores represent higher moral disengagement. In the current study, the internal consistency reliability estimate was high ($\alpha = .86$), consistent with estimates reported in previous research, with alphas ranging from .82 to .92 (Bandura et al., 1996; Pelton, Ground, Forehand, & Brody, 2004; Shulman, Cauffman, Piquero, & Fagan 2011; Walters & Urban, 2014).

Social Support Record (Vaux, 1988) is a nine-item measure that assesses adolescents' perceived

emotional advice, guidance, and practical social support. Participants are asked to respond on a 3-point Likert scale of "Not at all" (0), "Some" (1), or "A lot" (2) to nine statements regarding whether or not there are friends, adults at school, and adults at home who provide them with advice and help. A composite score is used for assessing social support, with higher scores indicating higher levels of social support. In the current study, the internal consistency reliability estimate was good ($\alpha = .81$), similar to that of previous studies, which ranged from .63 to .89 (Beauregard & Dumont, 1996; Daly, Shin, Thakral, Selders, & Vera, 2009; Fingerman, Miller, Birditt, & Zarit, 2009).

Ethnic/Racial Socialization Scale (Hughes & Chen, 1997), a 13-item scale that assesses the amount of ethnic/racial socialization the adolescent has perceived from parents in the last year. The scale includes three subscales: cultural socialization, preparation for bias, and promotion of mistrust. The cultural socialization subscale consists of five items (e.g., "In the past year, how many times have your parents encouraged you to read books concerning the history or traditions of your ethnicity?"). The preparation for bias subscale consists of six items (e.g., "How many times have your parents told you that people might try to limit you because of your ethnicity?"). The promotion of mistrust subscale consists of two items (e.g., "How many times have your parents done or said things to keep you from trusting students from other ethnic groups?"). Participants indicate how many times in the last year their parents did each thing listed, using the following responses: "Never" (1), "Once" (2), "Two or three times" (3), "Four or five times" (4), or "Six or more times" (5). For the current study, composite and individual subscales were used, with higher scores indicating higher levels of ethnic/racial socialization. The internal consistency of the total scale was high ($\alpha = .93$). The internal consistency for each subscale was as follows: cultural socialization ($\alpha = .86$), preparation for bias ($\alpha = .91$), and promotion of mistrust ($\alpha = .83$). Estimates reported in previous studies

were in similar ranges: cultural socialization ($\alpha = .72-.87$), preparation for bias ($\alpha = .74-.86$), and promotion of mistrust ($\alpha = .65-.73$; Burt, Simons, & Gibbons, 2012; Hughes & Johnson, 2001; Hughes et al., 2009; Landor et al., 2013).

Results

Correlations and *t*-tests

Means and standard deviations for the measures of interest are shown in Table 1. Initial bivariate correlations among all variables are shown in Table 2. For the outcome variable of interest, aggressive behaviors, higher scores were observed for males ($r = -.20, p < .05$) and detained youth ($r = .34, p < .01$). Independent *t*-test confirmed that males ($t(93) = 2.61, p < .01$) and detained youth ($t(93) = -3.44, p < .01$) reported significantly higher mean levels of aggressive behaviors than females and youth on probation (see Table 1).

Related to the other study variables, older youth reported greater social support than younger youth ($r = -.21, p < .05$). Males reported higher scores on the delinquency history ($r = -.31, p < .01$), moral disengagement ($r = -.28, p < .01$), and the cultural socialization ($r = -.24, p < .05$), and preparation for bias ($r = -.24, p < .05$) subscales of the ethnic/racial socialization measure compared to their female counterparts. As for

criminal status, no significant differences were observed among the study variables except for ethnic/racial socialization for promotion of mistrust ($r = .25, p < .05$) and moral disengagement ($r = .29, p < .01$), with detained youth endorsing stronger beliefs toward mistrust of others and displacement of responsibility for their actions to a greater degree compared to those youth who were on probation. Ethnic/racial differences were also examined, with results finding significant differences between White and Non-White participants on the moral disengagement ($r = -.27, p < .01$), cultural socialization ($r = -.36, p < .01$), and preparation for bias ($r = -.44, p < .01$) subscales of the ethnic/racial socialization measure, with Non-White participants reporting higher scores than White participants. No ethnic/racial differences were observed on any other study variable (refer to Table 2 for details on all correlations). All group differences were confirmed through independent *t*-tests (see Table 1).

Regression Analyses

A hierarchical regression analysis was conducted to examine the independent associations of the two previously identified risk factors (i.e., delinquency history and moral disengagement), one previously identified protective factor (i.e., social support), and the three subscales of ethnic/racial socialization (i.e., cultural socialization,

Table 1. Means and Standard Deviations

	Total N = 95	Status		Race		Gender	
		Probation n = 49	Detention n = 46	Non-White n = 35	White n = 60	Male n = 68	Female n = 27
AP	25.57 (11.7)	21.69 (7.8)**	29.63 (13.7)**	27.26 (13.2)	24.53 (10.7)	27.03 (13.0)*	21.78 (6.5)*
DH	20.28 (8.3)	18.69 (7.9)	21.83 (8.5)	18.57 (8.0)	21.17 (8.4)	21.82 (8.6)**	16.15 (5.9)**
MD	48.25 (8.8)	45.78 (7.9)**	50.96 (9.1)**	51.38 (10.7)*	46.48 (7.1)*	49.81 (9.0)**	44.41 (7.1)**
SS	7.01 (2.8)	12.92 (3.9)	12.61 (3.1)	12.57 (3.2)	12.88 (3.7)	12.74 (3.8)	12.85 (2.9)
CS	9.65 (5.2)	8.78 (4.6)	10.48 (5.6)	12.03 (6.0)	8.18 (4.0)	10.37 (5.3)*	7.67 (4.3)*
PB	10.5 (6.0)	9.63 (4.9)	11.46 (6.8)	13.94 (7.1)***	8.52 (4.0)***	11.40 (6.6)**	8.30 (2.7)**
PM	2.99 (2.0)	2.55 (1.0)*	3.52 (2.6)*	3.2 (2.3)	2.9 (1.8)	3.22 (2.2)*	2.52 (1.1)*

Note: AP: aggression problems; DH: delinquency history; MD: moral disengagement; SS: social support; CS: cultural socialization; PB: preparation for bias; PM: promotion of mistrust.

* $p < .05$, ** $p < .01$, *** $p < .001$ indicate significant differences according to independent samples *t*-tests.

Table 2. Bivariate Correlations of All Study Variables

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Status										
2. Gender	-.28**									
3. Age	.10	.10								
4. Race	.13	.09	.05							
5. DH	.19	-.31**	.16	.15						
6. MD	.29**	-.28**	.01	-.27**	.36**					
7. SS	-.04	.02	.21*	.04	-.17	-.12				
8. CS	.17	-.24*	.05	-.36**	.09	.28**	.06			
9. PB	.15	-.24*	-.06	-.44**	.10	.37**	-.14	.81**		
10. PM	.25*	-.16	-.15	-.07	.13	.25*	-.13	.34**	.47**	
11. AP	.34**	-.20*	.04	-.11	.47**	.49**	-.09	.39**	.42**	.45**

Note. DH: delinquency history; MD: moral disengagement; SS: social support; CS: cultural socialization; PB: preparation for bias; PM: promotion of mistrust; AP: aggression problems. Status coded as 1 = probation and 2 = detention. Gender coded as 1 = male and 2 = female. Race coded as 0 = Non-White and 1 = White.

* $p < .05$, ** $p < .01$

preparation for bias, and promotion of mistrust) on the past 30-day aggressive behaviors among juvenile offenders. Age, gender (1 = male, 2 = female), race (0 = Non-White, 1 = White), and status (1 = probation, 2 = detention) of the youth were entered into the first step of the regression analysis due to their correlations with the main study variables. Delinquency history, moral

Table 3. Standardized Coefficients From Linear Regression of Aggression Problems Among Juvenile Offenders

Variable	Step 1	Step 2	Step 3
Status	.34 (2.42)**	.24 (2.20)	.16 (2.07)
Gender	-.10 (2.67)	.07 (2.46)	.10 (2.29)
Age	.03 (.60)	-.05 (.54)	-.01 (.51)
Race	-.16 (2.41)	-.14 (2.28)	-.05 (2.31)
Delinquency history		.38 (.14)***	.36 (.13)***
Moral disengagement		.27 (.13)**	.21 (.13)*
Social support		.04 (.30)	.05 (.28)
Cultural socialization			.12 (.32)
Preparation for bias			.09 (.31)
Promotion of mistrust			.25 (.55)**

Note. Standard errors are given in parentheses. $N = 95$. Status coded as 1 = probation and 2 = detention. Gender coded as 1 = male and 2 = female. Race coded as 0 = Non-White and 1 = White.

* $p < .05$, ** $p < .01$, *** $p < .001$

disengagement, and social support were entered in step two. Lastly, the three subscales of ethnic/racial socialization—cultural socialization, preparation for bias, and promotion of mistrust—were entered in the third step.

Table 3 shows the results from the hierarchical regression analysis. After controlling for age, gender, race, and status of the youth, there was a significant main effect for delinquency history ($\beta = .38, p < .001$) and moral disengagement ($\beta = .27, p < .01$) on aggressive acts during the past 30 days ($R^2 = .39, p < .001$). At the third step, when the ethnic/racial socialization subscales were placed into the model, although delinquency history ($\beta = .36, p < .001$) and moral disengagement ($\beta = .21, p < .05$) remained significant, the promotion of mistrust ethnic/racial socialization subscale provided significant incremental variance in predicting aggressive behavior ($\beta = .25, p < .01$; incremental $R^2 = .11, p = .001$). Table 3 summarizes these results.

Discussion

The current study aimed to expand the current literature on risk for aggressive acts among juvenile offenders by examining the unique influence of culture (via ethnic/racial socialization

measures) over and above three well-known risk/protective factors (i.e., delinquency history, moral disengagement, and social support). The main findings of the study are that when examined together, of the previously identified risk/protective factors, only delinquency history and moral disengagement accounted for significant and unique variance in the likelihood of aggression problems among our sample of youth. When the three ethnic/racial socialization subscales were added to the model, the promotion of mistrust subscale provided incremental variance in predicting aggressive behavior above these factors, such that higher levels of promotion of mistrust was associated with greater likelihood of engaging in aggressive acts within the past 30 days.

These findings are novel, given the limited research that has been conducted examining the effect of ethnic/racial socialization among juvenile offenders. Our finding of a positive association between promotion of mistrust and aggression is consistent with previous literature among the general population indicating greater maladaptive consequences for youth who endorse beliefs of mistrust toward others of different ethnic, racial, or cultural backgrounds (Hughes et al., 2006; Hughes, et al., 2009; Stevenson, Reed, Bodison, & Bishop, 1997). It has been proposed that the reason this type of socialization is harmful is that it fails to provide coping skills needed to manage distress if an unpleasant interaction is experienced (Caughy, Nettles, & Lima, 2011). Thus, youth socialized to distrust others (promotion of mistrust), who lack adequate coping skills to manage the distress when interacting with others that they are primed to mistrust, may be more likely to retaliate by maladaptive means, such as aggression.

Contrary to our hypotheses, although cultural socialization and preparation for bias were independently correlated with aggression, there was a non-significant effect when the variables were placed within the regression model. However, these findings are consistent with Caughy and colleagues (2006), who found that higher scores

on promotion for mistrust predicted externalizing behaviors (e.g., aggression) among their sample of youth, but no relationship was found for preparation for bias or racial pride (e.g., cultural socialization). The authors also found that preparation for bias and racial pride were associated with higher externalizing scores for girls but not for boys, whereas only promotion of mistrust was associated with higher externalizing scores for boys and not girls. These findings of gender differences also corroborate our findings, given that our sample was primarily male (72%).

Null findings were also observed for social support on aggressive acts among our sample of youth. Our lack of association may have been due to the assessment measure used, which covered multiple types of support (i.e., friends, adults at school, and adults at home), as studies assessing specific domains of social support (e.g., parental support) have found protective effects against youth recidivism (e.g., Alarid, Montemayor, & Dannhaus, 2012). Thus, it is important to understand which forms of social support have the strongest impact on reducing risk for aggression or recidivism among juvenile offenders for prevention, intervention, and treatment programming efforts in the juvenile justice system.

Although our overall study findings are novel, they also add to the complex and inconsistent nature of existing literature on the relationship between dimensions of ethnic/racial socialization and aggressive behavior. One reason for these inconsistent findings may be due to the lack of a sound theoretical orientation to explain these relationships. Although, as stated above, some researchers have turned to the PVEST as a theoretical orientation, a major limitation in the field is that most research on the topic does not provide a theoretical rationale to understand the associations observed (Hughes et al., 2006). Hughes and colleagues (2009) aimed to fill this gap by proposing a conceptual framework that specified a mechanism through which different messages about ethnicity and race influence health outcomes among youth through youth's self-esteem.

Based on social identity theory (Tajfel & Turner, 1986), the authors postulated that cultural socialization would be associated with higher self-esteem and ethnic/racial affirmation and thus protect against negative outcomes. Alternatively, preparation for bias may be associated with decreased self-esteem due to increased expectation for discrimination or prompt youth to view their group less positively due to the existence of negative stereotypes, and thus associated with poorer outcomes. The authors provided findings supported these hypotheses with a statistically significant indirect effect of cultural socialization on aggression through both self-esteem and ethnic affirmation. Similar significant indirect pathways were also observed for preparation for bias (Hughes et al., 2009). Our current study did not provide assessment of self-esteem in order to test this mediation pathway. Future work should be conducted to confirm if this relationship is evident across study samples.

It is also possible that inconsistent findings in the literature may be due in part to the considerable variability among studies on how ethnic/racial socialization is conceptualized and measured, thus limiting researchers' ability to integrate findings across existing research (Hughes et al., 2006). Related to measurement and consistent with our findings, previous studies have indicated an intercorrelation between the ethnic/racial socialization dimensions, with the strongest correlations found between the cultural socialization and preparation for bias dimensions (e.g., Hughes & Johnson, 2001). Thus, a lack of association may be due to measurement weakness.

Although significant and important findings can be gleaned from this study, one must note its limitations. First, although the findings are based from a unique subpopulation of youth, the sample size was not large enough to examine interactive effects between the study variables. Future studies with larger sample sizes are needed to examine the possible moderating effect of promotion of mistrust on moral disengagement in predicting aggressive behaviors (i.e., youth who

exhibit higher moral disengagement who were also socialized to mistrust others are at the highest risk for engaging in aggressive behaviors) and gender differences within the risk model (Caughy et al., 2006).

Second, in addition to the sample size, the composition of the sample, which was primarily composed of White males, precluded the assessment of important ethnic/race and gender analyses. Given evidence of disproportionate minority contact (DMC) within the juvenile justice system and its association with negative health outcomes for ethnic/racial minority youth (Desai, Falzer, Chapman, & Borum, 2012), it's important to understand how factors such as ethnic/racial socialization may impact this relationship. General strain theory (GST; Agnew, 2001) offers a theoretical framework to understand the influence of ethnic/racial socialization on negative outcomes among ethnic/racial minority youth. Based on GST, it is plausible that in the presence of strain, cultural socialization may provide an important buffer against the negative effect of discrimination and other forms of injustice experienced by ethnic/racial minority youth on health outcomes. Furthermore, a protective effect may also be observed for those who are prepared for discrimination, particularly among youth who are also taught how to cope with experiences of injustice. Conversely, based on GST (Agnew, 2001), those who experience injustice related to DMC, who are socialized to prepare for discrimination or mistrust others and lack adaptive coping skills to manage strain, may in turn be more likely to use maladaptive coping strategies (e.g., aggression) in the presence of stressors within the juvenile justice system. These effects may also be moderated by personality traits such as low self-control, as proposed by Gottfredson and Hirschi's (1990) control theory. As such, future research should examine (a) whether ethnic/racial socialization moderates the relationship between racial or juvenile justice discrimination on mental health or behavioral outcomes and (b) if this process is further moderated by self-control among

system-involved youth. Gaining a better understanding of these mechanisms can inform early childhood prevention programs, parental training programs for parents of delinquent youth, and other intervention and treatment programming for at-risk youth.

Lastly, although key variables associated with risk for aggressive behaviors among juvenile offenders were used in the study, with good evidence for their reliability and validity, a more stringent test would have been the inclusion of a more comprehensive set of predictors, similar to Mulder, Brand, Bullens, and Van Marle's (2010) aggregated instrument for assessing recidivism risk. Additionally, it is possible that a mixed-method design that included qualitative interviews would have provided a richer understanding of the effect that ethnic/racial socialization has on youths' experiences within the juvenile justice system and behavioral outcomes.

In sum, there are several well-established factors associated with risk for violent, nonviolent, and general recidivism among juvenile offenders. However, one important dimension generally excluded from such risk models is the influence of culture. Our study aimed to examine the incremental influence of ethnic/racial socialization on aggressive behavior above and beyond three established risk/protective factors. We found that promotion of mistrust, a subscale of ethnic/racial socialization, was a significant predictor of past 30-day aggressive behavior, above and beyond the other significant factors (i.e., delinquency history and moral disengagement). Based on these findings, the inclusion of ethnic/racial socialization in risk-assessment tools, the development of early intervention programs, and treatment and intervention initiatives aimed at reducing juvenile crime and violence, may prove to be an important step toward addressing the needs of system-involved youth, their families, and the communities where they live.

About the Authors

Tamika C. B. Zapolski, PhD, is a clinical psychologist and an assistant professor of psychology at Indiana University–Purdue University Indianapolis. Dr. Zapolski's research program examines the influence of cultural and psychosocial factors on behavioral health outcomes among ethnic/racial minority youth.

Katherine S. L. Lau, PhD, was a postdoctoral fellow at the Indiana University School of Medicine at the time of this writing. Currently, Dr. Lau is an assistant professor of psychology at SUNY Oneonta. Her research program uses a developmental psychopathology approach to understand the roles of personality and contextual factors that place youth at-risk for developing severe antisocial and violent behaviors.

Crystal A. Garcia, PhD, is an associate professor of criminal justice, law, and public safety in the School of Public and Environmental Affairs at Indiana University–Purdue University Indianapolis. Her research focuses on racial and ethnic disparities in the juvenile and criminal justice systems, gender-responsive programming, reentry and community corrections, and the evaluation of juvenile and criminal justice policies and programs.

G. Roger Jarjoura, PhD, is a principal researcher at the American Institutes for Research. His research focuses on the evaluation of juvenile justice programs, youth mentoring, adult and juvenile reentry, and racial and ethnic disparities in juvenile justice system processing.

Matthew C. Aalsma, PhD, is an associate professor in the Department of Pediatrics at the Indiana University School of Medicine. His research focuses on medical and behavioral health access and treatment for justice-involved youth.

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Assessing Probation Officers' Knowledge of Offenders With Intellectual Disabilities: A Pilot Study

Valerie E. D. Russell, Florida International University, Miami, Florida

Paige N. Dunlap, North Carolina A&T University, Greensboro, North Carolina

Valerie E. D. Russell, Department of Leadership and Professional Studies, Florida International University; Paige N. Dunlap, Department of Human Development and Services, North Carolina A&T University.

Correspondence concerning this article should be addressed to Valerie E. D. Russell, 11200 SW 8th Street, ZEB 238B, Miami, Florida 33319. E-mail: verussel@fiu.edu

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Abstract

The prevalence of offenders with intellectual disabilities (ID) is increasing. Studies have shown that although most probation officers will have offenders with ID on their caseload, these officers have received minimal training to effectively interact with this population. Additionally, no studies have assessed probation officers' knowledge of people with ID. This study has two aims: to pilot test the *Probation Officer Knowledge of Intellectual Disabilities Assessment*, and to evaluate the instrument's reliability and validity. Test-retest, internal consistency, item-total correlation, Cronbach's alpha, item difficulty, and construct validity were assessed for the instrument. Descriptive statistics and reliability coefficients analysis were conducted. The successful development of knowledge domains established content validity of the newly developed assessment. However, the instrument yielded poor reliability coefficient results. To date, no assessments were identified that offered support for training staff working with offenders with ID. The criminal justice system can use content domains on this newly developed instrument to evaluate training needs and determine effective interventions. As this was the first investigation into probation officers' knowledge of people with ID, the possibilities of continuing this research are vast.

Introduction

The prevalence of the U.S. incarcerated population with intellectual disabilities (ID)¹ is between 4% and 10% (Scheyett, Vaughn, Taylor, & Parish, 2008), according to most estimates. Although offenders with ID compose a small percentage of offenders within the criminal justice system, the number far exceeds the 1% to 3% prevalence of people with ID found in the general population (Russell, 2012). Moreover, youth with ID have encompassed a large sector of the juvenile delinquent population since the late 1960s (Brier, 1989). Reports show that more than 50% of juvenile offenders had evidence of an ID (Berman, 1974; Podboy & Mallory, 1978; Larson, 1988; Katsiyannis, Ryan, Zhang, & Spann, 2008). Waldie and Spreen (1993) suggest that youth with ID possess personality characteristics such as poor impulse control and problem-solving ability, social perception problems, and poor judgment that make them prone to delinquent activity.

The National Center for State Courts conducted a controlled investigation with large representative samples and a comprehensive assessment of ID and delinquency (Dunivant, 1982). According to

¹ See "ID Definition" section, below, for more details on ID.

these studies, 36% of incarcerated juveniles were found to be more than twice as likely to commit a delinquent offense than their non-ID peers. When such variables as socioeconomic status, family size, and family intactness were controlled, these results remained essentially unchanged (Dunivant, 1982). This seems to show that the link between ID and juvenile delinquency strongly suggests that youth with ID face additional vulnerability during the arrest and adjudication process.

This hypothesis that ID is related to juvenile delinquency was also tested with a sample of 1,005 public school and 687 adjudicated juvenile delinquent youth (ages 12 to 17) who reported on their participation in delinquent behaviors (Larson, 1988). The results indicated that proportionately more adjudicated delinquent youth than public school youth had ID. Although this adds support to the literature suggesting there is an overrepresentation of people with ID within the criminal justice system (Lindsay, 2002; Scheyett, et al., 2008), the data showed no differences in delinquent behaviors engaged in by either sample group. Based on these findings, authors proposed that the greater proportion of youth with ID among adjudicated juvenile delinquents may be explained more by the way they are treated within the juvenile justice system than by differences in their delinquent behaviors (Shandra & Hogan, 2012; Zimmerman, Rich, Keilitz, & Broder, 1981). Further, Mallet's (2000) study of 397 juvenile youth offenders with ID on supervised probation reported findings that suggested that to better serve this population, needs and service gaps within the juvenile justice system would need to be overcome. Overcoming these gaps would improve intersystem collaboration for the juvenile court personnel and officers who work with this disproportionately represented population. This suggests that there is a need for probation officers to have an increased awareness of youth with ID and to know how to implement appropriate interventions so they can assist youth in their caseloads who have these challenging behaviors (McKenzie, Paxton, & Murray, 2003).

ID Definition

According to the American Psychiatric Association (2000), "Intellectual disability is operationally defined as a state of arrested or incomplete mental development resulting in a significant impairment of intellectual functioning and adaptive and social functioning that originates before the age of 18" (p. 52). More recently the American Association on Intellectual and Developmental Disabilities' *Definition Manual* provided this definition: "Intellectual disability refers to a particular state of functioning that begins in childhood, is multidimensional, and is affected positively by individualized supports" (Thompson, 2010, p. 166). This is in keeping with the emergence of a person-environment fit model that focuses on a person's interactions with his or her environment. This model takes into consideration the nature and extent to which people with ID experience a mismatch between their competencies and environment demands. When ID is viewed as a poor fit between a person's capacity and environmental demands, it is not considered a defect in the mind but rather a state of functioning (Thompson, 2010).

In additional reports, researchers have increasingly used the term "intellectual disability" to denote the cognitive problems connected to having a learning disability (Russell, Purcell, & Peterson, 2005; Williams & Casey, 2009). According to Williams and Casey (2009), people with ID often experience cognitive deficits in multiple areas. These cognitive deficits include, but are not limited to, attention, perception, time-perception, short-term memory, expression, comprehension, and coping with change. Because of these functional impairments, people with ID often say and do things they think will please other people and have a strong desire to fit in (Brodsky & Bennett, 2005). These characteristics frequently lead them to confess to crimes they did not commit (Scheyett et al., 2008). Moreover, people with ID who get arrested and are detained, incarcerated, or supervised within the criminal justice system, often struggle with processing the information

and have minimal understanding of legal terminology and procedures (Brodsky & Bennett, 2005; Scheyett et al., 2008). As a result, people with ID sometimes give up their rights because of their minimal understanding of the consequences, which in turn causes them to be more susceptible to receiving wrongful convictions (Scheyett et al., 2008). Along that same vein, Perske (2000) reported a study that determined 53 people with ID made false confessions to felonies, such as murder, rape, arson, and robbery, which they did not commit. These cases were extracted from a 30-year collection of files and from sifting through a list produced by two experts of all false confessors (Perske, 2000). More recently, Perske (2008) compiled a list of these people by name, after examining false confession reports from the Center on Wrongful Convictions at Northwestern University's School of Law. Even though all of the 53 people have been legally exonerated, the numbers on this false confession list will likely increase in the years to come.

The likelihood of an increase in false confessions is mostly due to the characteristics of people with ID. Previous literature on offenders with ID identified their vulnerabilities to arrest, as well as during the trial process, periods of incarceration, and time spent under community supervision (Brodsky & Bennett, 2005; Perske, 2000; Søndena, Rasmussen, & Nottestad, 2008). Because of the noted characteristics of offenders with ID and the extensive periods of time they could be sentenced to probation, the issue of offenders with ID under community supervision warrants further consideration in research.

Probation Officers and Clients with IDs

Because of the disproportionate amount of youth offenders with ID on community supervision (Lindsay, 2001; Mallet, 2000; Shandra & Hogan, 2012), it is highly probable that probation officers will have an offender with an ID on their caseload. However, none of the national recommendations on knowledge, skills, and abilities for probation officers include having specific training on youth

offenders with IDs (Bonta, Ruge, Scott, Guy, & Yessine, 2008). These findings suggest that probation officers need new guidelines, training, and intervention tools to better serve the complex needs of this specialized population (McKenzie et al., 2003).

Outside of the criminal justice environment, in health care and other social service disciplines, staff people's ability to meet the needs of clients with an ID and provide quality services is linked to their knowledge base on that population (Fraser, Edwards, & Harper, 1998; Holburn & Vietze, 2002; Hastings, Jenkins, & Baker, 1995; McKenzie, Sharp, Paxton, & Murray, 2002). According to McKenzie, Paxton, and Murray (2003), probation officers are likely to encounter challenging behavior such as aggression and assault when working with people with IDs. Therefore, it is crucial that they know how to intervene when de-escalating a situation (Black, Kelly, & Hardingham, 1997; McKenzie et al., 2002). Successful probation officer interventions rely on them having a broad knowledge base on safe reactive strategies as well as experience in the appropriate psychological and behavioral approaches that are proven effective in managing challenging behavior (Lindsay, 2001; McKenzie et al., 2004; Murray, Paxton, McKenzie, & Sharp, 1999).

Hence, it is important that probation officers have some knowledge of ID and are able to detect its signs and symptoms. However, previous literature has established that the majority of probation officers working with offenders with ID have received little or no appropriate training that would equip them to effectively intervene with this population. Further, a review of literature revealed that no studies have assessed probation officers' knowledge of offenders with ID (McKenzie et al., 2003; Russell, 2012).

Purpose

The purpose of this study was to pilot test the *Probation Officer Knowledge of Intellectual Disabilities Assessment*. This newly established

instrument was developed by utilizing a synthesis of subject matter analysis technique and a comprehensive literature review (Russell, 2012).

The following research question was addressed: Can a valid and reliable instrument be developed that assesses probation officers' knowledge level of offenders with ID?

The ultimate goal of this study was to evaluate the reliability and validity of the instrument. The instrument was pilot tested on a circuit probation unit in rural southern Illinois comprising 25 probation officers with mixed caseloads of both juvenile and adult offenders. The study results can add information to the body of literature about the most effective instrument to measure probation officers' knowledge of ID. Further, this data can eventually help identify the most effective training material for probation officers on offenders with ID and encourage criminal justice agency administrators to incorporate it within curriculum development for new staff orientation or in-service or academy training.

Methodology

Sample

A sample of juveniles and adult probation officers within an Illinois circuit court unit was used for this study. All 25 probation officers employed by the agency participated in the study. Table 1 displays the demographic data. The range of participants were ages 25 to over 60, and the majority were between ages 40 and 49 years. A total of 68% ($n = 17$) participants were female. Of the 25 participants, 60% ($n = 15$) reported having between 10 and 19 years of experience in criminal justice, 28% ($n = 7$) reported between 5 and 9 years, 8% reported more than 20 years, and 4% reported less than 5 years. In response to the question of years and current position, 48% reported between 10 and 19 years, 40% reported between 5 and 9 years, 8% reported more than 20 years, and 4% reported less than 5 years. All were White, and all had obtained a bachelor's degree.

Table 1. Participant Demographics

	Frequency	Percent
Gender		
Male	8	32.0
Female	17	68.0
Total	25	100
Ethnicity		
White	25	100
Age		
25–29	2	8
30–39	6	24
40–49	8	32
50–59	7	28
60+	2	8
Education Level		
BA, BS	25	100
Years of Experience		
<5	1	4
5–9	7	8
10–19	15	60
20+	2	8
Years in Position		
<5	1	4
5–9	10	40
10–19	12	48
20+	2	8
Personal Knowledge		
Yes	18	72
No	7	28

In regard to personal knowledge of a person with an ID, 72% ($n = 18$) reported they personally knew a person with such an issue.

Instrumentation

The instrument package included two items: (a) informed consent, and (b) the *Probation Officer Knowledge of Intellectual Disabilities Assessment*, a 20-item multiple-choice instrument that included demographic and other questions pertaining to the following officer characteristics: (a) sex, (b) age, (c) ethnicity, (d) years of experience in

criminal justice, (e) years of experience in current position, and (f) personal experience with a person who has an ID. The majority of the items were intended to reflect a probation officers' knowledge of offenders with IDs. The officers' knowledge domains and skills were established by using the study's first step, *subject matter expert (SME) analysis*. The subject matter analysis (SMA) has two components: the quest for agreement on the knowledge of the master performer, referred to as the subject matter expert (SME), and the representation of this knowledge so that elements, structures, and relationships are clearly depicted. SMA is concerned with what ought to be happening and with what performers must know to do their jobs to the best of their ability (Rossett, 1987). SMA is the dominant front-end technique for developing knowledge domains as well as for preparing new courses or modules for new products.

SMEs and their responses to interview protocol questions were recorded verbatim and transcriptions were analyzed by using content analysis (Krippendorff, 2004). In the initial stage of analysis, general concepts were obtained from each individual SME interview. After the initial draft of categories and themes was developed, appropriateness of content analysis was approved and validated by three of the five SMEs.

The study's second step was a *comprehensive review of literature* that involved conducting an initial literature review on knowledge levels of criminal justice staff about offenders with IDs. The search yielded minimal results. Based on SME suggestions, a supplemental literature review was performed regarding staff knowledge levels of clients with IDs in the following fields: education, special education, rehabilitation counseling, and health care. The outcomes of the literature review suggested that effective assessment of staff knowledge levels of IDs should include whether staff can do the following: describe the clinical definition of ID, recognize signs and symptoms of IDs, respond appropriately to outbursts and challenging behaviors, identify prevalence rates

of intellectual disability, and exemplify practical knowledge of effective interactions.

The third step of the study was *instrument development*. After the initial draft of items was developed, the SMEs validated the appropriate content of items for the instrument, deciding what should be retained, modified, or deleted. An item was deleted if a majority of experts recommended deletion. As a result of SME opinions, four questions were deleted and five questions were modified. A revised copy of the *Probation Officer Knowledge of Intellectual Disabilities Assessment* included the suggested changes. Item format is a mixture: Some items are queries about facts related to IDs, and others are scenario based and require participants to identify the most appropriate response to a situation based on their knowledge and experience. Additional items were designed to assess officers' attitudes on interventions with offenders and their views on the criminal justice organizational structure. The knowledge domain items were scored either correct (1 point) or incorrect (0 points), generating a total sum score. Higher scores (i.e., 7 or higher) denoted greater knowledge of offenders with IDs. For a more thorough explanation of the instrument development and its statistical data, see the companion article (Russell, 2012).

Procedure

The research project was introduced and information about the study's purpose was provided to participants during a weekly staff meeting at the officers' probation site. Officers were informed that participation was voluntary and that refusal to participate would not affect employment status. The anonymity of all responses was guaranteed by using subject code numbers instead of staff names or ID badge numbers. Once all content forms were collected, researchers passed out the *Probation Officer Knowledge of Intellectual Disabilities Assessment*, a pencil, and an envelope. The participants took approximately 20 minutes to complete the assessment. Once they completed the assessment, they were instructed to

place all items in the envelope, seal it, and return it to researchers.

Data Analysis

To establish evidence of test re-test reliability of scores produced by the *Probation Officer Knowledge of Intellectual Disabilities Assessment*, the assessment was readministered to the same probation officers approximately 2 weeks after the first administration. Participants' knowledge changes between the first and second administration were determined through a debriefing session after they took the assessment a second time. In the debriefing, participants were asked questions to determine if they had been exposed to any information about IDs since they were first assessed. The following list of statistical analysis was computed: *T*-test retest, internal consistency, item-total correlation, Cronbach's alpha, and item difficulty. Further, construct validity of the newly developed *Probation Officer Knowledge of Intellectual Disabilities* instrument was assessed in this study. The primary analysis used to answer the research question was the computation of descriptive statistics (means, medians, and frequencies) and reliability coefficients. Data was analyzed using a statistical package for social sciences.

Results

Knowledge Domains

The mean score for knowledge domain items was 6.5. Therefore, participants who attained a score of 7 or higher on the assessment were considered to have a greater knowledge of offenders with IDs. In contrast, probation officers who obtained a 6 or lower on the assessment were regarded as having a minimal knowledge of offenders with IDs. Mean scores (Tables 2 and 3), item-total correlation (Tables 4 and 5), and internal consistency reliability were estimated within each administration and between the two administrations of the assessment using Cronbach's alpha (Tables 2 and 3). These results are reported below.

First Administration. The mean score of probation officers during the initial administration was 6.72, median = 7, standard deviation = 1.88 (see Table 2). Results based on item-total correlation illustrated that 7 out of 13 items positively correlated with the total score of the assessment at a statistically significant level. Of these seven items, five (items 1, 6, 8, 9, and 10) correlated significantly at .01 alpha level. Items 3 and 7 showed significant correlation with the assessment total score at .05 alpha level (see Table 4). The group's overall Cronbach's alpha = .539 for the 13 knowledge domain questions. According to Brewer (1996), the strength of internal consistency reliability is classified as follows: (a) below .20 = poor, (b) .21 to .40 = low, (c) .41 to .60 = medium,

Table 2. *Intellectual Disabilities Knowledge Domains: First Administration*

Means	Median	SD	Cronbach's Alpha
6.72	7	1.88	.539
	Question Number	Frequency	Percent
Item Difficulty			
Question Response	4		
Correct		4	16.0
Incorrect		21	84.0
Question Response	5		
Correct		21	84.0
Incorrect		4	16.0
Question Response	10		
Correct		23	92.0
Incorrect		2	8.0
Total Score: Correct Responses			
	3	2	3.9
	4	2	3.9
	5	1	2.0
	6	4	7.8
	7	9	17.6
	8	3	5.9
	9	2	3.9
	10	2	3.9

Table 3. *Intellectual Disabilities Knowledge Domains: Second Administration*

Means	Median	SD	Cronbach's Alpha
6.96	7	1.79	.453
	Question Number	Frequency	Percent
<i>Item Difficulty</i>			
Question Response	8		
Correct		2	92.0
Incorrect		23	8.0
Question Response	10		
Correct		23	92.0
Incorrect		2	8.0
<i>Total Score: Correct Responses</i>			
	4	4	7.8
	5	1	2.0
	6	4	7.8
	7	6	11.8
	8	4	7.8
	9	5	9.8
	10	1	2.0

(d) .61 to .80 = high, and (e) .81 to 1 = almost perfect. In concurrence with this classification, the strength of internal consistency for the initial administration was medium. Based on a previously established cutoff for high or low scores, in the initial administration, 16 out of 25 probation officers had a high level of knowledge about offenders with intellectual disabilities; 9 out of 25 probation officers were identified as having low knowledge of offenders with IDs (see Table 2).

In a further examination of assessment scores, an item difficulty analysis was conducted. Results indicated that more than 80% of probation officers answered Question 5 and Question 10 correctly, and more than 80% of participants answered Question 4 incorrectly. Even though 80% of participants answered correctly to both Questions 5 and 10, only the latter showed significant moderate correlation with the assessment total score (see Table 4). The correlation of Question 5 with the assessment total score was poor (.052). In addition, 80% of participants answered Question 4 incorrectly; however, this question had a negative, poor correlation with

Table 4. *Inter-Item Correlations, Knowledge Domain: First Administration*

	1	2	3	4	5	6	7	8	9	10	11	12	13	Total Corr.
1	1	.046	.114	.272	.272-	.460	.067	.184	.282	.473	.428	.067	.272-	.630**
2	.046	1	.027-	.299-	.168-	.157	.016-	.202-	.021	.202	.471-	.385	.299	.244
3	.114	.027-	1	.454-	.419-	.614	.210	.283	.387	.307	.316	.210	.454	.462*
4	.272	.299-	.454-	1	.190	.127-	.245	.129-	.327-	.129	.168	.266-	1-	-.052
5	.272-	.168-	.419-	.190	1	.327-	.266	.129	.327	.129-	.168-	.245-	.190-	.052
6	.460	.157	.614	.127-	.327-	1	.031-	.221	.215	.393	.157	.359	.127	.609**
7	.067	.016-	.210	.245	.266	.031-	1	.166	.421	.525	.016-	.316-	.245-	.453*
8	.184	.202-	.283	.129-	.129	.221	.166	1	.393	.087	.430	.166	.129	.524**
9	.282	.021	.387	.327-	.327	.215	.421	.393	1	.221	.200	.031	.327	.701**
10	.473	.202	.307	.129	.129-	.393	.525	.087	.221	1	.202	.166-	.129-	.595**
11	.428	.471-	.316	.168	.168-	.157	.016-	.430	.200	.202	1	.016-	.168-	.383
12	.067	.385	.210	.266-	.245-	.359	.316-	.166	.031	.166-	.016-	1	.266	.321
13	.272-	.299	.454	.1-	.190-	.127	.245-	.129	.327	.129-	.168-	.266	1	.052

(-) behind number = negative correlation
 Knowledge domain item numbers = **bold text**
 Significance at a .001 level = **
 Significance at a .05 level = *

Table 5. *Inter-Item Correlations, Knowledge Domain: Second Administration*

	1	2	3	4	5	6	7	8	9	10	11	12	13	Total Corr.
1	1	.046	.114	.312	.312-	.400	.067	.206-	.327	.473	.282	.067	.272-	.544*
2	.046	1	.027-	.129-	.086-	.210	.016-	.046-	.140	.202	.336-	.385	.299	.407*
3	.114	.027-	1	.320-	.280-	.523	.210	.064	.458	.307	.387	.210	.454	.526*
4	.312	.129-	.320-	1	.250-	.000	.281	.312-	.204-	.147	.042	.187-	.873-	-.046
5	.312-	.086-	.280-	.250-	1	.408-	.187	.089	.204	.147-	.042-	.281-	.055	-.011
6	.400	.210	.523	.000	.408-	1	.076-	.036-	.167	.361	.102	.306	.089	.540**
7	.067	.016-	.210	.281	.187	.076-	1	.484-	.459	.525	.031	.316-	.245-	.307
8	.206-	.046-	.064	.312-	.089	.036	.484-	1	.036	.473-	.089	.350	.272	.116
9	.327	.140	.458	.204-	.204	.167	.459	.036	1	.241	.068	.076	.356	.717**
10	.473	.202	.307	.147	.147-	.361	.525	.473-	.241	1	.221	.166-	.129-	.497**
11	.282	.336-	.387	.042	.042-	.102	.031-	.089	.068	.221	1	.031	.127-	.350
12	.067	.385	.210	.187-	.281-	.306	.316-	.350	.076	.166-	.031	1	.266	.414*
13	.272-	.299	.454	.873-	.055	.089	.245-	.272	.356	.129-	.127-	.266	1	.117

(-) behind number = negative correlation
 Knowledge domain item numbers = **bold text**
 Significance at a .001 level = **
 Significance at a .05 level = *

assessment total score (-.052). Although high percentages of correct or incorrect responses to questions did not automatically qualify an item to be deleted, in future analysis, these items should be closely monitored and possibly modified (DeVillis, 2003).

Second Administration. The mean probation officers' score during the administration 2 weeks later was 6.96, median = 7, standard deviation = 1.79 (see Table 3). Based on item-total correlation, results showed that 7 out of 13 items positively correlated with the total score of the assessment at a statistically significant level during the second administration as well. However, of these seven items, only four (items 1, 3, 6, and 9) correlated significantly at .01 alpha level. Items 2, 10, and 19 showed significant correlation with the assessment total score at .05 alpha level (see Table 5). The group's overall Cronbach's alpha = .453 for the 13 knowledge domain questions. The strength of the items' internal consistency for the second administration was moderate as well. In the second administration, 16 out of 25 probation officers had a high level of knowledge about

offenders with IDs, and 9 out of 25 probation officers had low knowledge. Results from the item analysis indicated that more than 90% of probation officers answered Question 10 correctly, and more than 90% of participants answered Question 8 incorrectly. Although 90% of participants answered Question 8 incorrectly, this item had a poor correlation (.116) with assessment total score. However, Question 10 showed significant moderate correlation (.497) with the assessment total score in the second administration. As a high percentage of probation officers provided the correct response to Question 10, and it had a significant moderate correlation to the assessment total score in both administrations, this item could be too simple and may need to be modified or deleted from future administrations of this assessment.

Test-Retest Correlation. Correlation between the two administrations was .058, and the Cronbach's alpha reliability coefficient was .110. These results indicate that the strength of relationship of the two administrations is weak and reliability is poor.

Inter-Item Correlation. According to literature (DeVillis, 2003), an average inter-item correlation is .50. In this study, only two inter-item correlations yielded above average correlations over both administrations (see Table 4). The correlation of items 3 and 6 for first administration was .614, and their correlation was .523 for the second administration. Also, the inter-item correlation of items 7 and 10 for both administrations was .525. Due to the small 13-item scale in this study, the average inter-item correlation needed to be approximately .29. This average inter-item correlation method helped offset weaker correlations within the pool of items. However, it must also be noted that there were several items that were negatively correlated (see Tables 4 and 5). When negative correlations occur, it is suggested that items be either reversed or eliminated. If after revisions, the item correlation is not improved, the items should be eliminated from the instrument.

Organizational Structure

The questions under this section were intended to gather probation officers' opinions on who or what controls effective outcomes of offenders with IDs. Descriptive frequencies based on probation officers' responses from both administrations to items are described below.

1. *Item 12:* Based on responses, 44% of the participants believed that an officer's interactional styles and practices mostly influence an offender's successful completion of supervision. It must also be noted that 40% of participants thought that availability of community resources was the strongest influence of an offender's successful completion of supervision.
2. *Item 13:* As it relates to effectively working with offenders with IDs, 64% of participants identified lack of community resources as being the most difficult barrier.
3. *Item 14:* According to 92% of the participants, assessing probation officers' knowledge level of offenders with IDs has received

little attention from the criminal justice field because of a lack of awareness about the prevalence rates of offenders who have an ID.

Probation Officer Attitudes

The items under this section were intended to assess probation officers' attitudes and their willingness to change beliefs and patterns of behavior to effectively work with offenders with IDs. These item response choices are in Likert scale format. Based on scale development literature suggestions, two questions are worded positively and two are worded negatively. Descriptive frequencies based on probation officers' responses from both administrations to items are described below:

1. *Item 15:* 60% of the participants reported that it was important for them to take additional time to assist an offender with IDs.
2. *Item 16:* 56% of the participants agreed that increased knowledge of offenders with IDs would help them manage their caseloads more efficiently.
3. *Item 17:* 76% of the probation officers disagreed that no diagnosis of ID in an offender's chart is no reason to suspect that the offender might have an ID.
4. *Item 18:* 72% of participants disagreed with the statement that probation officers do not need training on IDs.

Conclusion

The successful development of knowledge domains established content validity of the newly developed instrument. This was accomplished by using a group of SMEs and a comprehensive literature review. The SMEs provided a review and approval of knowledge domains that measured the concept of staff having knowledge levels of offenders with IDs. The construct validity and reliability of the newly developed instrument will require further investigation. In both administrations, the mean score obtained on assessment

was approximately 7, and Cronbach's alpha reliability coefficient of each administration was at a medium level. However, correlation between the two administrations was .058, and the Cronbach's alpha reliability coefficient was poor. These results indicate that the strength of relationship of the two administrations is weak and reliability is poor. Because of these reasons, this study only provides support for content validity and internal consistency estimates of reliability.

Limitations

This study used a convenience sample of probation officers in a rural county in southern Illinois. Further, this sample largely comprises White (100%), female (68%) respondents between the ages of 40 and 49. Therefore, this limits the generalizability of the results to those probation officers who chose to participate in the study.

Threats to internal validity were also examined. Mortality was not a factor in this study because all probation officers participated in both administrations of the assessment. During the second administration, maturation could have been a factor because some probation officers had court in the morning before they took the assessment the second time. Therefore, during the first administration, participants took more time answering the questions and appeared to have been "fresher."

Implications of Current Research

This instrument provides professionals in the field a starting point for conversations about specific staff training needs regarding offenders with IDs. Prior to this research, no studies or assessments were identified that offered any support for needs assessment training on probation officers. Supervisors and supervisees in the criminal justice system can use content domains developed from SMEs' interviews to evaluate specific concepts and interactive approaches. However, the validity and reliability of this instrument requires further investigation.

Future research. A scale's p -value is strongly influenced by covariation among items and the number of items in the instrument. In general, shorter scales allow participants to be relieved of some time constraints caused by longer scales. In this study, it was suggested that the instrument be brief to ensure that probation officers would not have to take too much time out of their schedules to complete it. However, due to the current scale's low reliability, future research should focus on increasing the number of scale items to assist with improving the scale's overall reliability. Increasing the number of items will also enhance the inter-item correlations. This process can be accomplished by using the established content domains developed from literature and SME interviews to create more items based on the emerged themes and categories. In addition to increasing the number of items, we suggest recruiting a more diverse population of staff from multiple disciplines within the criminal justice system (i.e., court personnel, correctional officers, police officers, judges). The instrument could eventually be used as a comparison of knowledge (pre and post) in competency-based training on IDs within the criminal justice system as a whole.

About the Authors

Valerie E. D. Russell, PhD, is an assistant professor and program coordinator of the rehabilitation counseling degree track at Florida International University. She has more than 18 years of experience working in the human service/counseling profession with felony offenders, at-risk youth, and minorities. She has developed and facilitated training for county health care professionals and implemented state-wide staff initiatives for correctional probation officer academies and state vocational rehabilitation counselors.

Paige N. Dunlap, PhD, is an assistant professor of rehabilitation counseling at North Carolina A & T University. She is researching the implications of providing rehabilitation counseling services to gang members with disabilities and to incarcerated populations.

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Gender and Adolescents' Risk for Recidivism in Truancy Court

*Valerie R. Anderson, Indiana University School of Medicine, Indianapolis, Indiana
Ashlee R. Barnes and Nordia A. Campbell, Michigan State University, East Lansing,
Michigan*

*Christina A. Campbell, University of Cincinnati, Cincinnati, Ohio
Eytayo Onifade, Florida State University, Tallahassee, Florida*

William S. Davidson, Michigan State University, East Lansing, Michigan

Valerie R. Anderson, Department of Pediatrics, Indiana University School of Medicine; Ashlee R. Barnes, and Nordia A. Campbell, Department of Psychology, Michigan State University; Christina A. Campbell, School of Criminal Justice, University of Cincinnati; Eytayo Onifade, School of Social Work, Florida State University; William S. Davidson, Department of Psychology, Michigan State University.

Correspondence concerning this article should be addressed to: Valerie R. Anderson, 410 W. 10th Street, Suite 1001, Indianapolis, IN, 46202. E-mail: valeande@iu.edu

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Abstract

The current study investigated the predictive validity of the Youth Level of Service/Case Management Inventory (YLS/CMI) by gender with a sample of youth involved in truancy court ($N = 911$). The results indicate that the YLS/CMI is a valid predictor of recidivism for truant offenders in general; however, the measure did not predict the recidivism of truant girls. The YLS/CMI is a significant predictor of future delinquency for both boys and girls but is not a significant predictor for future truancy court petitions across gender. The results suggest the need to explore truancy-specific and gender-responsive risk assessment instruments for truancy court-involved youth.

Introduction

Truancy has long been an issue for the school and juvenile justice systems (Henry, 2007;

Maynard, McCrea, Pigott, & Kelly, 2013; Zhang, Katsiyannis, Barrett, & Willson, 2007). Many youth who are truant from school are likely to engage in risky behaviors such as drinking alcohol, using drugs, and having unprotected sex (Dembo & Gullledge, 2009; Dembo et al., 2012, 2014; Henry & Huizinga, 2007a, 2007b; Zhang et al., 2007). Within the context of the justice system, truancy is viewed as a status offense, which is an act that is only considered illegal if committed by a juvenile (Sickmund & Puzanchera, 2014; Stahl, 2008; Zhang et al., 2010). The other major categories of status offenses include running away, curfew violations, incorrigibility (e.g., being "out of control"), and liquor law violations (e.g., under-age drinking) (Sickmund & Puzanchera, 2014; Stahl, 2008). In this study, we investigate the validity of a widely used criminogenic risk assessment instrument among a sample of youth who were referred to a truancy court intervention. In particular, we examine gender differences in the

predictive validity of the assessment on truancy and delinquency (e.g., crimes committed by people younger than age 18) recidivism types.

Literature Review

Truancy is generally defined as chronic absenteeism from school or classes without authority, and truant youth may be handled formally (e.g., processed) or informally (e.g., diverted) by the juvenile justice system (DeSocio et al., 2007). There is a lack of consistency and uniformity in defining truancy among researchers, because most school districts and local juvenile courts have their own definitions of truancy and policies in response to truancy (Gentle-Genitty, Karikari, Chen, Wilka, & Kim, 2015; Reid, 2014), and how cases are handled by the juvenile justice system varies widely (Dembo et al., 2014). Researchers also have different definitions in their studies of truancy's effects. For example, Barry, Chaney, and Chaney (2011) defined truancy as deliberately skipping school; Epstein and Sheldon (2002) operationalized truancy based on rates of school attendance; Hendricks, Sale, Evans, McKinley, and DeLozier Carter (2010) identified truants by the percentage of hours they spent in school each semester; Lawrence, Lawther, Jennison, and Hightower (2011) defined truancy as students who were absent from school 15 or more times in the school year. This variability had led to issues for researchers who are attempting to synthesize results from studies on truancy (Gentle-Genitty et al., 2015) and for juvenile justice experts in determining how truancy cases are specifically handled across the country (Dembo et al., 2014).

In the United States, truancy cases account for the largest proportion of formally handled status offenses (Sickmund & Puzanchera, 2014). In 2010, more than 49,000 truancy cases were processed nationally out of an estimated 137,000 status offenses (Sickmund & Puzanchera, 2014). For formally handled truancy cases, youth ages 14 to 17 represented almost five times more cases per 1,000 than youth ages 10 to 13 (Sickmund & Puzanchera, 2014). As for gender,

boys and girls had similar trends in truancy cases referred to juvenile court between 1995 and 2010 (Sickmund & Puzanchera, 2014). Except for one racial/ethnic group—American Indian/Alaskan Native youth—truancy is the most common status offense among youth of all race/ethnicities (Sickmund & Puzanchera, 2014; Stahl, 2008).

Based on survey research with informally processed truant youth—taken from a community sample rather than a juvenile justice sample—Attwood and Croll (2006) reported that students from families with high socioeconomic status (SES), defined by income and education levels, are less likely to engage in truancy than their low-SES counterparts. These differences may be due to high-SES parents being more engaged in their children's school as well as the promotion of ideas related to academic success from parents and school systems (Zhang et al., 2010). Similar results on the impact of SES on truancy were reported in Henry's (2007) study using the Denver Youth Survey, which examined the relationship between truancy and several correlates, such as level of parental education and mother's employment status, which can indicate SES level; academic grades; and peer relationships. After comparing truancy rates of students whose mothers had a college degree to those of students whose mothers had lower levels of education, researchers found that truancy rates were significantly lower for those students whose mothers had a college degree (Henry, 2007).

Researchers looked into other factors that could impact truancy. In her study, Henry (2007) found that the strongest predictors of truancy were delinquent peers and poor school performance. Hunt and Hopko (2009) examined contextual factors predicting truancy among surveyed high school students and identified poor academic performance, depression, and a less-structured home environment as the strongest predictors of truancy. It is important to note that most studies on truancy use community and school-based samples or informally processed youth (e.g., diverted from the juvenile justice system).

This is a crucial distinction, because many factors distinguish school-based samples from samples of youth handled formally by the juvenile justice system, and there are few studies that specifically examine truancy with the juvenile justice population.

Gender Differences in Truancy

Though national statistics demonstrate nearly equal trends of new truancy cases in juvenile courts across gender (Sickmund & Puzanchera, 2014; Stahl, 2008), these trends can vary by geographic region, jurisdiction, and divisions of court. For example, Onifade, Nyandoro, Davidson, and Campbell (2009) found that compared to other court divisions (e.g., standard delinquency or the intake division), there was a disproportionately higher number of girls in the truancy division.

Scholars have studied the role that gender plays in predicting truancy recidivism, and this research has produced mixed findings. In a study that investigated the predictive validity of the Youth Level of Service/Case Management Inventory (YLS/CMI) with formally processed truancy cases, Onifade and colleagues (2009) found that gender, criminogenic risk score, and criminogenic risk level were not significant predictors of future truancy. Zhang and colleagues (2007) compared the risk profiles of formally processed truant youth and delinquent (nontruant) youth. When examining demographics, they found that gender was a significant risk factor for recidivism. More specifically, truants who were male and younger at the time of the first offense were more likely to recidivate. In contrast, Henry and Huizinga (2007b) investigated gender as a covariate in their study on the relationship between truancy and substance abuse (i.e., marijuana, alcohol, and tobacco use) and found differing results. Although there were no gender differences in the onset of alcohol or marijuana use, the relationship between truancy and the onset of tobacco use was stronger for boys than girls (Henry & Huizinga, 2007b). Overall, the literature on the relationship between gender,

delinquency, and truancy has demonstrated that boys are at higher risk for engaging in delinquency and truancy reoffenses.

Risk Factors for Truancy

In addition to gender, there are other risk factors associated with initial truancy and truancy reoffenses. The most cited risk factors include individual and demographic variables, family and school, economic influences (e.g., low SES), and educational variables (Dembo et al., 2012; Nolan, Cole, Wroughton, Clayton-Code, & Riffe, 2013; Zhang et al., 2007). Family risk factors include a lack of adequate parental supervision, youth and family substance abuse, and domestic violence. Risk factors associated with the family system can manifest themselves in many ways. For instance, researchers found that students who had zero or limited unsupervised time after school were significantly less likely to engage in truant behaviors (Henry, 2007).

Additional studies have investigated demographic characteristics associated with truancy recidivism and found that truants who were male, racial/ethnic minorities, younger in age at the time of the first truancy offense, and enrolled in special education courses were at higher risk to commit new truancy offenses (Nolan et al., 2013; Zhang et al., 2007). Student-specific variables such as substance abuse and lack of social skills are also risk factors for truancy (Henry & Huizinga, 2007a, 2007b; Hunt & Hopko, 2009; Zhang et al., 2007, 2010).

Macro-level systems (e.g., neighborhood, school policies) can also impact the onset of truancy or truancy reoffenses. Important school and educational variables include school size, flexibility of learning environments, and strict consequences (e.g., at-home suspension) for chronic absenteeism (Zhang et al., 2007). Though it is much easier to blame truancy solely on the truant youth's individual characteristics, research indicates that students are less likely to consistently attend classes if they perceive the teachers as uncaring

or the school as unsafe, or if levels of student disengagement are especially high (Henry & Huizinga, 2007a). These issues may also intersect with the socioeconomic status of the school and the availability of resources (e.g., new textbooks, healthy food options).

It is important to note that most research describing truancy risk factors describe factors that influence the initial onset of truancy and not necessarily repeat truancy or future delinquency. Although there is some research on factors that predict repeat truancy and delinquency recidivism (see Dembo et al., 2012; Dembo et al., 2014; Onifade et al., 2009; Zhang et al., 2007, 2010), most of the truancy research is investigated with community and school-based samples.

Problems Associated With Truancy

Truancy has long-term and short-term negative consequences that can impact youth's health, education, and social development. In the long-term, truant youth are more likely to be incarcerated, unemployed, and in unstable marriages as adults (Henry, 2007). Short-term negative outcomes include poor academic performance (Zhang et al., 2007, 2010), increased risk of school dropout (Henry & Huizinga, 2007a), engaging in risky behaviors (e.g., unprotected sex, substance abuse, driving under the influence, violence; Bazemore, Stinchcomb, & Leip, 2004; Dembo et al., 2012; Henry & Huizinga, 2007b), and increased likelihood of being formally processed by the juvenile justice system (Zhang et al., 2010).

In a recent study, Dembo and colleagues (2012) identified subgroups of truant offenders using latent class analysis (a statistical method to categorize people based on observed characteristics). Overall, truant youth reported juvenile justice system involvement, mental health problems, and substance abuse issues. Expectedly, the high-risk subgroup (28%), having higher levels of justice involvement, substance abuse, and mental health issues, demonstrated significantly higher levels of these characteristics/negative

outcomes than the low-risk subgroup (Dembo et al., 2012). It is important to note, however, that many youth who are arrested for a status offense are not formally involved with the juvenile justice system (e.g., status offenders are commonly diverted from the system). Nonetheless, truancy is considered a developmental pathway to delinquency (Polansky, Villanueva, & Bonfield, 2008; Sickmund & Puzanchera, 2014).

Zhang and colleagues (2010) examined this developmental pathway when they investigated the differences between juvenile offenders whose first offense was truancy and those whose first offense was a delinquent act (e.g., assault, larceny). Compared to those with delinquency initial offenses, truancy-first offenders more frequently received probation referrals and commitments to secured facilities (Zhang et al., 2010). Given the negative outcomes associated with being truant, researchers must work to identify factors that increase the likelihood that a youth will become a repeat offender. One such strategy is risk assessment.

Risk Assessment

Risk assessment instruments are composed of criminogenic risk factors designed to predict future delinquency (Onifade et al., 2008a). These risk factors include association with delinquent peers, lack of involvement in organized activities, negative attitudes toward authority, substance abuse, low achievement, unstable family structure, and antisocial personality characteristics (Cottle, Lee, & Heilbrun, 2001). Over the past few decades, risk assessment tools have markedly improved the prediction of recidivism. They have progressed from first-generation instruments that relied on the experiential judgment of clinicians, to fourth-generation risk assessment instruments that are composed of several factors, including dynamic (conditions that can change over time) and static (measures of prior delinquency) factors, and risk, need, and responsivity factors (show the person's readiness for change and ability to respond to particular treatments

and programs) (Andrews, Bonta, & Wormith, 2006). Studies have shown that employing assessments that target core criminogenic risk factors can significantly reduce recidivism (Lipsey, Howell, Kelly, Chapman, & Carver, 2010). Risk assessment instruments are important because they are designed to standardize probation and placement decision-making so that assessed juvenile offenders are treated primarily based on their level of risk for future delinquency (Onifade et al., 2008a). These instruments can also be used to develop specific case management plans to reduce recidivism for assessed youth.

The YLS/CMI is a widely used risk-assessment instrument that has been demonstrated to accurately predict recidivism risk (Bechtel, Lowenkamp, & Latessa, 2007; Catchpole & Gretton, 2003; Flores, Travis, & Latessa, 2003; Onifade et al., 2008a, 2008b; Schmidt, Campbell, & Houlding, 2011; Schmidt, Hoge, & Gomes, 2005). Further, the YLS/CMI was designed to be a universal assessment tool for juvenile court systems (e.g., universal use for all offenders regardless of crime type, age, gender, race/ethnicity). YLS/CMI is a multidimensional assessment comprising the static and dynamic factors that best predict criminogenic risk for recidivism (Andrews et al., 2012; Onifade et al., 2009; Schwalbe, 2007). Subscales include prior and current offenses, education, leisure and recreation, family and parenting, substance abuse, personality and behavior, attitudes and orientation, and peer relationships (Andrews et al., 2012). The purpose of the assessment is to uncover areas of need so youth can receive services for those needs. It also uses a low-, moderate-, and high-risk classification system that accurately predicts the potential for recidivism at each level (Onifade et al., 2009).

The YLS/CMI is a valid classification tool for assessing juvenile risk for recidivism (Catchpole & Gretton, 2003; Flores et al., 2003; Onifade et al., 2008a). Onifade and colleagues (2008a) identified significant differences in offense rates and time to recidivism across risk levels that were

determined by the YLS/CMI (e.g., youth classified as high risk on the YLS reoffended at a faster rate than those classified as low or moderate risk). Bechtel and colleagues (2007) also found that the YLS/CMI accurately predicted recidivism for juveniles in the community (e.g., probationers) and those in institutions (e.g., detention), demonstrating more accurate predictions for community-based offenders.

Few studies have investigated the ability for any risk assessment instrument to specifically predict future truancy. The only study we found was one by Onifade and colleagues (2009); they investigated the predictive validity of the YLS/CMI with a sample of truant offenders. The researchers aimed to determine whether the YLS/CMI was a valid predictor for truancy, and they looked at which criminogenic risk typologies could be identified among truant youths (Onifade et al., 2009). The researchers found that neither risk level nor risk score significantly predicted truancy recidivism. In addition, five subgroups of offenders emerged with distinct criminogenic risk typologies (minimal risk, antiauthority risk, drug-involved peer risk, court-involved group, and comprehensive-risk group); nearly half of the truant offender sample belonged to the minimal risk group. Interestingly, those with the highest rate of truancy recidivism belonged to the minimal risk group as well. In addition, there were two moderate-risk groups with similar offense rates (but different risk profiles), and two high-risk groups with high criminogenic risk and high rates of delinquent reoffenses but low rates of truancy reoffenses (Onifade et al., 2009). The study concluded that the YLS/CMI was not a good risk assessment for predicting repeat truancy, but it performed adequately in predicting delinquency among first-time truancy offenders.

YLS/CMI and Gender

Although some studies have reported that the YLS/CMI predicts delinquency recidivism equally across gender (Catchpole & Gretton, 2003; Flores et al., 2003; Onifade et al., 2008a, 2008b; Schmidt

et al., 2011, 2005), others have reported nonsignificant findings (Bechtel et al., 2007; Onifade et al., 2009). For instance, the comparison of YLS/CMI scores based on gender is equivocal at best, with some findings suggesting that girls exhibit significantly lower risk than boys (Onifade et al., 2008a), and some findings suggesting that girls tend to score higher than boys (Flores et al., 2003). Furthermore, Flores and colleagues (2003) found gender differences across the eight domains of the YLS/CMI.

Overall, studies that investigated truancy, gender, and justice system involvement reported that girls were less likely to be rearrested (Flores et al., 2003); the distribution of girls differed across YLS/CMI criminogenic risk profiles in that girls were overrepresented in the low-risk group (Onifade et al., 2008b); and in general, the YLS/CMI is better at predicting risk of recidivism among boys (Schmidt et al., 2011). In a recent meta-analysis, Schwalbe (2008) examined 19 studies (4 of which utilized the YLS/CMI) that specifically investigated the predictive validity of risk-assessment tools across gender. The effect sizes in gender differences for the YLS/CMI studies were not statistically different between boys ($r = .32$) and girls ($r = .40$). Schwalbe (2008) concluded that although risk assessments effectively predicted recidivism for female offenders, there was evidence of gender bias (e.g., practitioners scoring girls systematically higher than boys on criminogenic risk measures) in juvenile justice processing and decision making.

Current Study

The variability in the previous studies examining the predictive validity of the YLS/CMI for delinquent youth calls into question the extent to which the YLS/CMI adequately predicts general recidivism for both boys and girls. Previous researchers have investigated gender differences in risk assessment and delinquency but not in the context of a truancy court intervention. In particular, our study used an innovative approach by examining the gender-based validity of the YLS/

CMI to understand overall recidivism as well as delinquency and truancy recidivism. Our study provided an in-depth examination of specific subscales of the YLS/CMI to determine if certain subscales are better predictors of recidivism by gender than others, or if the overall risk score is a better predictor of recidivism by gender. Previous studies have demonstrated that the YLS substance abuse subscale is a stronger predictor of female juvenile recidivism (Andrews et al., 2012) and the family subscale is a stronger predictor of recidivism for female juvenile offenders (Onifade et al., 2009). Thus, further research is needed to investigate the role of gender in the YLS/CMI's predictive validity, particularly for truant youth. Because girls tend to comprise at least half of truancy petitions (Onifade et al., 2009), our current study focuses primarily on gender differences among truant youth. Given the paucity of research on the topic of gender, risk assessment tools, and truancy, it is clear that further research on gender and risk assessment in the context of truancy is necessary for both research and intervention purposes. Therefore, our study aims to fill this gap in the literature by examining gender and truancy in relation to the YLS/CMI.

Our research site was the family division of a juvenile court in a midsized, midwestern county with three major units: intake, truancy, and delinquency. Youth at intake are generally low-risk, first-time offenders, and youth who are supervised in the delinquency division are formally adjudicated. The truancy court is separate from both the intake (informal) and delinquency (formal) divisions of court in that it processes truancy petitions submitted by the local public school system. Youth younger than age 16 are eligible for truancy court referrals in the county of interest, yet the court typically processes middle school-aged youth to promote prevention. Truancy court exclusively handles all school referrals for chronic absences. In conjunction with the local public school system, the truancy court of interest defines chronic absenteeism as missing 10 or more class periods during the

academic year. The overall mission of the truancy court is to eliminate barriers to education as well as provide academic opportunities to local youth who are referred to the court system. The truancy court judges established an “on time, every time” policy in hopes that this court supervision will remove barriers, increase youth and parental commitment to education, and motivate overall changes in school attendance behaviors.

Previous studies addressing adolescents’ risk of recidivism in truancy court have not deeply explored gender and assessment in the context of truancy court interventions (e.g., Onifade et al., 2009; Zhang et al., 2007, 2010). This study aims to fill this gap in the literature by examining the gender-based performance of the YLS/CMI with a sample of youth involved in truancy court in predicting recidivism.

Research Questions

1. Are there gender differences in risk of recidivism among youth in truancy court?
2. Are there gender differences in risk of recidivism based on type of recidivism (e.g., truancy or delinquency)?
3. Are there gender differences in the predictive validity of the YLS/CMI’s composite score and eight domains among truant youth based on any type of future petition (either delinquency or truancy) to court?
4. Are there gender differences in the predictive validity of the YLS/CMI’s composite score among truant youth disaggregated by future petition type: (a) future delinquency petitions, and (b) future truancy petitions?

Methods

Measures

This study examined how well the YLS/CMI predicted recidivism overall for male and female youth who entered the juvenile justice system through a truancy court by type of recidivism

(future truancy or delinquency petitions). Data in this study were collected in the truancy court division of a juvenile court in a midwestern county. Juvenile court officers (JCOs) administered the risk assessment from 2004 to 2011 to all youth referred to truancy court. Two-year recidivism was the dependent variable and was measured from the time the JCO administered the initial YLS/CMI assessment to each youth (e.g., the beginning of the truancy court case). Recidivism was coded as a dichotomous variable and defined in two ways. First, recidivism was defined as any new petition to court—delinquency or truancy (e.g., 0 = no petition, 1 = delinquency or truancy petition). Second, recidivism was broken down by type of recidivism to identify gender differences in the predictive validity of the YLS/CMI based on future delinquency petitions and future truancy petitions. Adult records were also checked for recidivism during the same time intervals if youth aged out of the court system. Identical to the juvenile records except for the inclusion of status offenses, the adult records included any future criminal justice petitions (e.g., assaults, property offenses) in the county of interest.

The YLS/CMI is a 42-item multidimensional criminogenic risk measure designed to predict future offending and provide guidance for case management for youth in the juvenile justice system (Hoge, Andrews, & Leschied, 2002). The items for each of the eight subscales are dichotomously scored (no = 0, yes = 1); thus, scores can range from 0 to 42. The eight subscales, commonly referred to as the “big eight” criminogenic risk domains, assess both static and dynamic risk factors for future offending (Hoge et al., 2002); they are as follows: Official offense history has five items (e.g., three or more prior convictions), school performance and behavior has seven items (e.g., low achievement), use of free time has three items (e.g., lack of organized activities), characteristics of acquaintances and friends has four items (e.g., lack of positive acquaintances), drug and alcohol use/abuse has five items (e.g.,

occasional drug use), family relationships and parental behavior has six items (e.g., inadequate supervision), antisocial tendencies has five items (e.g., not seeking help), and disruptive behavior and personality characteristics has seven items (e.g., short attention span). The items within each of these subscales are computed to create a summated score for each risk domain, with scores ranging from 3 to 7 (Hoge et al., 2002), depending on the number of items in each subscale. Risk level for recidivism is determined by the total score of all items on the scale: Low Risk = 0 to 8; Moderate Risk = 9 to 22; High Risk = 23+.

The truancy court started this assessment project in 2003, and the court selected the YLS/CMI because it had been widely used and validated in many juvenile justice settings (Bechtel et al., 2007; Olver, Stockdale, & Wormith, 2014; Onifade et al., 2008a, 2008b; Schwalbe, 2007). The standard delinquency division implemented use of the YLS/CMI at the same time. The truancy court implemented the YLS/CMI to assess the criminogenic risk of truant youth in the same standardized manner as youth involved in the standard delinquency division of the court.

Sample

During 2004–2011, 911 youth were referred to truancy court and received the YLS/CMI. The sample included 49.2% boys ($n = 448$) and 50.8% girls ($n = 463$). Table 1 includes descriptive statistics of the sample. The JCO administered the YLS/CMI to the youth predisposition via face-to-face interview format; the JCO then scored it. All new truancy assessments scores were entered into the court data management system. There were no missing data or duplicate cases during the study time period. That is, as every youth referred to truancy court received one initial YLS/CMI, our study's sample only represented unique cases. In collaboration with court administration and management staff, we provided JCOs with extensive training on administering and scoring the YLS/CMI. These

Table 1. *YLS/CMI Descriptive Statistics*

	Girls ($n = 463$) <i>M (SD) or n (%)</i>	Boys ($n = 448$) <i>M (SD) or n (%)</i>
YLS Total Score	12.51 (5.76)	12.49 (5.93)
Offense History	0.20 (0.59)	0.17 (0.58)
Family/Parenting	2.16 (1.64)	2.02 (1.59)
Education	3.41 (1.61)	3.64 (1.56)
Peer Relations	1.83 (1.16)	1.71 (1.15)
Substance Abuse	0.52 (1.07)	0.67 (1.15)*
Leisure and Recreation	1.91 (0.86)	1.74 (0.90)*
Personality	2.02 (1.66)	1.96 (1.66)
Attitudes and Orientation	0.46 (0.81)	1.96 (1.00)*
Low Risk	124 (26.8%)	128 (28.6%)
Moderate Risk	310 (67.0%)	290 (64.7%)
High Risk	29 (6.3%)	30 (6.7%)
Age	13.77 (1.12)	13.73 (1.14)
Caucasian	155 (33.5%)	151 (33.7%)
Hispanic/Latino	61 (13.2%)	59 (13.2%)
African-American	160 (34.6%)	144 (32.1%)
Multi-Racial	80 (17.3%)	78 (17.4%)
Other	7 (1.5%)	14 (3.1%)

Notes. Independent samples *t*-tests and chi-squares were used to test differences.

* $p < .05$

Two boys were missing race/ethnicity data.

trainings consisted of interrater reliability checks, listening to taped cases, and group discussions about scoring and case planning.

Analysis

The independent variables in the study included total score, risk level, and subscale scores for each of the eight domains on the YLS/CMI. A correlation matrix of these variables is presented in Table 2.

A receiver operating characteristic (ROC) area under the curve (AUC) statistic was calculated to examine the predictive validity for the overall sample and the disaggregated samples of boys and girls. AUCs are robust to low base rates, making this a more ideal analysis than a binary logistic regression (Fawcett, 2006). These statistics

Table 2. Correlation Matrix of YLS/CMI Scores

	1	2	3	4	5	6	7	8	9
1. Total Score	--								
2. Risk Level	.84*	--							
3. Prior History	.28*	.24*	--						
4. Education	.68*	.58*	.03	--					
5. Leisure	.40*	.36*	.12*	.15*	--				
6. Peers	.65*	.56*	.14*	.33*	.18*	--			
7. Substance Abuse	.53*	.41*	.19*	.17*	.15*	.39*	--		
8. Family	.72*	.56*	.15*	.34*	.22*	.37*	.27*	--	
9. Attitudes	.60*	.48*	.18*	.29*	.19*	.30*	.29*	.38*	--
10. Personality	.73*	.64*	.10*	.51*	.17*	.34*	.21*	.40*	.34*

* $p < .05$

range from 0 to 1 with an AUC of .5 or below specifying the acceptance of the null hypothesis. AUCs at approximately .6 indicate adequate predictive validity, and values above .7 are considered strong (Fawcett, 2006; Schmidt et al., 2005). In addition to predicting delinquency and truancy recidivism by gender, our study aggregated recidivism type by gender to test if the YLS/CMI is predictive of future truancy petitions and/or future delinquency petitions by gender.

Results

Upon investigating the risk for recidivism based on the total risk score and across each domain,

Table 3. Two-Year Recidivism Rates by Gender

	Girls (n = 463) n (%)	Boys (n = 448) n (%)
All Recidivism		
Recidivists	145 (31.3%)	180 (40.2%)*
Non-Recidivists	318 (69.7%)	268 (59.8%)*
Delinquency Recidivism		
Recidivists	91 (19.9%)	126 (28.4%)*
Non-Recidivists	365 (80.1%)	317 (71.6%)*
Truancy Recidivism		
Recidivists	65 (14.3%)	58 (13.1%)
Non-Recidivists	391 (85.7%)	385 (86.9%)

Notes. Independent samples *t*-tests and chi-squares were used to test differences.

* $p < .05$

Seven girls and five boys were missing re-offense types.

we found there were no significant differences between boys and girls on the total score and five of the eight domains. As illustrated in Table 1, the substance abuse and attitudes/orientation subscales were significantly higher for boys, and the leisure/recreation subscale scores were significantly higher for girls.

Table 3 presents the 2-year recidivism for truancy and delinquency rates by gender. Boys recidivated at a significantly higher rate (40.2%) than girls (31.3%) for any

new petition (e.g., truancy or delinquency) to court 2 years following their YLS/CMI assessment. In addition, 2 years following their initial YLS/CMI assessment, the proportion of boys with delinquency petitions (28.4%) was significantly higher than girls with future delinquency petitions (19.9%). In terms of truancy recidivism rates, 14.3% of girls had a future truancy petition, and 13.1% of boys had a future truancy petition. There was a small proportion of boys and girls ($n = 24$) that had both future delinquency and truancy petitions (not shown in the table); therefore, there was some overlap when broken down by type of recidivism.

As seen in Table 4, the YLS/CMI total score was a significant predictor of any recidivism for all youth in truancy court ($AUC = .567, p < .01$). However, the observed effects are not very strong (all AUCs range from .509 to .590). We also examined the predictive validity of the YLS/CMI subscales. Of the eight subscales, family/parenting and personality/behavior subscales were significant predictors, and the education subscale was the strongest predictor ($AUC = .574, p < .01$) of any recidivism for the total sample. In terms of the gender-based predictive validity of the assessment, there were several differential findings. We found that none of the subscales or the total score significantly predicted recidivism for girls when examining any type of recidivism.

Conversely, the total score, education, family, and personality subscales significantly predicted any type of recidivism for boys (see Table 4).

We conducted a set of posthoc analyses (analogous to a *t*-test) using MedCalc to test for differences between boys' and girls' AUC values. The results revealed that there were no significant differences in AUCs between groups that indicate true differences, but boys had statistically significant AUCs and girls did not. The MedCalc significance tests indicated that the YLS/CMI does not predict differently by gender for truancy youth, which is similar to previous studies with the YLS/CMI that do not predict recidivism for delinquent youth differently by gender (see meta-analysis in Schwalbe, 2008). However, not demonstrating predictive validity at all for a certain subgroup of offenders (e.g., females) is a distinct issue that warrants additional attention for assessments, such as the YLS/CMI, to provide equivalent and accurate risk estimates for all youth (Barnes et al., 2016). Moreover, although the AUCs are statistically significant for the total score and certain subscales for boys, the AUCs are still small in magnitude and should be interpreted with caution. Overall, the YLS/CMI does not appear to be a strong predictor of recidivism for truancy-involved youth or by gender. Therefore, we conducted additional tests to determine the effect of recidivism type.

Significant differences emerged when investigating the predictive validity of the total YLS/CMI score separated by type of recidivism (see Table 5). For the full sample, the YLS/CMI total score did not predict truancy recidivism (*AUC* = .390). When broken down by gender, the YLS/CMI total

Table 4. Predictive Validity of the YLS/CMI by Gender for Truant Youth

	Overall (<i>N</i> = 911) AUC [95% CI]	Girls (<i>n</i> = 463) AUC [95% CI]	Boys (<i>n</i> = 448) AUC [95% CI]
Total Score	.567 [.528-.606]**	.545 [.488-.601]	.590 [.536-.644]**
Risk Level	.539 [.500-.578]	.528 [.471-.585]	.551 [.496-.605]
Prior History	.516 [.477-.555]	.526 [.468-.583]	.509 [.454-.564]
Education	.574 [.535-.613]***	.556 [.499-.583]	.584 [.530-.639]**
Leisure	.513 [.473-.552]	.513 [.456-.570]	.522 [.468-.577]
Peers	.531 [.492-.571]	.520 [.462-.578]	.548 [.493-.602]
Family	.546 [.508-.585]*	.532 [.476-.588]	.565 [.511-.619]*
Substance Abuse	.540 [.500-.579]*	.527 [.469-.584]	.546 [.491-.601]
Attitudes	.534 [.495-.574]	.530 [.473-.587]	.535 [.480-.590]
Personality	.542 [.503-.582]*	.520 [.462-.578]	.565 [.510-.619]*

Notes. CI = confidence interval; AUC = area under the curve

p* < .05. *p* < .01 ****p* < .001

Table 5. Gender Differences in the Predictive Validity of the YLS/CMI by Recidivism Type

	Overall (<i>N</i> = 911) AUC [95% CI]	Girls (<i>n</i> = 463) AUC [95% CI]	Boys (<i>n</i> = 448) AUC [95% CI]
Truancy Recidivism	.390 [.340-.441]	.411 [.339-.483]	.367 [.298-.436]
Delinquency Recidivism	.645 [.603-.688]***	.626 [.562-.689]***	.664 [.606-.721]***

Notes. CI = confidence interval; AUC = area under the curve

****p* < .001

score did not predict future truancy for either boys (*AUC* = .367) or girls (*AUC* = .411). However, for the entire sample, the YLS/CMI total score was a predictor of future delinquency petitions (*AUC* = .645), significantly predicting future delinquency for both boys (*AUC* = .664) and girls (*AUC* = .626).

Discussion

The aim of this study was to identify whether the YLS/CMI was a valid predictor of truancy and delinquency recidivism for youth in the truancy division of a juvenile court. Given that girls are disproportionately more likely to be involved with the juvenile courts for status offenses (e.g., truancy) than delinquency offenses compared to boys (Sickmund & Puzanchera, 2014), we also investigated the differential predictive validity of the YLS/CMI by gender (Onifade et al., 2009;

Zhang et al., 2007). The YLS/CMI is a well-validated criminogenic risk tool for delinquent youth (Bechtel et al., 2007; Catchpole & Gretton, 2003; Flores et al., 2003; Onifade et al., 2008a, 2008b; Schmidt et al., 2011, 2005), but it has not shown promising results to aid in predicting recidivism for youth referred to truancy courts (Onifade et al., 2009). Moreover, practitioners often rely on the criminogenic risk level rather than the total score to guide decision making and aid in case planning. From a practical standpoint, our findings in this study suggest that the YLS/CMI risk scores do not possess strong predictive validity for both boys and girls involved in truancy court.

Furthermore, of the literature that has examined the efficacy of the YLS/CMI for truant youth, there have not been any comprehensive studies examining gender differences in the predictive ability of the assessment for truancy offenders. The results of our study indicated that the YLS/CMI is a statistically significant but generally poor predictor of recidivism for truant offenders, but it predicted slightly better for male offenders by total score and across specific subscales. For example, in the overall sample, we found that education, family, substance abuse, and personality domains significantly predicted recidivism. However, when disaggregated by gender, this relationship only held up for the subsample of boys, in which the education, family, and personality subscales significantly predicted recidivism.

Our study also added to the literature by incorporating types of recidivism broken down by gender and the predictive validity of the assessment based on type of recidivism. Results indicated that there was not a significant difference in the proportion of males and females that were truancy recidivists. However, when examining delinquency recidivism, there were a significantly greater proportion of male delinquency recidivists than female delinquency recidivists in truancy court. In addition, the YLS/CMI significantly predicted recidivism for boys and girls in truancy court who received a delinquency petition during the 2-year follow-up. These findings are congruent with previous research that

has noted that truancy court may act as a pathway into the formal juvenile justice system (Polansky et al., 2008; Zhang et al., 2010).

Finally, the findings yielded are also consistent with Onifade and colleagues' (2009) results that the YLS/CMI is not a significant predictor of truancy recidivism for both boys and girls. These weak effects may be because the sample of truant youth in this study are generally classified as low-risk offenders. If juvenile courts continue to implement criminogenic risk measures such as the YLS/CMI for truant youth, there is a need to norm the tool (e.g., develop new cut scores by gender for risk levels to improve predictive accuracy) for this subpopulation, given the time and monetary investments associated with its implementation.

In addition to examining the predictive validity of the overall risk score, it is also important to examine the psychometric properties of the YLS/CMI assessment's subscales. If subscales vary by gender, researchers and practitioners can use this information to address gender differences in needs and subsequently respond to the appropriate—and perhaps differential—needs of boys and girls. To that end, developing more gender-responsive risk assessment instruments for youth involved in the system—perhaps by examining the content validity of items (e.g., are the underlying meanings of the items different by gender?)—would bring about much more accurate risk assessment instruments of truant youth and their specific needs. Gender-responsive assessments, successful in predicting female recidivism, are already common in the adult offender literature (e.g., Salisbury, Van Voorhis, & Spiropoulos, 2009), demonstrating that in assessments for youth offenders, development of more specificity in the items predict more accurately for offending girls. As girls comprise about half of the truancy court population, it is important to accurately assess risk and predict recidivism for girls involved with the juvenile justice system.

Limitations

As with any study, this research is limited by several factors. One limitation is that at the time of this study, the juvenile court was only administering the YLS/CMI and no other criminogenic risk or mental health assessments. This is an important limitation, because there are a multitude of other validated risk-assessment instruments used in the juvenile justice system (e.g., Youth Assessment Screening Inventory, Positive Achievement Change Tool, and Ohio Youth Assessment System), and the use of other risk measures or assessment types would have allowed for a comparative analysis of measures by gender and recidivism type to determine the best measures for predicting delinquency and truancy reoffending for boys and girls. Furthermore, the YLS/CMI only focuses on risk factors and does not include protective factors (e.g., prosocial attitudes, consistent supervision, commitment to school). Protective factors may play an important role in predicting recidivism and understanding gender differences among youth involved in truancy court and, more broadly, in the juvenile justice system (Stevens, Morash, & Park, 2011). As well, school-related factors may have some influence on youths' trajectories and exacerbate the school-to-prison pipeline (Nolan et al., 2013; Zhang et al., 2010). Therefore, the use of general criminogenic risk measures in specialized truancy courts may not be the most appropriate tool for this particular context because, as seen in our study, they do not predict future truancy.

The dependent variable of interest in this study was recidivism. Although recidivism is the most common outcome measure for delinquency, there are likely to be many other outcomes of interest for youth specifically involved in truancy court. More proximal outcomes, such as academic achievement, may provide insights into areas where researchers and practitioners can provide assistance to truant youth to facilitate more positive outcomes. Investigating these other variables might have also made it possible to delineate potential pathways from these

proximal outcomes to more distal variables such as recidivism.

Another important limitation of this study is the reliance on ROC AUC values. These values only assessed the bivariate relationships between the independent variables and the dependent variable disaggregated by gender and did not control for other potentially relevant factors (e.g., age, race/ethnicity) that could impact the ability of the YLS/CMI to predict recidivism for truancy court-involved youth. Nonetheless, our study is still valuable for having investigated truancy recidivism with an eye toward gender differences.

Implications and Directions for Future Research

Truancy is an issue that spans across the educational, juvenile justice, and social service systems; thus, a comprehensive, coordinated systems response is important for addressing the needs of truant youth (Nolan et al., 2013). Connecting youth to appropriate social service agencies (e.g., child welfare services) may increase school attendance and decrease risky behaviors (Dembo et al., 2014, 2015; Larson, Zuel, & Swanson, 2011). For example, Larson and colleagues (2011) contended that truancy and educational neglect is a child welfare issue rather than a juvenile justice issue and saw improvement in school attendance for truant youth by incorporating a family-centered approach (e.g., interventions that focus primarily on the family unit rather than the individual youth) through the child welfare system.

As shown in our study, the widely used YLS/CMI assessment tool in the juvenile justice system works differently for youth entering the justice system for truancy than for those entering the system for delinquency. Given that on the YLS/CMI, the best predictor for truancy for all youth was the education subscale, even above the total score or risk level, researchers and practitioners may consider developing an instrument that is specific for truant populations (see Dembo et al., 2012) and can predict recidivism by offense type (e.g., whether or not the youth will have chronic

issues with truancy and/or penetrate deeper into the juvenile justice system with delinquency petitions). Thus, the development and implementation of more appropriate risk screener tools for truant youth is needed. For example, Kim and Barthelemy (2011) developed a truancy risk screener for use in schools, as there are currently no validated instruments or tools to directly measure truancy risk. This particular assessment was developed and validated in a school context, but it could be adapted for the juvenile justice system and tested for feasibility of use in truancy courts.

Furthermore, recidivism for truancy-involved youth and gender differences should be examined in more nuanced ways in future research. For example, researchers may disaggregate crime type (e.g., violent or nonviolent offenses) among recidivists to understand potentially gender-specific truancy pathways and violent behavior. Future research should also consider examining gender-specific risk factors for truancy and the needs of truancy court populations (add/remove variables or develop new assessments that are sensitive to gender-based needs; e.g., Emeka & Sorensen, 2009) to improve the predictive validity of risk-assessment instruments for all youth entering truancy court programs. Truancy courts pose unique intervention points in the juvenile justice system for the potential development and provision of more gender-responsive assessment and services. In addition to gender, it is critical to investigate the effects of race/ethnicity on truancy court involvement, as well as potential differences in the predictive ability of risk-assessment instruments for youth by race/ethnicity (e.g., Shepherd, Luebbers, & Dolan, 2013) compared with larger samples of juvenile justice-involved youth. The impact of how changes in risk scores over time may influence recidivism, a growing area of inquiry in the general delinquency literature (e.g., Barnes et al., 2016), is another important consideration for future research.

Conclusion

When addressing truancy, it's important to consider policies and practices that influence school attendance and engagement and factors that influence truancy and the trajectory of youth into the justice system. One study found no differences in future rates of attendance and academic achievement among youth petitioned to court for truancy compared with those youth who were truant but did not receive a court petition (Thomas, 2011). Therefore, truant youth may fare better when the juvenile justice system handles these cases informally or through diversion programming (e.g., youth mentoring services), as lower-risk youth benefit more from diversion than from further juvenile justice system contact (Onifade et al., 2009). In sum, there is a critical need for more rigorous evaluation of truancy court interventions and the development of risk assessment tools that are both gender-sensitive and valid for juveniles involved in the justice system for truancy.

About the Authors

Valerie R. Anderson, PhD, is a postdoctoral fellow in Adolescent Medicine at Indiana University School of Medicine. Her research focuses on the intersection of gender and the juvenile justice system, with a particular emphasis on girls' trajectories in the system, as well as the system's response to female delinquency.

Ashlee R. Barnes, MA, is a doctoral candidate in the Department of Psychology at Michigan State University. Her research interests include understanding risk and protective factors for juvenile offending and evidence-based interventions for juvenile justice-involved youth.

Nordia A. Campbell, MA, is a doctoral candidate in the Department of Psychology at Michigan State University. Her research interests are in the experiences of historically marginalized youth and students, as well as in programming and protective factors that aim to support them.



Christina A. Campbell, PhD, is an assistant professor at the University of Cincinnati in the School of Criminal Justice. Her research focuses on the assessment of risk and strengths among juvenile offenders, neighborhood ecology, and juvenile justice and child welfare policy.

Eyitayo Onifade, PhD, is an assistant professor at Florida State University in the School of Social Work. His research focuses on delinquency prevention, child welfare programming, and policy-level interventions.

William S. Davidson, PhD, is a University Distinguished Professor of Psychology and senior fellow, university outreach and engagement, at Michigan State University. He is also editor emeritus of the *American Journal of Community Psychology*. His research has included at-risk populations, including juvenile offenders, adult offenders, substance abusers, victims of violence, and adults with dual diagnosis.

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