

# **Diverting Juvenile Justice-Involved Youth With Behavioral Health Issues From Detention: Preliminary Findings From Ohio's Behavioral Health Juvenile Justice (BHJJ) Initiative**

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**Jeff M. Kretschmar<sup>1</sup>, Fredrick Butcher<sup>1</sup>,  
Daniel J. Flannery<sup>1</sup>, and Mark I. Singer<sup>1</sup>**

## **Abstract**

Nationally, well over half of juvenile justice-involved youth report behavioral health impairment. Although the juvenile justice system may be the first place a youth is screened for behavioral health problems, the system is often ill-prepared to properly treat these youth. In response to the growing number of youth entering the juvenile justice system with behavioral health issues and the lack of proper care in these facilities, many communities have developed diversion programs as an alternative to detention. The current study investigated Ohio's Behavioral Health Juvenile Justice (BHJJ) program, a diversion program for juvenile justice-involved youth with behavioral health issues that provides evidence-and community-based behavioral health treatment. Results indicated BHJJ was effective at improving behavioral health outcomes, including general functioning and trauma symptomatology, and reducing future delinquency. Analyses also examined the variables that predicted successful treatment completion and future adjudications. Implications for juvenile justice programming and policy are discussed.

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<sup>1</sup>Case Western Reserve University, Cleveland, OH, USA

## **Corresponding Author:**

Jeff M. Kretschmar, Begun Center for Violence Prevention Research & Education, Jack, Joseph and Morton Mandel School of Applied Social Sciences, Case Western Reserve University, 11402 Bellflower Road, Cleveland, OH 44106-7167, USA.  
Email: jeff.kretschmar@case.edu

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**Juvenile Justice and Behavioral Health**

National estimates indicate that the majority of youth involved in the juvenile justice system report behavioral health impairment. While estimates vary, most studies report that between 65% and 75% of juvenile justice-involved youth have at least one mental health or substance abuse disorder, and 20% to 30% report suffering from a serious behavioral disorder (Cocozza & Skowrya, 2000; Shufelt & Cocozza, 2006; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002; Wasserman, McReynolds, Lucas, Fisher, & Santos, 2002). Rates of similar behavioral disorders among the general adolescent population are far lower (Colins et al., 2010; Cuellar, McReynolds, & Wasserman, 2006; Friedman, Katz-Levy, Manderscheid, & Sondheimer, 1996; Merikangas et al., 2010; Otto, Greenstein, Johnson, & Friedman, 1992). While juvenile justice-involved youth present with various disorders, common diagnoses include disruptive behavior disorders (e.g., conduct disorder), mood disorders (e.g., depression), and anxiety disorders (e.g., posttraumatic stress disorder [PTSD]; Arroyo, 2001; Cuellar et al., 2006; Teplin et al., 2002).

Along with behavioral health concerns, juvenile justice-involved youth, and in particular juvenile justice-involved females, report more exposure to trauma than the general population of youth (Arroyo, 2001; Cauffman, Feldman, Watherman, & Steiner, 1998; Ford, Chapman, Hawke, & Albert, 2007; Hennessey, Ford, Mahoney, Ko, & Siegfried, 2004; Steiner, Garcia, & Matthews, 1997; Wasserman & McReynolds, 2011). One study found over 60% of juvenile detainees reported a history of psychological trauma (Ford, Hartman, Hawke, & Chapman, 2008) whereas another study found that over 90% of juvenile detainees reported experiencing one or more traumas, with an average of more than 14 separate incidents (Abram et al., 2004). Studies examining juvenile justice populations have found that between 11% and 50% of juvenile justice-involved youth meet criteria for PTSD (Abram et al., 2004; Arroyo, 2001; Garland et al., 2001; Ko et al., 2008; Teplin et al., 2002; Wasserman et al., 2002).

Although a large percentage of juvenile justice-involved youth have behavioral health problems, many have not received help or treatment for these issues prior to entering the juvenile justice system. One study found that only 34% of juvenile detainees with anxiety, mood, or disruptive behavior disorders had ever received prior behavioral health treatment (Novins, Duclos, Martin, Jewett, & Manson, 1999). In another study, nearly 17% of juvenile detainees reported previous behavioral health treatment by a psychiatrist or therapist (Feinstein et al., 1998). A Substance Abuse and Mental Health Services Administration (SAMHSA)-funded study reported that although approximately 94% of juvenile justice facilities had some type of behavioral health services available to youth, the quality and comprehensiveness of these services varied greatly based on the facility (Goldstrom, Jaiquan, Henderson, Male, & Manderscheid, 2000). Goldstrom et al. (2000) reported that 71% of juvenile detention

centers offer behavioral health screening whereas only 56% conduct full evaluations. In facilities where full evaluations are offered, screenings and assessments are often not standardized (Hoge, 2002; Soler, 2002).

## **Juvenile Justice/Behavioral Health Diversion Programs**

The prevalence of juvenile justice-involved youth with behavioral health issues is cause for alarm. Although the juvenile justice system is often the first time a youth is screened for behavioral health problems, the system is often ill-prepared to properly treat these youth (Cocozza & Skowrya, 2000; Skowrya & Powell, 2006; Teplin et al., 2002; U.S. Department of Justice, 2005). In response to the growing number of youth entering the juvenile justice system with behavioral health issues and the lack of proper care in these facilities, many communities have developed diversion programs or specialized dockets, including mental health and drug courts, as an alternative to detention placements. These programs allow for in-depth assessment and evaluation and more comprehensive and evidence-based treatment and supervision services than are available in typical juvenile justice facilities. Maintaining youth in the community also allows them to participate in treatment modalities best delivered in community settings, such as family-based treatment.

Juvenile diversion programs target youth at different points in the juvenile justice process. For example, youth can be diverted from formal processing through the system or from incarceration after formal processing. Several recent meta-analyses have examined the impact of programs that divert youth from formal juvenile court processing (Petrosino, Turpin-Petrosino, & Guckenburg, 2010; Schwalbe, Gearing, MacKenzie, Brewer, & Ibrahim, 2012; Wilson & Hoge, 2012). Generally, these studies have found that youth in these diversion programs recidivate at lower rates than those formally processed in the court system.

Schwalbe and colleagues (2012) examined the impact of specific types of diversion programming on recidivism in 28 juvenile offender diversion programs. The diversion programs were separated into five categories: case management, individual treatment, family treatment, youth court, and restorative justice. The authors found that the overall effect of diversion programs on recidivism was non-significant. The only diversion category that produced significant reductions in recidivism was family treatment. Restorative justice programs were effective only when researchers played an active role in their implementation. Due to small sample sizes, other outcome variables of interest including mental health outcomes, substance use, and school performance were not included in the meta-analysis. The authors reported that although only a few diversion programs specifically targeted youth with mental health or substance abuse problems, preliminary results seemed positive. Youth in these programs demonstrated reduced recidivism and out of home placements compared with non-diverted youth.

Diversion programs in New York and Texas have focused on youth with behavioral health concerns and have found positive results (Colwell, Villarreal, & Espinosa, 2012; Cuellar et al., 2006; Sullivan, Veysey, Hamilton, & Grillo, 2007). Both of these programs focused on youth formally processed and adjudicated in the court system

and diverted from institutional placement and placed into community-based treatment. Overall, youth diverted into these programs demonstrated reductions in future delinquency (Colwell et al., 2012; Sullivan et al., 2007) and out of home placements (Sullivan et al., 2007) compared with non-diverted youth.

The research on juvenile justice diversion programs generally finds support for their effectiveness, especially related to juvenile justice outcomes. Studies that focus on diversion from formal processing and those that focus on diversion from institutional placement consistently find a reduction in recidivism. Although many diversion programs focus on juvenile justice outcomes, less is known about how other relevant outcomes, such as behavioral health functioning, are affected by these programs. For example, how does diversion programming affect behavioral health functioning or trauma symptoms experienced by these youth? To truly understand the impact of diversion programs on youth with behavioral health concerns, it is important to continue to broaden the scope of research associated with the programs beyond juvenile justice data.

## Ohio's BHJJ Initiative

More than 15 years ago, Ohio's juvenile court judges met with representatives from the Ohio Department of Mental Health (ODMH) and the Ohio Department of Youth Services (ODYS) to address a growing and serious concern. Many of the youth who appeared in court demonstrated serious mental health and/or substance use problems. Not only did these judges lack the resources and expertise to identify, assess, and serve these youth, but there were few alternative programs into which these youth could be placed.

The state recommended funding local pilot projects in an attempt to divert youth who demonstrated a need for behavioral health service from incarceration and into community-based treatment settings. The pilot program operated in three counties in Ohio. Although small in scope, the pilot project was successful in reducing the number of youth with behavioral health issues committed to the ODYS (Flannery, McTaggart, Buckeye, & Singer, 2002).

In 2005, the state allocated new resources to the BHJJ project and funded several counties throughout Ohio to expand on the work accomplished in the pilot phase. The intent of the BHJJ project was to transform the local systems' ability to identify, assess, evaluate, and treat multi-need, multi-system youth and their families and to identify effective programs, practices, and policies. As in the pilot, the initiative was designed to divert juvenile justice-involved youth with mental health or substance use issues from detention and into community and evidence-based treatment. To gain a better understanding of the special needs of female offenders, the state encouraged applications from counties that focused on juvenile justice-involved females. The state funded selected counties to implement or improve behavioral health screening and assessment of juvenile justice-involved youth. Funding was also provided to contract with local behavioral health agencies to deliver the necessary treatment to these youth.

To participate in BHJJ, youth must have a history of juvenile justice involvement, have at least one *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.;

*DSM-IV*; American Psychiatric Association [APA], 1994) diagnosis, and be between the ages of 10 and 18. In addition, the state identified additional optional eligibility criteria, including substantial behavioral status impairment, co-occurring substance abuse, a pattern of criminal behavior, exposure to trauma or domestic violence, a pattern of criminal behavior, and a history of multi-system involvement. Each participating county was able to decide which of these optional criteria they would use to determine program eligibility.

Since 2006, 11 counties have been selected to participate in the BHJJ program. Urban, suburban, and rural counties have been included in the project (for more thorough descriptions of the counties and projects, see Kretschmar, Butcher, & Flannery, 2013). These counties must use evidence-based or evidence-informed treatment models; however, the state allows each county to select the model that best fits the needs of their youth and families. Examples of the types of treatment models provided through BHJJ include Multi-Systemic Therapy (MST), Functional Family Therapy (FFT), Integrated Co-Occurring Treatment (ICT), Trauma-Focused Cognitive Behavioral Therapy (TF-CBT), and Multi-dimensional Family Therapy (MDFT). These evidence-based programs have built-in fidelity monitoring procedures provided by the program developers and adherence to program fidelity is regularly evaluated and if necessary, corrected.

Although each county uses slightly different protocols and procedures in the implementation of BHJJ, the juvenile court is the typical entry point into the program. Youth who have been charged with a crime or who are currently on probation are screened and assessed for behavioral health issues to determine whether they meet criteria for inclusion in BHJJ. Each county is free to determine which behavioral health screening and assessment tools are used. Examples of tools used in the counties include the Massachusetts Youth Screening Instrument (MAYSI-2) (Grisso & Barnum, 2003), the Global Appraisal of Individual Needs (GAIN) (Dennis, White, Titus, & Unsicker, 2008), the Substance Abuse Subtle Screening Inventory (SASSI) (Miller & Lazowski, 2001), and the University of California at Los Angeles Posttraumatic Stress Disorder Reacon Index (UCLA PTSD RI) (Steinberg, Brymer, Decker, & Pynoos, 2004). If the youth screens positive on the behavioral health assessment, meets the additional eligibility criteria selected on by the county, and the youth and family agree to participate, the youth is recommended for BHJJ participation. If the judge or magistrate accepts the recommendation, the youth is enrolled in the BHJJ program and referred to the treatment agency responsible for providing the treatment services.

In most cases, the youth is placed on probation supervision during their time in the BHJJ program. While all counties use BHJJ as a diversion from local or statewide incarceration, some counties also use BHJJ as a diversion from formal processing. In these cases, typically involving minor crimes and youth with very limited juvenile justice involvement, youth may not be placed on probation during BHJJ. While placement in residential treatment is an option in some of the participating counties, a mission of BHJJ is to provide treatment in the least restrictive setting possible and therefore the majority of the treatment is provided in-home or in outpatient settings.

When residential placement is used, it is typically only a brief stay to stabilize a youth before moving them into outpatient or home-based treatment services.

## Current Study

The current study is an evaluation of the BHJJ program, the characteristics of youth at enrollment, and outcomes related to program participation. Using data collected from youth participating in BHJJ, we examined the following research questions:

**Research Question 1:** What are the background characteristics of youth enrolled in BHJJ?

To develop a profile of the youth enrolled in BHJJ, Research Question 1 will examine the enrollment characteristics of participants, including youth and family history, behavioral health information, and prior juvenile justice involvement.

**Research Question 2:** Do youth participating in BHJJ exhibit improvements in psychological functioning, problem severity, and trauma symptomatology from enrollment to termination?

The BHJJ program specifically targets juvenile justice-involved youth with behavioral health problems for evidence-based treatment delivered in the least restrictive setting. Research Question 2 will examine whether the behavioral health issues of youth receiving treatment have improved from enrollment to termination.

**Research Question 3:** What factors at enrollment predict successful treatment completion and future court involvement among BHJJ youth?

Identifying the factors that predict successful treatment completion and future court involvement can allow BHJJ and similar programs to specifically target youth who would benefit most from treatment and to tailor treatment programs to the needs of those youth. Identifying the enrollment characteristics that predict program success and recidivism can help court and treatment staff make informed decisions on youth placement and treatment. Research Question 3 will examine the factors that predict two separate outcomes of success: treatment completion and a reduction in future juvenile court adjudications.

## Data and Method

### Sample

Study data were collected at enrollment into and termination from the BHJJ program. Beginning in January 2006 and through June 2013, 2,545 youth were enrolled in the BHJJ program. At enrollment into the program, a therapist from the local

treatment agency typically conducted a full diagnostic assessment of the youth. If the youth recently underwent a diagnostic assessment, results from that assessment were used by the treatment agency. Data indicated that 86.0% ( $n = 2,022$ ) of BHJJ youth received a diagnostic assessment as part of their enrollment into BHJJ. In addition to this assessment, the youth, caregiver, and agency worker assigned to the case completed questionnaires and surveys designed to collect information related to the youth and family history, reasons for referral to BHJJ, mental health and substance use diagnoses, trauma symptoms, current and previous substance use, functioning levels, and overall problem severity. Some of these surveys are repeated during the course of treatment and all of the surveys are repeated on termination of services. The juvenile court in each county collected information related to the youths' juvenile court involvement (e.g. charges, adjudications) prior to BHJJ enrollment, during BHJJ participation, and after BHJJ termination. These data are gathered for all BHJJ youth through their 18th birthday. De-identified data were collected by each of the BHJJ counties and sent to Case Western Reserve University (CWRU) for evaluation purposes. The evaluation protocol was approved by the Institutional Review Board at CWRU.

### **Instrumentation**

**Enrollment form.** This form permits program staff to record a variety of background issues related to treatment including the date of enrollment, *DSM-IV* diagnoses, and educational data including disciplinary issues. For the purposes of this study, we used these data to identify youth with co-occurring mental health and substance use diagnoses and youth who have been suspended or expelled from school in the 12 months prior to enrollment.

**Caregiver Information Questionnaire (CIQ).** The CIQ is completed by the caregiver with the assistance of the program staff. This survey permits staff to record information including the child's abuse history, child's suicide ideation and attempts, and family histories of substance abuse and mental health issues. The CIQ was adapted from a measure first used in a national evaluation of community-based mental health services (U.S. Department of Health and Human Services, 2005).

**Trauma Symptom Checklist for Children (TSCC).** The TSCC is a 54-item Likert-type questionnaire containing six subscales designed to measure symptoms of anxiety, anger, depression, posttraumatic stress, and sexual concerns in youth aged 7 to 17 years (Briere, 1996). The youth responds to a series of questions regarding the frequency of certain thoughts, events, or behaviors. Responses are made on a 4-point, 0 to 3 scale with 0 indicating "never" and 3 indicating "almost all the time." The TSCC is completed at enrollment into and termination from BHJJ. Good psychometric properties for all subscales have been demonstrated in previous studies (Briere, 1996; Lanktree et al., 2008). Data on the TSCC are limited to those who were 17 or younger when the survey was administered.

*Ohio Youth Problem, Functioning, and Satisfaction Scales (Ohio Scales).* The Ohio Scales were designed to assess clinical outcomes for children with severe emotional and behavioral disorders, and were developed primarily to track service effectiveness (Ogles, Melendez, Davis, & Lunnen, 2001). The measure assesses four primary domains of outcomes with four subscales: Problem Severity, Functioning, Hopefulness, and Satisfaction With Services. For the purposes of this study, we present only the Problem Severity and Functioning scales. The Problem Severity scale includes 20 items that measure problems typically found in populations of youth receiving behavioral health treatment and are appropriate for children between the ages of 5 to 18 (Ogles et al., 2001). Items are scored on a 6-point scale from 0 “not at all” to 5 “all the time” and include problem behaviors such as arguing, fighting, and using drugs or alcohol. The Functioning scale is comprised of 20 items that measure the youth’s level of functioning in several areas of daily activity (e.g., interpersonal relationships, recreational activities, etc.). Responses are scored on a 5-point scale that range from 0 “extreme troubles” and 4 “doing very well.” Scores on the items are summed to create a total problem severity and functioning score. Caregivers, workers, and youth are asked to respond to identical items on the two scales. The Ohio Scales have previously been used to evaluate juvenile justice diversion programs (Colwell et al., 2012). The Problem Severity and Functioning scales for the BHJJ sample exhibited excellent reliability for all three raters (range  $\alpha = .90-.95$ ).

*Criminogenic risk indices.* To measure two separate areas of criminogenic risk at intake into the program, indices measuring substance use and juvenile justice history were created. Variables included in these indices were modeled after the Ohio Youth Assessment System (OYAS), a validated measure of criminogenic risk in youth (Latesa, Lovins, & Ostrowski, 2009). Substance use consisted of three items including onset of drug use prior to age 12, past 30 day drug use, and past 30 day alcohol use. Juvenile justice history consisted of whether the youth was involved with the juvenile court prior to age 13, the total number of charges in the 12 months prior to enrollment, whether the youth had a felony charge in the 12 months prior to enrollment, and whether the youth was adjudicated delinquent in the 12 months prior to enrollment.

*Juvenile court data.* Juvenile courts in each participating county provided both historical juvenile court involvement data and recidivism data for each BHJJ youth. For the purposes of this study, we examine recidivism as a new adjudication in the 12 months following enrollment into the BHJJ program. New adjudication refers only to new cases rather than a continuation of a case that predated a youth’s participation in BHJJ. Recidivism data are restricted to youth who are 17 years of age at the date of enrollment and who were enrolled prior to June 2012 ( $n = 1,120$ ). For outcome analyses involving juvenile court data, the sample is limited to these youth.

*Successful treatment completion.* On termination of treatment from BHJJ, the case worker is asked to identify the reason for the youth’s termination from the program. Although the criteria that define successful treatment completion vary slightly based



on county definitions and the specific evidence-based practices selected, successful treatment completion is generally tied to attendance at and participation in treatment meetings, improvement in behavioral health functioning, compliance with terms of the treatment plan, and so on.

### **Analysis Plan**

First, we present enrollment data to describe the characteristics of a BHJJ youth. Data on juvenile court involvement, behavioral health diagnoses, victimization, and family history will be presented along with the demographic characteristics of the sample. We then conducted paired-samples *t* tests on the Ohio Scales Problem Severity and Functioning subscales and the TSCC subscales from enrollment to termination to examine changes in psychological functioning, problem severity, and trauma symptomology throughout the program. Last, we estimated logistic regression models to predict successful treatment completion and delinquent adjudication in the 12 months following enrollment into the BHJJ program from behavioral health characteristics at enrollment. Data for these models are limited to BHJJ youth who have completed surveys at both enrollment into and termination from the program. In addition, adjudication data are limited to those who were 17 years old or younger at the time of enrollment. Adjudication data were provided by the juvenile court in each BHJJ county. Because we did not have access to adult records, youth who turned 18 years old during the 12 months following enrollment were eliminated from the analyses. Any charges for youth above 18 years of age would likely be filed in adult court, and therefore would not appear in juvenile court records.

## **Results**

### **Description of Sample at Enrollment**

Data describing the characteristics of youth enrolled in BHJJ are presented in Table 1. From January 2006 through June 2013, 2,545 youth were enrolled in the BHJJ program. The sample was composed of 58.4% males ( $n = 1,478$ ) and 41.6% females ( $n = 1,054$ ). The age of the BHJJ sample at enrollment into the program ranged from 8 to 18 years old, and the mean age at enrollment was 15.6 years old ( $SD = 1.53$ ). The majority of the youth in the sample were either White (52.3%;  $n = 1,316$ ) or Black (39.3%;  $n = 990$ ) with the remainder consisting of multi-racial (6.3%;  $n = 159$ ) and other racial groups (2.1%;  $n = 52$ ). Due to the high percentage of White and Black participants in the sample, we collapsed race into two categories: White and non-White.

The majority of BHJJ youth presented with mental health disorder(s) only (59.6%;  $n = 1,346$ ) whereas 38.4% ( $n = 867$ ) were diagnosed with co-occurring mental health and substance use disorders. The remaining 2.0% ( $n = 45$ ) were diagnosed with substance use disorder(s) only. More than 30% (30.9%;  $n = 381$ ) had been charged with a felony offense in the 12 months prior to enrollment in BHJJ. Based on caregiver

**Table 1.** Descriptive Characteristics of BHJJ Sample at Intake.

	%	<i>n</i>
Gender		
Male	58.4	1,478
Female	41.6	1,054
Age at intake <sup>a</sup>	15.6 (SD = 1.5)	2,435
Race		
Non-White	47.7	1,201
White	52.3	1,316
DSM-IV diagnosis		
Mental health only	59.6	1,346
Substance use only	2.0	45
Co-occurring	38.4	867
Juvenile court history (12 months prior)		
Felony level youth	30.9	381
Youth history (Lifetime)		
Physical abuse	17.4	402
Sexual abuse	15.7	357
Exposure to domestic violence	41.2	950
Attempted suicide	14.8	336
Suicide ideation	38.8	893
Mental illness in the family	69.1	1,478
Substance abuse in the family	61.1	1,377

Note. DSM-IV = *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; DSM-IV; American Psychiatric Association [APA], 1994); BHJJ = Behavioral Health Juvenile Justice.

<sup>a</sup>Age at intake presented as a mean and standard deviation.

reports, nearly 18% (17.4%;  $n = 402$ ) were victims of physical abuse, 15.7% ( $n = 357$ ) were victims of sexual abuse, and 41.2% ( $n = 950$ ) had been exposed to domestic violence. Caregivers reported that 14.8% ( $n = 336$ ) of BHJJ youth had attempted suicide in their lifetime and that 38.8% ( $n = 893$ ) had talked about suicide in their lifetimes. Sixty-nine percent of BHJJ youth had a family member with a history of mental illness ( $n = 1,478$ ) whereas 61.1% ( $n = 1,377$ ) had a family member with a history of substance abuse.

### *Change in Behavioral Health From Enrollment to Termination*

While we began with 2,545 youth with BHJJ enrollment data, longitudinal data are limited to respondents who had terminated BHJJ treatment and were available for a termination interview. Results of paired-samples  $t$  tests for the Ohio Scales are presented in Table 2. From enrollment to termination, caregivers reported a significant decrease in problem severity,  $t(994) = 21.49$ ,  $p < .001$ , and a significant increase in functioning,  $t(1002) = -20.68$ ,  $p < .001$ . Workers reported a similar decrease in

**Table 2.** Paired-Samples *t* Tests for Ohio Scales.

	Intake			Termination			<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>		
Problem severity								
Caregiver	25.58	16.68	995	14.34	13.18	995	21.49***	.68
Worker	26.22	12.99	1,400	16.49	12.79	1,400	24.13***	.64
Youth	19.61	14.43	1,111	11.06	10.92	1,111	20.68***	.62
Functioning								
Caregiver	42.72	16.68	1,003	53.66	16.49	1,003	-20.68***	.65
Worker	40.56	11.98	1,400	48.97	14.77	1,400	-19.87***	.53
Youth	56.81	13.07	1,108	62.55	13.38	1,108	-13.56***	.41

\*\*\**p* < .001.

problem severity,  $t(1399) = 24.13, p < .001$ , and a significant increase in functioning,  $t(1399) = -19.87, p < .001$ . In comparison with workers and caregivers, youth reported lower levels of problem severity and higher functioning. However, from enrollment to termination, youth reported a significant decrease in problem severity,  $t(1110) = 20.68, p < .001$ , and a significant increase in functioning,  $t(1107) = -13.56, p < .001$ . Considering Cohen's (1988) suggested cutoffs, large effect sizes were observed for all three reporters on the Problem Severity scale and the worker reported Functioning scale. Medium effect sizes were found for the caregiver and youth reported Functioning scales.

Means and paired-samples *t* tests for TSCC subscales at enrollment and termination are presented in Table 3. Significant reductions in trauma symptoms were observed for all six subscales from enrollment to termination. Statistically significant improvements were found for the Anxiety,  $t(938) = 10.29, p < .001$ ; Depression,  $t(938) = 13.31, p < .001$ ; Anger,  $t(937) = 13.44, p < .001$ ; Posttraumatic Stress,  $t(938) = 12.47, p < .001$ ; Dissociation,  $t(932) = 12.15, p < .001$ ; and Sexual Concerns,  $t(936) = 7.99, p < .001$ , subscales. Participation in BHJJ had a medium effect on trauma symptoms from enrollment to termination for all subscales except for Sexual Concerns where a small effect was observed.

### Recidivism and Successful Completion

For the entire sample of BHJJ youth, 67.1% ( $n = 1,315$ ) were identified as successful treatment completers. Other common termination reasons included termination due to out of home placement (7.6%,  $n = 148$ ) and dropping out of services (6.4%,  $n = 125$ ). We examined whether successful treatment completers and non-completers differed on demographic and behavioral health variables at intake. "A significantly larger proportion of non-White youth were non-completers,  $\chi^2(1) = 10.78, p < .001$ . Behavioral health data at intake indicated that non-completers had significantly higher levels of anger,  $t(1084.47) = 3.41, p < .001$ ; higher levels of problem severity as reported by

**Table 3.** Paired-Samples *t* Tests TSCC.

	Intake			Termination			<i>t</i>	<i>d</i>
	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>		
Anxiety	3.72	3.90	939	2.52	3.22	939	10.29***	.34
Depression	4.93	4.64	939	3.13	3.61	939	13.31***	.43
Anger	7.67	5.84	938	5.28	4.95	938	13.44***	.36
Posttraumatic stress	5.90	5.47	939	3.98	4.54	939	12.47***	.41
Dissociation	5.75	4.96	933	4.00	4.24	933	12.15***	.40
Sexual concerns	3.36	3.50	937	2.52	3.31	937	7.99***	.26

Note. TSCC = The Trauma Symptom Checklist for Children.

\*\*\* $p < .001$ .

workers,  $t(1184.01) = 4.73$ ,  $p < .001$ , and parents,  $t(1684) = 2.34$ ,  $p < .05$ ; and lower levels of functioning as reported by workers,  $t(1838) = -5.54$ ,  $p < .001$ , and parents,  $t(1691) = -3.04$ ,  $p < .01$ .

At 12 months after enrollment, 17.9% ( $n = 285$ ) were charged with a felony and 42.9% ( $n = 681$ ) were adjudicated delinquent on any type of charge. Among youth who were charged with a felony in the 12 months prior to their enrollment in BHJJ, 29.6% ( $n = 137$ ) were charged with a new felony in the 12 months after enrollment.

### Predicting Outcomes From Intake Characteristics

To identify predictors of treatment success and recidivism in the year following enrollment in the BHJJ program, we estimated logistic regression models (see Table 4). These models represent a subset of the overall sample presented in the previous sections. Data on expulsion or suspension from school were only collected for youth enrolled since 2009 ( $n = 1,370$ ) of which 1,056 had available termination data. The following analyses were restricted to these youth. Recidivism data are further limited to youth who had 12 months to recidivate after enrollment and who were 17 years or younger at the time of enrollment into the program. Missing data were handled using listwise deletion.

At termination, 68.8% ( $n = 631$ ) of youth were identified by workers as successful treatment completers. To predict successful treatment completion, we examined demographic, behavioral health, and criminogenic risk variables. The model chi-square test indicated that the model significantly distinguished between successful and unsuccessful treatment completers,  $\chi^2(13) = 47.30$ ,  $p < .001$ . Race,  $B = .51$ ,  $p < .01$ ; substance use variables,  $B = -.17$ ,  $p < .05$ ; and the presence of co-occurring mental and substance use diagnoses,  $B = -.33$ ,  $p < .05$ , significantly predicted successful treatment completion. The odds ratio indicated a 67% increase in the odds of successful completion for White youth in comparison with non-White youth. Substance use was an index of three measures, onset of drug use before age 12, past 30 day alcohol use,

**Table 4.** Logistic Regression Model Predicting Successful Completion and New Adjudications 12 Months After Intake.

	Successful completion		Adjudication	
	B	Exp(B)	B	Exp(B)
Male	-.05	0.95	.17	1.18
White <sup>a</sup>	.51**	1.67	-.66***	0.51
Age	-.09	0.91	.02	1.02
Juvenile justice history	-.01	0.99	.24***	1.27
Substance use	-.17*	0.84	.43*	1.54
Co-occurring <sup>b</sup>	-.33*	0.72	-.00	0.99
History of abuse <sup>c</sup>	-.19	0.83	.11	1.11
Suspended/expelled from school	-.22	0.80	.39*	1.48
$\chi^2$	47.30***		89.83***	
n	917		749	

Note. To control for treatment programming and conditions specific to each BHJJ county, a categorical variable denoting the county in which the youth was enrolled was also included in the model.

<sup>a</sup>Non-White is the reference category.

<sup>b</sup>The reference category includes youth who do not have co-occurring mental health and substance use diagnoses.

<sup>c</sup>History of abuse includes a lifetime history of physical and sexual abuse as well as witnessing domestic violence. Youth who have no history of abuse is the reference category.

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

and past 30 day drug use. Each one-unit increase in the substance use index is associated with a 16% decrease in the odds of successfully completing treatment. Having a co-occurring mental health and substance use diagnosis is associated with a 28% decrease in the odds of successful treatment completion.

The same variables were used to predict new adjudications in the 12 months following enrollment into the program. Slightly less than half (49.7%;  $n = 372$ ) of BHJJ youth had a new adjudication in the 12 months after enrollment into the program. The model was statistically reliable in distinguishing between youth who had new adjudications and those who did not,  $\chi^2(13) = 89.83$ ,  $p < .001$ . Race,  $B = -.66$ ,  $p < .001$ ; previous juvenile justice involvement,  $B = .24$ ,  $p < .001$ ; substance use variables,  $B = .43$ ,  $p < .05$ ; and suspension or expulsion from school in the 12 months prior to enrollment,  $B = .39$ ,  $p < .05$ , significantly predicted new adjudications. Odds ratios indicated a 49% decrease in the odds of a White youth being adjudicated delinquent in the 12 months following enrollment in comparison with non-White youth. Juvenile justice history is an index of four variables including initial court involvement prior to age 13, a delinquent adjudication 12 months prior to enrollment, a felony charge 12 months prior to enrollment, and total charges prior to enrollment. A one-unit increase in the juvenile justice history index was associated with a 27% increase in the odds of a new adjudication. For the substance use index, a one-unit increase was associated with a 54% increase in the odds of a new adjudication. Being suspended or expelled from

school in the 12 months prior to enrollment is associated with a 48% increase in the odds of a new adjudication.

## Discussion

Results presented here highlight several issues related to juvenile justice diversion programs and the youth they serve. We examined the profile of youth enrolled in the BHJJ program. Data indicated while virtually all youth presented with a mental health diagnosis, nearly 40% were diagnosed with a co-occurring substance use disorder. Caregivers reported youth suffered physical and sexual abuse and were exposed to domestic violence. In addition, many youth exhibited suicidal ideation and nearly 15% attempted suicide in the past. The majority of youth came from families that experienced mental illness and substance abuse. These data provide a more comprehensive picture of the youth enrolled in these programs and can be used to inform the types of assessments and treatments necessary to effectively serve these youth. For example, jurisdictions planning to implement a diversion program similar to BHJJ should consider including trauma-informed treatment practices that address the trauma reported by juvenile justice-involved youth.

Multiple outcomes were examined, including change in behavioral health from enrollment to termination, recidivism, and the factors that predict successful treatment completion and future adjudications. Youth exhibited statistically significant improvements in trauma symptoms, psychological functioning, and problem severity from enrollment to termination. In addition, the current study enhances our understanding of the effects diversion programming has on additional outcomes, such as behavioral health improvements. Although recidivism is certainly a critical indicator of program success, capturing data related to behavioral health outcomes is equally important, especially for diversion programs targeting juvenile justice-involved youth with behavioral health issues.

Our analyses examined predictors of successful treatment completion and future adjudications. Results indicated non-White youth, youth with higher scores on the substance use index, and youth with co-occurring mental health and substance use disorders were less likely to complete treatment successfully. The finding that non-White youth were less likely to complete BHJJ treatment successfully is consistent with recent research that found non-White participants are less likely to successfully complete substance use treatment than White participants (Arndt, Acion, & White, 2013; Cooper, MacMaster, & Rasch, 2010; Substance Abuse and Mental Health Services Administration, 2009). We examined potential causes for this difference in our multivariate model and found no racial differences on any of the significant predictors of successful treatment completion. Although it is unclear from our data why this discrepancy exists, one possible reason is the level of cultural competency with which the treatment was delivered.

Cultural competency is an important aspect of the therapeutic relationship and has been found to affect the connection between treatment provider and client, client satisfaction with services, and the knowledge, skills, and attitudes of health professionals (Beach

et al., 2005; Whaley & Davis, 2007). Although we asked a question about the cultural competency of the services delivered through the BHJJ program, most of the respondents were youth who completed the program successfully. We examined data from 38 non-White youth who completed the program unsuccessfully and found high levels of satisfaction with the cultural competency of the BHJJ services they received. Although the sample size for this group was quite low, these results may suggest that issues related to cultural competency did not account for the differences in treatment success.

Youth with co-occurring disorders and youth with higher scores on the substance use index were also less likely to complete BHJJ successfully. These results are consistent with previous research that found youth with co-occurring disorders have difficulties staying in treatment, are more likely to relapse than youth with substance use disorders only, and are generally less successful in treatment programs than youth with mental health disorders (Grella, Hser, Joshi, & Rounds-Bryant, 2001; Hawkins, 2009). An estimated 40% to 60% of individuals with co-occurring disorders terminate treatment early (Hawkins, 2009; Kazdin, 1996; Wierzbicki & Pekarik, 1993). The complexity of treating youth with co-occurring disorders and the effectiveness of the interventions available have a significant impact on the success of these youth in treatment and diversion programs.

Non-White youth, youth with higher scores on the substance use and juvenile justice indices, and youth suspended or expelled in the 12 months prior to their BHJJ enrollment were more likely to have a new adjudication 12 months after enrollment. Previous research has found non-Whites involved in diversion programs, or in the juvenile justice system in general, recidivate more quickly and severely than Whites (Hoeve, McReynolds, Wasserman, & McMillan, 2013; Jeong, Lee, & Martin, 2013). The causes for these differences are likely multi-faceted, but one reason may be related to the issue of disproportionate minority contact (DMC). DMC refers to the overrepresentation of minority youth at all points in the juvenile justice system. Research has found that non-Whites are more likely to be contacted, arrested, and referred to the justice system at higher rates than Whites, even after controlling for additional risk and offending factors (Huizinga et al., 2007; Leiber, 2002).

Youth with higher scores on the juvenile justice history index were more likely to receive future adjudications. This finding is consistent with research that has found previous juvenile court involvement to be a significant predictor of future court involvement and a key component of criminogenic risk (Cottle, Lee, & Heilbrun, 2001; DeLisi, Neppl, Lohman, Vaughn, & Shook, 2013; Hoeve et al., 2013; Jeong et al., 2013; Latessa et al., 2009; Schumacher & Kurz-Gwen, 2000; Trulson, DeLisi, & Marquart, 2011). Youth with higher scores on the substance use index were also more likely to receive future adjudications, a finding consistent with previous research (Bonta, Law, & Hanson, 1998; Cottle et al., 2001; Dowden & Brown, 2002; Trulson et al., 2011).

Last, youth who were suspended or expelled from school in the 12 months prior to their enrollment were more likely to receive future adjudications. Research has shown that suspensions and expulsions can have both short-and long-term significant and negative consequences for students removed from school including engaging in delinquency and crime. In their research on suspended children aged 12 to 16, Hemphill

and colleagues found that after controlling for risk and protective factors, suspended students were significantly more likely to engage in antisocial and violent behavior 12 months later than non-suspended students (Hemphill et al., 2009; Hemphill, Toumbourou, Herrenkohl, McMorris, & Catalano, 2006).

### *Limitations*

The present study provided evidence that BHJJ significantly affected behavioral health and juvenile justice outcomes for youth. However, this evaluation was limited in several important ways. First, there was no control group available for comparison with the BHJJ sample and youth were not randomly assigned to the BHJJ project. Youth from the participating counties who met eligibility criteria were recommended for enrollment. No wait-list control or true control group existed. Although the data indicated that the BHJJ participants demonstrated improved behavioral health and juvenile justice outcomes, we are unable to say how those improvements would compare with youth assigned to other diversion programs or to treatment as usual.

Another limitation is the lack of a true measure of criminogenic risk for use in predicting recidivism. For purposes of these analyses, we approximated criminogenic risk by creating a proxy measure using data collected from several questionnaires. Although we used the validated OYAS (Latessa et al., 2009) as a guide, we were unable to fully duplicate the items on this measure. A full measure of criminogenic risk may provide additional clarity on the impact of criminogenic risk domains on recidivism in juvenile justice diversion programs.

Last, we were unable to control for specific types of behavioral health treatment provided through the program. While some BHJJ counties used one evidence-based treatment model, others selected from a menu of options and we were not privy to the exact nature of the type of treatment model or models each youth received. Although this created a diverse sample of youth in need of behavioral health treatment, we were not able to identify which treatment modality was applied to each youth enrolled in BHJJ. Although we controlled for county of participation in our models, we were unable to control for specific evidence-based practice received. Therefore, the results should be interpreted in the context of general juvenile justice diversion programming for youth with behavioral health issues, and not as an examination of the effectiveness of specific types of evidence-based treatment models for juvenile justice-involved youth. The BHJJ program was made up of multiple evidence-based treatments depending on the needs of the youth in each county. Although this created some issues from a data analysis standpoint, counties were able to tailor their programs toward the specific needs of their population.

### *Implications*

Despite the limitations of the study, the findings add to the growing body of research supporting the effectiveness of juvenile justice diversion programs, and specifically, diversion programs targeting youth with behavioral health issues. Overall, BHJJ



allowed courts to provide enhanced screening, assessment, and treatment specifically targeted to the needs of the youth being served. Data presented here do not provide evidence that BHJJ youth fared better than youth in other diversion programs. The data reported in this study do, however, provide information on the youth being served by the program, evidence of behavioral health improvement from enrollment to termination for BHJJ youth, and an examination of the factors that predict treatment completion and recidivism.

Although we found that certain predictors led to greater odds of both unsuccessful treatment completion and recidivism, several variables had no impact on these outcomes. Gender, age, the type of mental health diagnosis (mental health, substance use, co-occurring), and history of abuse had no impact on future recidivism. Gender, age, scores on the juvenile justice history index, history of abuse, and suspensions/expulsions from school had no impact on successful treatment completion. These findings indicate that diversion programs may be appropriate for a large segment of juvenile justice-involved youth with varying histories of behavioral health issues and juvenile justice involvement.

Across several outcomes, substance use was predictive of poor program outcomes. These results point to the importance of providing youth who have substance use issues effective substance use treatment in addition to any necessary mental health treatment. Traditionally, mental health treatment and substance abuse treatment were delivered either consecutively or in parallel and often by two different clinicians (Drake, Mueser, Brunette, & McHugo, 2004). Recently, juvenile treatment programs have been developed that treat mental health and substance issues concurrently, and research supports the effectiveness of this approach (Hills & Keator, 2014; Kinscherff & Coccozza, 2014; Shepler, Newman, Cleminshaw, Webb, & Baltrinic, 2013). For example, ICT was designed as an integrated treatment program for youth with co-occurring disorders (Cleminshaw, Shepler, & Newman, 2005; Canary, Shepler, & Fox, 2014; Shepler et al., 2013). To be eligible for ICT, a youth must have both a mental health and substance use diagnosis, and the mental health and substance use treatment is combined into one treatment plan and delivered by one therapist. Given the high rates of juvenile justice-involved youth with co-occurring disorders (Hussey, Drinkard, Falletta, & Flannery, 2008; Skowrya & Coccozza, 2006), models such as ICT should be considered by jurisdictions when developing the menu of behavioral health treatment available in diversion programs.

Despite evidence of their success, the availability of diversion options for juvenile justice-involved youth with behavioral health issues is often dependent on the availability of funding for such programs. In addition to producing significant behavioral outcomes, diversion programming is often a much more cost-effective option compared with traditional court processing (Greenwood, 2008; Justice Policy Institute, 2009; Small, Reynolds, O'Conner, & Cooney, 2005; Washington State Institute for Public Policy, 2013). A significant cost savings can be realized by diverting these youth from the juvenile justice system and into evidence and community-based behavioral health treatment. However, as the number of diversion programs increase, the stress on already overburdened behavioral health agency budgets will increase. It is

critical that some of the money saved through diversion efforts flow back into the communities that are now responsible for providing the behavioral health treatment previously provided in juvenile justice facilities.

Although many previous diversion evaluations focused on juvenile justice-related outcomes such as recidivism, our study is one of the few that examined measures of behavioral health functioning, problem severity, and trauma symptoms in such a large sample of youth. The significant impact of BHJJ on these behavioral health outcomes provides evidence to behavioral health agencies that juvenile justice diversion programming can have a significant impact on the key indicators on which their agencies are focused. Our results may facilitate conversations between juvenile justice and behavioral health agencies about cost sharing or using braided funding to help support diversion programming such as BHJJ. Since the inception of BHJJ, both the ODYS and the Ohio Department of Mental Health and Addiction Services (OHMHAS) have shared responsibility for funding the program. This shared funding approach is not always the norm, as juvenile justice agencies often pay for either the majority or all of the cost associated with juvenile justice diversion programming. A blended funding approach would reduce the financial burden on one agency and ultimately lead to greater sustainability of diversion programming for youth.

## **Conclusion**

The results presented here suggest BHJJ is effective at improving behavioral health outcomes in juvenile justice-involved youth. Our results add to the growing literature that supports the effectiveness of juvenile diversion programs and speaks specifically to programs that target youth with behavioral health issues. Although additional research is needed to confirm the impact these programs can have on juvenile justice-involved youth with behavioral health concerns, preliminary outcomes from BHJJ are promising. As more juvenile justice agencies turn to diversion as an effective alternative to traditional court processing, it is important that researchers continue to evaluate both the juvenile justice and behavioral health outcomes associated with these diversion programs. Future research should examine the impact specific evidence-based practices have on diversion outcomes as well as differential effects that may be present based on race or gender of the youth.

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## References

- Abram, K. M., Teplin, L. A., Charles, D. R., Longworth, S. L., McClelland, G. M., & Dulcan, M. K. (2004). Posttraumatic stress disorder and trauma in youth in juvenile detention. *Archives of General Psychiatry, 61*, 403-410. doi:10.1001/archpsyc.61.4.403
- American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.). Washington, DC: Author.
- Arndt, S., Acion, L., & White, K. (2013). How the states stack up: Disparities in substance abuse outpatient treatment completion rates for minorities. *Drug and Alcohol Dependence, 132*, 547-554. doi:10.1016/j.drugalcdep.2013.03.015
- Arroyo, W. (2001). PTSD in children and adolescents in the juvenile justice system. In J. M. Oldham & M. B. Riba (Series Eds.) & S. Eth (Vol. Ed.), *Review of Psychiatry Series: Vol. 20, Number 1. PTSD in children and adolescents* (pp. 59-86). Washington, DC: American Psychiatric Publishing.
- Beach, M. C., Price, E. G., Gary, T. L., Robinson, K. A., Gozu, A., Palacio, A., & Cooper, L. A. (2005). Cultural competence: A systematic review of health care provider educational interventions. *Medical Care, 43*, 356-373.
- Bonta, J., Law, M., & Hanson, K. (1998). The prediction of criminal and violent recidivism among mentally disordered offenders: A meta-analysis. *Psychological Bulletin, 123*, 123-142. doi:10.1037/0033-2909.123.2.123
- Briere, J. (1996). *Trauma Symptom Checklist for Children (TSCC): Professional manual*. Odessa, FL: Psychological Assessment Resources.
- Caffman, E., Feldman, S., Wathernan, J., & Steiner, H. (1998). Posttraumatic stress disorder among female juvenile offenders. *Journal of the American Academy of Child & Adolescent Psychiatry, 37*, 1209-1216. doi:10.1097/00004583-199811000-00022
- Cleminshaw, H., Shepler, R., & Newman, I. (2005). The Integrated Co-occurring Treatment (ICT) model: A promising practice for youth with mental health and substance abuse disorders. *Journal of Dual Diagnosis, 1*, 85-94. doi:10.1300/J374v01n03\_11
- Cocozza, J., & Skowrya, K. (2000). Youth with mental health disorders: Issues and emerging responses. *Juvenile Justice, 7*, 3-13.
- Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.
- Colins, O., Vermeiren, R., Vreugdenhil, C., van den Brink, W., Doreleijers, T., & Broekaert, E. (2010). Psychiatric disorders in detained male adolescents: A systematic literature review. *Canadian Journal of Psychiatry, 55*, 255-263.
- Colwell, B., Villarreal, S. F., & Espinosa, E. M. (2012). Preliminary outcomes of a pre-adjudication diversion initiative for juvenile justice involved youth with mental health needs in Texas. *Criminal Justice and Behavior, 39*, 447-460. doi:10.1177/0093854811433571
- Cooper, R. L., MacMaster, S., & Rasch, R. (2010). Racial differences in retention in residential substance abuse treatment: The impact on African American men. *Research on Social Work Practice, 20*, 183-190. doi:10.1177/1049731509338936
- Cottle, C. C., Lee, R. J., & Heilbrun, K. (2001). The prediction of criminal recidivism in juveniles a meta-analysis. *Criminal Justice and Behavior, 28*, 367-394. doi:10.1177/0093854801028003005
- Cuellar, A. E., McReynolds, L., & Wasserman, G. (2006). A cure for crime: Can mental health treatment diversion reduce crime among youth? *Journal of Policy Analysis and Management, 25*, 197-214. doi:10.1002/pam.20162

- DeLisi, M., Neppel, T. K., Lohman, B. J., Vaughn, M. G., & Shook, J. J. (2013). Early starters: Which type of criminal onset matters most for delinquent careers? *Journal of Criminal Justice, 41*, 12-17. doi:10.1016/j.jcrimjus.2012.10.002
- Dennis, M. L., White, M., Titus, J. C., & Unsicker, J. (2008). *Global Appraisal of Individual Needs (GAIN): Administration guide for the GAIN and related measures (version 5)*. Bloomington, IL: Chestnut Health Systems. Retrieved from [http://www.gaincc.org/\\_data/files/Instruments%20and%20Reports/Instruments%20Manuals/GAIN-I%20manual\\_combined\\_0512.pdf](http://www.gaincc.org/_data/files/Instruments%20and%20Reports/Instruments%20Manuals/GAIN-I%20manual_combined_0512.pdf)
- Dowden, C., & Brown, S. L. (2002). The role of substance abuse factors in predicting recidivism: A meta-analysis. *Psychology, Crime & Law, 8*, 243-264. doi:10.1080/10683160208401818
- Drake, R. E., Mueser, K. T., Brunette, M. F., & McHugo, G. J. (2004). A review of treatments for people with severe mental illnesses and co-occurring substance use disorders. *Psychiatric Rehabilitation Journal, 27*, 360-374. doi:10.2975/27.2004.360.374
- Feinstein, R. A., Lampkin, A., Lorish, C. D., Klerman, L. V., Maisiak, R., & Oh, M. K. (1998). Medical status of adolescents at time of admission to a juvenile detention center. *Journal of Adolescent Health, 22*, 190-196. doi:10.1016/S1054-139X(97)00169-9
- Flannery, D., McTaggart, M., Buckeye, L., & Singer, M. (2002). Evaluation of mental health services to juvenile offenders. In D. Roth (Ed.), *New research in mental health* (Vol. 15, pp. 339-343). Columbus: Ohio Department of Mental Health.
- Ford, J. D., Chapman, J. F., Hawke, J., & Albert, D. (2007). *Trauma among youth in the juvenile justice system: Critical issues and new directions*. Delmar, NY: National Center for Mental Health and Juvenile Justice.
- Ford, J. D., Hartman, J. K., Hawke, J., & Chapman, J. (2008). Traumatic victimization, posttraumatic stress disorder, suicidal ideation, and substance abuse risk among juvenile justice-involved youths. *Journal of Child & Adolescent Trauma, 1*, 75-92. doi:10.1080/19361520801934456
- Friedman, R., Katz-Levy, J., Manderscheid, R., & Sondheimer, D. (1996). Prevalence of serious emotional disturbance in children and adolescents. In R. Manderscheid & M. A. Sonnenschein (Eds.), *Mental health in the United States* (pp. 71-89). Rockville, MD: U.S. Department of Health and Human Services.
- Garland, A. F., Hough, R. L., McCabe, K. M., Yeh, M. A. Y., Wood, P. A., & Aarons, G. A. (2001). Prevalence of psychiatric disorders in youths across five sectors of care. *Journal of the American Academy of Child & Adolescent Psychiatry, 40*, 409-418. doi:10.1097/00004583-200104000-00009
- Goldstrom, I., Jaiquan, F., Henderson, M., Male, A., & Manderscheid, R. W. (2000). The availability of mental health services to young people in juvenile justice facilities: A national survey. In R. W. Manderscheid & M. J. Henderson (Eds.), *Mental health, United States, 2000* (DHHS Publication No. SMA-01-3537, pp. 248-268). Washington, DC: U.S. Government Printing Office.
- Greenwood, P. (2008). Prevention and intervention programs for juvenile offenders. *The Future of Children, 18*, 185-210. doi:10.1353/foc.0.0018
- Grella, C. E., Hser, Y., Joshi, V., & Rounds-Bryant, J. (2001). Drug treatment outcomes for adolescents with comorbid mental and substance use disorders. *Journal of Nervous and Mental Disease, 189*, 384-392.
- Grisso, T., & Barnum, R. (2003). *Massachusetts Youth Screening Instrument—Version 2: User's manual and technical report*. Sarasota, FL: Professional Resource Press.
- Hawkins, E. H. (2009). A tale of two systems: Co-occurring mental health and substance abuse disorders treatment for adolescents. *Annual review of psychology, 60*, 197-227. doi:10.1146/annurev.psych.60.110707.163456

- Hemphill, S. A., Smith, R., Toumbourou, J. W., Herrenkohl, T. I., Catalano, R. F., McMorris, B. J., & Romaniuk, H. (2009). Modifiable determinants of youth violence in Australia and the United States: A longitudinal study. *The Australian & New Zealand Journal of Criminology*, *42*, 289-309.
- Hemphill, S. A., Toumbourou, J. W., Herrenkohl, T. I., McMorris, B. J., & Catalano, R. F. (2006). The effect of school suspensions and arrests on subsequent adolescent antisocial behavior in Australia and the United States. *Journal of Adolescent Health*, *39*, 623-784. doi:10.1375/acri.42.3.289
- Hennessey, M., Ford, J. D., Mahoney, K., Ko, S., & Siegfried, C. (2004). *Trauma among girls in the juvenile justice system*. Los Angeles, CA: National Child Traumatic Stress Network.
- Hills, H., & Keator, K. (2014). *New directions to address co-occurring mental disorders* (Advancing juvenile drug treatment courts: Policy and program briefs). Reno, NV: National Center for Mental Health and Juvenile Justice and the National Council of Juvenile and Family Court Judges.
- Hoeve, M., McReynolds, L. S., Wasserman, G. A., & McMillan, C. (2013). The influence of mental health disorders on severity of reoffending in juveniles. *Criminal Justice and Behavior*, *40*, 289-301. doi:10.1177/0093854812459639
- Hoge, R. D. (2002). Standardized instruments for assessing risk and need in youthful offenders. *Criminal Justice and Behavior*, *29*, 380-396. doi:10.1177/009385480202900403
- Huizinga, D., Thornberry, T. P., Knight, K. E., Lovegrove, R. L., Hill, K., & Farrington, D. P. (2007). *Disproportionate minority contact in the juvenile justice system: A study of differential minority arrest/referral to court in three cities. A report to the Office of Juvenile Justice and Delinquency Prevention* (NCJ Report No. 219743). Retrieved from <http://www.ncjrs.gov/pdffiles1/ojdp/grants/219743.pdf>
- Hussey, D. L., Drinkard, A. M., Falletta, L., & Flannery, D. (2008). Understanding clinical complexity in delinquent youth: Comorbidities, service utilization cost, and outcomes. *Journal of Psychoactive Drugs*, *40*, 85-95. doi:10.1080/02791072.2008.10399764
- Jeong, S., Lee, B. H., & Martin, J. H. (2013). Evaluating the effectiveness of a special needs diversionary program in reducing recidivism among mentally ill youthful offenders. *International Journal of Offender Therapy and Comparative Criminology*, *58*, 1058-1080. doi:10.1177/0306624X13492403
- Justice Policy Institute. (2009). *The costs of confinement: Why good juvenile justice policies make good financial sense*. Retrieved from [http://www.justicepolicy.org/images/upload/09\\_05\\_rep\\_costsofconfinement\\_jj\\_ps.pdf](http://www.justicepolicy.org/images/upload/09_05_rep_costsofconfinement_jj_ps.pdf)
- Kanary, P., Shepler, R., & Fox, M. (2014). *Developing effective policies for addressing the needs of court-involved youth with co-occurring disorders* (Advancing juvenile drug treatment courts: Policy and program briefs). Reno, NV: National Center for Mental Health and Juvenile Justice and the National Council of Juvenile and Family Court Judges.
- Kazdin, A. E. (1996). Dropping out of child psychotherapy: Issues for research and implications for practice. *Clinical Child Psychology and Psychiatry*, *1*, 133-156. doi:10.1177/1359104596011012
- Kinscherff, R., & Cocozza, J. (2014). *Developing effective policies for addressing the needs of court-involved youth with co-occurring disorders* (Advancing juvenile drug treatment courts: Policy and program briefs). Reno, NV: National Center for Mental Health and Juvenile Justice and the National Council of Juvenile and Family Court Judges.
- Ko, S. J., Ford, J. D., Kassam-Adams, N., Berkowitz, S. J., Wilson, C., Wong, M., . . . Layne, C. M. (2008). Creating trauma-informed systems: Child welfare, education, first responders, health care, juvenile justice. *Professional Psychology: Research and Practice*, *39*, 396-404. doi:10.1037/0735-7028.39.4.396

- Kretschmar, J. M., Butcher, F., & Flannery, D. (2013). An evaluation of the behavioral health/ juvenile justice initiative. *Behavioral Health in Ohio: Current Research Trends, 1*(2), 18-30.
- Lanktree, C. B., Gilbert, A. M., Briere, J., Taylor, N., Chen, K., Maida, C. A., & Saltzman, W. R. (2008). Multi-informant assessment of maltreated children: Convergent and discriminant validity of the TSCC and TSCYC. *Child Abuse & Neglect, 32*, 621-625. doi:10.1016/j.chiabu.2007.10.003
- Latessa, E., Lovins, B., & Ostrowski, K. (2009). *The Ohio Assessment System: Final report*. Cincinnati, OH: Center for Criminal Justice Research, University of Cincinnati. Retrieved from [http://www.uc.edu/content/dam/uc/ccjr/docs/reports/project\\_reports/OYAS\\_final\\_report.pdf](http://www.uc.edu/content/dam/uc/ccjr/docs/reports/project_reports/OYAS_final_report.pdf)
- Leiber, M. J. (2002). Disproportionate minority confinement (DMC) of youth: An analysis of state and federal efforts to address the issue. *Crime & Delinquency, 48*, 3-45. doi:10.1177/001112870204800101
- Merikangas, K. R., He, J. P., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., . . . Swendsen, J. (2010). Lifetime prevalence of mental disorders in US adolescents: Results from the National Comorbidity Study—Adolescent Supplement (NCS-A). *Journal of the American Academy of Child & Adolescent Psychiatry, 49*, 980-989.
- Miller, F. G., & Lazowski, L. E. (2001). *The adolescent SASSI-2 manual: Identifying substance use disorders*. Springville, IN: SASSI Institute.
- Novins, D. K., Duclos, C. W., Martin, C., Jewett, C. S., & Manson, S. M. (1999). Utilization of alcohol, drug, and mental health treatment services among American Indian adolescent detainees. *Journal of the American Academy of Child & Adolescent Psychiatry, 38*, 1102-1108. doi:10.1097/00004583-199909000-00013
- Ogles, B. M., Melendez, G., Davis, D. C., & Lunnen, K. M. (2001). The Ohio Scales: Practical outcome assessment. *Journal of Child and Family Studies, 10*, 199-212. doi:1062-102401/0600-0199519.5010
- Otto, R. K., Greenstein, J. J., Johnson, M. K., & Friedman, R. M. (1992). Prevalence of mental disorders among youth in the juvenile justice system. In J. J. Coccozza (Ed.), *Responding to the mental health needs of youth in the juvenile justice system* (pp. 7-48). Seattle, WA: The National Coalition for the Mentally Ill in the Criminal Justice System.
- Petrosino, A., Turpin-Petrosino, C., & Guckenburg, S. (2010). Formal system processing of juveniles: Effects on delinquency. *Campbell Systematic Reviews, 1*, 1-88.
- Schumacher, M., & Kurz-Gwen, A. (2000). *The 8% solution: Preventing serious, repeat juvenile crime*. Thousand Oaks, CA: SAGE.
- Schwalbe, C. S., Gearing, R. E., MacKenzie, M. J., Brewer, K. B., & Ibrahim, R. (2012). A meta-analysis of experimental studies of diversion programs for juvenile offenders. *Clinical Psychology Review, 32*, 26-33. doi:10.1016/j.cpr.2011.10.002
- Shepler, R., Newman, D., Clemishaw, H., Webb, T., & Baltrinic, E. (2013). A comparison study of treatment programs for youth offenders with co-occurring disorders. *Behavioral Health in Ohio: Current Research Trends, 1*(2), 7-17.
- Shufelt, J. L., & Coccozza, J. J. (2006). *Youth with mental health disorders in the juvenile justice system: Results from a multi-state prevalence study*. Delmar, NY: National Center for Mental Health and Juvenile Justice.
- Skowrya, K., & Coccozza, J. (2006). *A blueprint for change: Improving the system response to youth with mental health needs involved in the juvenile justice system*. Delmar, NY: National Center for Mental Health and Juvenile Justice.

- Skowrya, K., & Powell, S. (2006). *Juvenile diversion: Programs for justice-involved youth with mental health disorders*. Delmar, NY: National Center for Mental Health and Juvenile Justice.
- Small, S. A., Reynolds, A. J., O'Connor, C., & Cooney, S. M. (2005). *What works, Wisconsin: What science tells us about cost-effective programs for juvenile delinquency prevention*. Madison: University of Wisconsin-Madison.
- Soler, M. (2002). Health issues for adolescents in the justice system. *Journal of Adolescent Health, 31*, 321-333. doi:10.1016/S1054-139X(02)00494-9
- Steinberg, A. M., Brymer, M. J., Decker, K. B., & Pynoos, R. S. (2004). The University of California at Los Angeles post-traumatic stress disorder reaction index. *Current Psychiatry Reports, 6*, 96-100.
- Steiner, H., Garcia, I. G., & Matthews, Z. (1997). Posttraumatic stress disorder in incarcerated juvenile delinquents. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*, 357-365. doi:10.1097/00004583-199703000-00014
- Substance Abuse and Mental Health Services Administration. (2009). *Predictors of substance abuse treatment completion or transfer to further treatment, by service type*. Rockville, MD: Substance Abuse and Mental Health Services Administration, Office of Applied Studies.
- Sullivan, C. J., Veysey, B. M., Hamilton, Z. K., & Grillo, M. (2007). Reducing out-of-community placement and recidivism: Diversion of delinquent youth with mental health and substance use problems from the justice system. *International Journal of Offender Therapy and Comparative Criminology, 51*, 555-577. doi:10.1177/0306624X06296237
- Teplin, L. A., Abram, K. M., McClelland, G. M., Dulcan, M. K., & Mericle, A. A. (2002). Psychiatric disorders in youth in juvenile detention. *Archives of General Psychiatry, 59*, 1133-1143. doi:10.1001/archpsyc.59.12.1133
- Trulson, C. R., DeLisi, M., & Marquart, J. W. (2011). Institutional misconduct, delinquent background, and rearrest frequency among serious and violent delinquent offenders. *Crime & Delinquency, 57*, 709-731. doi:10.1177/0011128709340224
- U.S. Department of Health and Human Services. (2005). *National evaluation of the comprehensive community mental health services for children and their families program*. Rockville, MD: Author.
- U.S. Department of Justice. (2005). *Department of Justice activities under Civil Rights of Institutionalized Persons Act: Fiscal year 2004*. Washington, DC: Author.
- Washington State Institute for Public Policy. (2013). *Benefit-cost technical manual: Methods and user guide* (Document No. 13-10-1201b). Olympia, WA: Author.
- Wasserman, G. A., & McReynolds, L. S. (2011). Contributors to traumatic exposure and posttraumatic stress disorder in juvenile justice youths. *Journal of Traumatic Stress, 24*, 422-429. doi:10.1002/jts.20664
- Wasserman, G. A., McReynolds, L. S., Lucas, C., Fisher, P., & Santos, L. (2002). The voice DISC-IV with incarcerated male youths: Prevalence of disorder. *Journal of the American Academy of Child & Adolescent Psychiatry, 41*, 314-321. doi:10.1097/00004583-200203000-00011
- Whaley, A. L., & Davis, K. E. (2007). Cultural competence and evidence-based practice in mental health services: A complementary perspective. *American Psychologist, 62*, 563-574. doi:10.1037/0003-066X.62.6.563
- Wierzbicki, M., & Pekarik, G. (1993). A meta-analysis of psychotherapy dropout. *Professional Psychology: Research and Practice, 24*, 190-195. doi:10.1037/073-7028.24.2.190

Wilson, H. A., & Hoge, R. D. (2012). The effect of youth diversion programs on recidivism: A meta-analytic review. *Criminal Justice and Behavior, 40*, 497-518. doi:10.1177/0093854812451089

### Author Biographies

**Jeff M. Kretschmar** is a research assistant professor at the Jack, Joseph, and Morton Mandel School of Applied Social Sciences and senior research associate at the Begun Center for Violence Prevention Research and Education at Case Western Reserve University. His areas of interest include childhood exposure to violence, trauma, juvenile justice, and domestic violence.

**Fredrick Butcher** is a research associate in the Begun Center for Violence Prevention Research and Education at Case Western Reserve University. His areas of research include youth exposure to violence, assessment of trauma, and juvenile justice systems and policy.

**Daniel J. Flannery** is the Semi J. and Ruth Begun professor and director of the Begun Center for Violence Prevention, Research and Education at the Jack, Joseph and Morton Mandel School of Applied Social Sciences at Case Western Reserve University. His primary areas of research are in youth violence prevention, the link between violence and mental health, and program evaluation. He is senior editor of the *Cambridge Handbook of Violent Behavior and Aggression* (2007) and author of *Wanted on Warrants: The Fugitive Safe Surrender Program* (2013).

**Mark I. Singer** is the Leonard W. Mayo professor of Family and Child Welfare and the deputy director of the Begun Center for Violence Prevention, Research and Education. He has an extensive clinical background working with emotionally disturbed and juvenile justice involved youths including directing two inpatient psychiatric units specializing in coexisting mental and drug disorders. He has published numerous articles in the areas of youth violence, child mental health and substance abuse.