# An Evaluation of the Behavioral Health/Juvenile Justice (BHJJ) Initiative: 2006-2015

## Cuyahoga County Results

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# CONTENTS

# EXECUTIVE SUMMARY: AN EVALUATION OF THE BEHAVIORAL HEALTH/JUVENILE JUSTICE (BHJJ) INITIATIVE: 2006 – 2015 CUYAHOGA COUNTY RESULTS

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Juvenile justice-involved youth with serious behavioral health issues often have inadequate and limited access to care to address their complex and multiple needs. Ohio's Behavioral Health/Juvenile Justice (BHJJ) initiative was intended to transform and expand the local systems' options to better serve these youth. Recent emphasis was placed on decreasing the population of ODYS facilities while providing alternatives to incarceration. Twelve counties participated in BHJJ in the newest biennium: Cuyahoga, Franklin, Cuyahoga, Hamilton, Lucas, Summit, Wayne, Holmes, Trumbull, Mahoning, Lorain, and Wood. BHJJ was funded by a partnership between the Ohio Departments of Youth Services (ODYS) and Mental Health and Addiction Services (OhioMHAS). The Begun Center for Violence Prevention Research and Education at Case Western Reserve University provided research and evaluation services for the program.

The BHJJ program diverts youth from local and state detention centers into more comprehensive, community-based mental and behavioral health treatment. The BHJJ program enrolled juvenile justice-involved youth between 10-18 years of age who met several of the following criteria: a DSM IV Axis I diagnosis, substantial mental status impairment, a co-occurring substance use/abuse problem, a pattern of violent or criminal behavior, and a history of multi-system involvement.

**Demographics and Youth Characteristics**

- 371 youth have been enrolled in BHJJ (50.7% male, 49.7% African American). In the past two years, more non-whites (74.4%) than whites (25.6%) and males (62.2%) than females (37.8%) have been enrolled.

- Youth averaged 2.8 Axis I diagnoses. Males were significantly more likely to be diagnosed with ADHD and Cannabis-related disorders. Females were more likely to be diagnosed with PTSD.

- Over 88% of males and 71% of females were diagnosed with both a mental health and substance use diagnosis.

- Caregivers reported that 36.7% of the females had a history of sexual abuse, 60.8% talked about suicide, and over 30% had attempted suicide. Over 62% of males and 77% of females had family members who were diagnosed with or showed signs of depression.

- According to the OYAS, nearly 78% of the youth served in Cuyahoga County were moderate or high risk.

- Twenty-eight percent of youth served in Cuyahoga County had felony charges in the 12 months prior to enrollment.

**Educational Information**

- Over 74% of the youth were suspended or expelled from school in the year prior to their enrollment. At termination, 77.8% of youth were attending school. At intake, 36.6% of youth earned mostly A's, B's, or C's while at termination, 57.4% of youth earned mostly A's, B's, or C's.

- At termination, workers reported that 62.1% of youth were attending school more than they were before starting treatment.

**Mental/Behavioral Health Outcomes**

- BHJJ youth reported a significant decrease in trauma symptoms from intake to termination.

- Results from the Ohio Scales indicated the caregiver, worker, and youth all reported increased youth functioning and decreased problem severity while in BHJJ treatment.

- Both males and females reported a decrease in past six month alcohol and marijuana use.

- Youth demonstrated a 70% reduction in the risk for out of home placement at the time of termination. A little more than 7% of successful completers and 52% of unsuccessful completers were at risk for out of home placement at termination.

- Over 87% of caregivers were satisfied with the services their child received through BHJJ and 94% agreed that the services received were culturally and ethnically sensitive.

**Termination and Recidivism Information**

- Sixty-eight percent of the youth terminated from the BHJJ program were identified locally as successful treatment completers. The average length of stay in the program was approximately 11 months (approximately 8 months for youth enrolled during previous biennium).

- Successful treatment completion in BHJJ produced lower percentages of subsequent juvenile court charges, felonies, misdemeanors, and delinquent adjudications than unsuccessful completion, although both groups demonstrated decreased juvenile court involvement after termination from BHJJ compared to before enrollment.

- One year after termination, 9.5% of successful treatment completers and 14.3% of unsuccessful treatment completers had a new felony charge. Of the youth entering BHJJ with at least one felony charge, about 21% were charged with a new felony in the 12 months following BHJJ termination.

- Thirteen of the 354 youth (3.7%) enrolled in Cuyahoga County for whom we had recidivism data were sent to an ODYS facility at any time following their enrollment in BHJJ.

## JUVENILE JUSTICE AND MENTAL HEALTH

Youth involved in the juvenile justice system report significant behavioral health impairment. While estimates vary, most studies report that between 65-75% of juvenile justice-involved (JJI) youth have at least one mental health or substance abuse disorder and 20% to 30% report suffering from a serious mental disorder (Cocozza & Skowyra, 2000; Shufelt & Cocozza, 2006; Teplin, Abram, McClelland, Dulcan, & Mericle, 2002; Wasserman, McReynolds, Lucas, Fisher, & Santos, 2002). Rates of similar mental health/substance use disorders among the general adolescent population are far lower (Cuellar, McReynolds, & Wasserman, 2006; Friedman, Katz-Levy, Manderscheid, & Sondheimer, 1996; Merikangas, et al., 2010; Otto, Greenstein, Johnson, & Friedman, 1992; U.S. Department of Health and Human Services, 1999).

Studies have found that JJI females are often more likely to suffer from mental health disorders than JJI males (Teplin et al., 2002; Nordess et al., 2002; Shufelt & Cocozza, 2006; Wasserman, McReynolds, Ko, Katz, & Carpenter, 2005). Driving this difference is the fact that Anxiety and Mood Disorders are far more common in JJI girls than JJI boys (Shufelt & Cocozza, 2006; Teplin et al., 2002; Wasserman et al., 2005). Not only are JJI girls more likely to report mental health disorders, they are also more likely to report co-occurring mental health and substance use disorders than JJI males (Abram, Teplin, McClelland, & Dulcan, 2003; Wasserman et al., 2005; Wasserman, McReynolds, Schwalbe, Keating, & Jones, 2010).

While it is clear that a significant percentage of JJI youth have mental health problems, many have not received help or treatment for these issues prior to entering the system. One study found that only 34% of juvenile detainees with Anxiety, Mood, or Disruptive Behavior Disorders had ever received prior mental health treatment (Novins, Duclos, Martin, Jewett, & Manson, 1999). In another study, only 17% of juvenile detainees reported previous mental health treatment by a psychiatrist or therapist (Feinstein et al., 1998). A SAMHSA-funded study reported that while 94% of juvenile justice facilities had some type of mental health services available to youth, the quality and comprehensiveness of these services varied greatly based on the facility (Goldstrom, Jaiquan, Henderson, Male, & Manderscheid, 1998). Goldstrom et al. (1998) reported that 71% of juvenile detention centers offer mental health screening while 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/MENTAL HEALTH DIVERSION PROGRAMS

The prevalence of juvenile justice youth with mental health issues is cause for alarm. While the juvenile justice system is often the first time a youth is screened for mental health problems, the system is often ill-prepared to properly treat these youth (Cocozza & Skowyra, 2000; Skowyra & 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 mental health issues and the lack of proper care in these facilities, many communities have developed diversion programs or mental health courts as an alternative to detention or incarceration. These programs allow for more in-depth assessment and

evaluation and more comprehensive and evidence-based treatment and supervision services than are available in typical juvenile justice facilities.

## OHIO'S BEHAVIORAL HEALTH/JUVENILE JUSTICE (BHJJ) INITIATIVE

Over 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 in lieu of a detention facility.

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. While small in scope, the pilot project was successful in reducing the number of youth with behavioral health issues committed to the ODYS.

In 2005, the state allocated new resources to the Behavioral Health/Juvenile Justice (BHJJ) project and funded several counties throughout Ohio to expand upon 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 JJI youth with mental health or substance use issues from detention and into community and evidence-based treatment. The state identified criteria to be used by participating counties to determine if a youth was appropriate for inclusion in the BHJJ project, including: a DSM-IV diagnosis, aged 10 to 18, substantial mental status impairment, co-occurring substance abuse, a pattern of criminal behavior, charged and/or adjudicated delinquent, a threat to public safety, exposed to trauma or domestic violence, and a history of multi-system involvement. Each county was able to determine which and how many criteria the youth had to meet to be eligible for participation.

Since 2006, 17 counties have been selected to participate in the BHJJ program. Urban, suburban, and rural counties have been included in the project. These counties were required to use evidence-based or evidence-informed treatment models; however, the state allowed each county to select the model that best fit 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 Multidimensional Family Therapy (MDFT).

While each county employs 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 are given a psychological assessment to determine if they meet criteria for inclusion in BHJJ. If the youth meets criteria and the youth and family agrees 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 or linked to the treatment agency responsible for providing the treatment services. In most cases the youth remains on probation supervision during their time in the BHJJ program. While residential placement 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.

A key component to the BHJJ program is the ongoing outcome evaluation provided by the Begun Center for Violence Prevention Research and Education at the Mandel School for Applied Social Sciences at Case Western Reserve University (Kretschmar, Butcher, & Flannery, 2016; Kretschmar, Butcher, Kanary, & Devens, 2015). The current evaluation report includes data from 2006 through June 30, 2015. For information or copies of previous evaluation reports, please contact Dr. Jeff Kretschmar at jeff.kretschmar@case.edu or visit (http://mha.ohio.gov/Default.aspx?tabid=136).

## MEASURES AND INSTRUMENTATION

All of the instruments collected as part of the BHJJ evaluation were in TeleForm© format. TeleForm© is a software program that allows for data transmission via fax machine, scanner, or .pdf file. Instruments are created using this software and once completed, can be faxed or scanned directly into a database.

### OHIO YOUTH PROBLEM, FUNCTIONING, AND SATISFACTION SCALES (OHIO SCALES)

The Ohio Scales (Ogles, Melendez, Davis, & Lunnen, 2001) were designed to assess clinical outcomes for children with severe emotional and behavioral disorders, and were developed primarily to track service effectiveness. The measure assesses four primary domains of outcomes with four subscales: Problem Severity, Functioning, Hopefulness, and Satisfaction with services. In the Ohio Scales–Caregiver version, the caregiver rates his/her child's problem severity and functioning, and the caregiver's satisfaction with services and hopefulness about caring for his or her child. In the Ohio Scales–Youth version, the youth rates his/her own problem severity and functioning, and his/her satisfaction with services and hopefulness about life or overall well-being. The Worker version does not include the Satisfaction or Hopefulness scales. A score is generated for each of the four subscales, with a total score for the scale generated by summing the items.

### TRAUMA SYMPTOM CHECKLIST FOR CHILDREN (TSCC)

The Trauma Symptom Checklist for Children (TSCC) is a 54-item Likert-type questionnaire containing six subscales designed to measure anxiety, anger, depression, posttraumatic stress, dissociation, and sexual concerns (Briere, 1996). Youth respond to a series of questions regarding the frequency of certain thoughts, events, or behaviors. Responses are made on a 4-point, 0-3 scale with "0" indicating "never" and "3" indicating "almost all the time".

### SUBSTANCE USE SURVEY – REVISED

This measure, adapted from the SAMHSA-funded Tapestry Project (a demonstration and research project that identifies, serves and follows youth and families from Cuyahoga County, Ohio, with significant behavioral and mental health needs), collects information reported by the youth about the frequency of his or her substance use, including tobacco, alcohol, marijuana, cocaine, painkillers, and several additional substances.

## ENROLLMENT AND DEMOGRAPHICS FORM (ENROLLMENT FORM)

This form permits program staff to record several important pieces of information including date of enrollment, reasons for BHJJ services, DSM-IV diagnoses, Global Assessment of Functioning (GAF) scores, and agencies with which the youth is involved. In addition, out-of-home placement status, risk for placement, and educational and vocational data are collected.

## CHILD INFORMATION UPDATE FORM (TERMINATION FORM)

This form is completed by the treatment staff at termination from the BHJJ program, and is used to record DSM-IV diagnoses, GAF score, date and reasons for termination from the program, and out-of-home placement risk. Educational and vocational data, as well as information related to contacts with the police are also captured.

## RECENT EXPOSURE TO VIOLENCE

This 26-item optional scale measures several youth-reported violent acts: threats, beatings, hitting, knife attacks, sexual abuse, and shootings (adapted from Singer, Anglin, Song, & Lunghofer, 1995). Youths respond to a 4-point scale ranging from "0" (never) to "3" (almost every day). Subjects report separately on violence they have experienced directly and violence they have witnessed. For threats, slapping/hitting, and beatings, questions are specific to the setting in which the violence has occurred: at home, at school, or in the neighborhood. The remaining items do not specify the setting in which the violence occurred. This scale, which has an acceptable internal consistency (Cronbach's alpha = .86), served as our measure of victimization.

## CAREGIVER INFORMATION QUESTIONNAIRE (INTAKE AND TERMINATION)

The Caregiver Information Questionnaire, adapted from SAMHSA/Center for Mental Health Services (2005), permits staff to record information including demographics, risk factors, family composition, physical custody of the child, abuse history, family history of mental health issues, the child's mental and physical health service use history, caregiver employment status, and child's presenting problems.

## YOUTH SERVICES SURVEY FOR FAMILIES

The Youth Services Survey for Families (YSSF) (SAMHSA) was designed to assess caregiver satisfaction with services the youth received, and if, as a result of those services, the youth is showing improved functioning. This measure was optional.

## RECIDIVISM

Recidivism can be defined in many ways: a new offense, a violation of probation, new adjudication, or commitment to ODYS. Recidivism is a standard measure of program success, especially as an indicator of treatment outcomes over time. For this evaluation, recidivism was defined in three ways; a new misdemeanor or felony charge, a new adjudication, and a placement in an ODYS facility any time after enrollment in the BHJJ program. These data are provided to the evaluators by the juvenile court in each participating county. Recidivism data are presented for youth prior to and after enrollment and termination from BHJJ.

## OHIO YOUTH ASSESSMENT SYSTEM (OYAS)

The OYAS is a criminogenic risk assessment tool designed to assist juvenile court staff with placement and treatment decisions based on a youth's risk score. The OYAS contains five distinct

versions of the tool administered at different points in the juvenile justice process: Diversion, Detention, Disposition, Residential, and Reentry. Youth receive a total score and fall into three risk levels; low, moderate, or high. Each county's juvenile court supplied OYAS data to the evaluators.

## DATA COLLECTION SCHEDULE

The evaluation contains both mandatory and optional questionnaires (see Table 1 and Table 2).

**Table 1. Required BHJJ Questionnaires**

| Measure | Who Completes | When Administered |
|---|---|---|
| **Ohio Scales** | Youth & Worker | Intake, every 3 months, Term |
| **Trauma Symptom Checklist for Children (TSCC)** | Youth | Intake, Term |
| **Substance Use Survey – Revised (SUS)** | Youth with Program Staff | Intake, every 6 months, Term |
| **Enrollment and Demographics Information Form (EDIF)** | Program Staff | Intake |
| **Child Information Update Form (CIUF)** | Program Staff | Term |
| **Caregiver Information Questionnaire – Intake (CIQ-I)** | Caregiver with Program Staff | Intake |

**Table 2. Optional BHJJ Questionnaires**

| Measure | Who Completes | When Administered |
|---|---|---|
| **Ohio Scales** | Caregiver | Intake, every 3 months, Term |
| **Recent Exposure to Violence Scale (REVS)** | Youth | Intake, Term |
| **Caregiver Information Questionnaire – Term (CIQ-F)** | Caregiver with Program Staff | Term |
| **Youth Service Survey for Families (YSSF)** | Caregiver | Term |

## PROJECT DESCRIPTION

Cuyahoga County's BHJJ model has evolved as a highly intensive structured program delivering effective, evidence-based treatment and culturally-appropriate services for serious juvenile offenders, ages 12 to 18, who exhibit serious behavioral health needs. These youth are juvenile justice-involved, residents of Cuyahoga County, adjudicated for misdemeanors or felonies, and have a history of multi-system involvement. Data provided by Ohio Department of Youth Services (ODYS) reflect that of all commitments from Cuyahoga County, nearly 95% are non-white and 94% male. Many of the youth enrolled in the BHJJ project are residents of the City of Cleveland, English speaking and indigent.

The BHJJ program within Cuyahoga County entails specialized Juvenile Court services, Care Coordination and a continuum of evidenced based treatment modalities which are the primary elements of the program. These include Juvenile Court's model After-Care program, Care Coordination, and intensive use of wraparound services. Access is also available to the evidenced based practices of Multi-Systemic Therapy & Integrated Co-occurring Treatment. To further align with the design intent of the BHJJ program, the provision of services are delivered within a youth's respective community in their natural environment.

The BHJJ model shifted upon the 2013-2015 grant period, as all BHJJ –funded positions were employed directly through the court. This made immediate improvement in communication and coordination regarding both a youth's legal status and treatment needs. A more cohesive team was formed, providing accurate and rapid responses to each family's needs. Additionally, the BHJJ team has access to a dedicated crisis stabilization bed. Services include crisis intervention, stabilization, comprehensive diagnostic assessment, psychiatric consultations, evaluation, and medication management. The aforementioned allows a crisis to be managed by providing a short term solution and ultimately avoiding the need for an out of home residential placement. Overall, since 2011, the BHJJ Project has seen its residential placements reduced by 70%.

***Project Referral Process:*** BHJJ participants are identified by Probation Officers, Jurists, Alternative Case Planning (ACP) Review Committee or the ODYS Review Committee who suspect a youth has mental health concerns or has an identified substance abuse problem. The Probation Officer upon the referral conducts the OYAS, and refers the case to the BHJJ Probation Manager or Assessor. The BHJJ Assessor completes additional assessments. Once all assessments are complete, the BHJJ Manager assigns the case to a Probation Aftercare Coordinator and a Care Coordinator. The Care Coordinator organizes a team meeting with the family to discuss the results of the assessments and a strengths based plan to meet the individualized needs of each youth and family. If a case is pending within Juvenile Court system, the case is presented at a Court Hearing that includes a judge, public defender, probation staff and treatment staff. At the hearing, the case is funneled to the BHJJ Assessor to determine if the case appropriate for BHJJ programming.

***Assessment Package:*** The BHJJ Assessor completes the initial Ohio Youth Problem and Satisfaction Scales. These along with the *Ohio Youth Assessment System (OYAS)* completed by the Court, yield a complete picture of the needs of the youth and families based on a comprehensive bio-psychosocial assessment. As such the BHJJ Assessor is then able to determine the most appropriate evidenced based practice model.

***Care Coordination/Community Wraparound:*** The Care Coordinator develops the plan based on the youth's individualized needs, strengths and goals in a range of life domains, and creates a team including the participation of supportive others identified by the family. There are two main evidence

based models inherent in the BHJJ project to which Care Coordinators plan with, ICT and MST. They also have the ability to develop or locate non-traditional services that fits the youth's needs. Both the Assessor and Care Coordinator are charged with accessing least restrictive options, which include the utilization of crisis beds, respite services, and evidence based treatment prior to residential treatment placements.

As mentioned above, ancillary services are necessary to support youth and families in the community. Therefore, wraparound services remain fundamental within the project. Care Coordination includes contracting for non-traditional Wraparound services such as respite, mentoring, art/music therapy, and pro-social activities including recreation and community involvement opportunities. This enables the development of individualized intervention plans and provides the flexibility necessary to tailor services and supports in response to changing needs and circumstances. This is achieved, in part, by leveraging local Community Wraparound and Family-Centered Services and Supports (FCSS) funds allocated by Cuyahoga County's Family & Children First Council (FCFC).

Treatment/Evidence Based Practices: The treatment component of the BHJJ project uses community-based resources and promising practices to support and extend treatment gains for youth and families. The OYAS measures criminogenic needs and, when used as a post-test, can indicate whether or not these needs were addressed in BHJJ treatment. Treatment Services include:

- Integrated Co-Occurring Treatment (ICT) Model: ICT is an integrated treatment approach embedded in an intensive home based method of service delivery, which provides a set of core services to youth with co-occurring disorders of substance use and Serious Emotional Disability.
- *Multi-Systemic Therapy (MST):* MST focuses on understanding the "fit" of the child's/family's issues and how to best resolve them. In addition, MST focusses on assisting parents in building support systems and social networks within their community and empowers them to address their family's needs more effectively. Particular emphasis is placed on ensuring the family's ability to sustain positive changes and avoid recidivism once therapy has ended.

Additional services are available as warranted through existing funding at the Court and through the ADAMHS Board, and include the crisis stabilization bed and short-term residential treatment.

***Placement Aftercare Coordinator (PAC)***: Placement Aftercare Coordinator provides not only the legal aspect of case management, but also helps to coordinate the range of program components accessed through the Court system. During the early part of aftercare, the youth and family have weekly contact with a Placement Aftercare Coordinator and are also involved with specialized counseling specific to the needs of the youth and family. By the end of aftercare, contact with Court and system representatives is monthly and the family and youth have built community supports and resources outside of the system.

The Cuyahoga County BHJJ project has been highly successful addition to the array of juvenile justice and behavioral health services available in Cuyahoga County. The county's commitments of youth to ODYS facilities has declined by 69% since 2005. Additionally and as mentioned, since 2011 out of home placements have significantly reduced due to an effective service model that is intensive and cohesive contributing to successful outcomes for project participants.

## DESCRIPTION OF THE ANALYSES USED IN THE REPORT

Several types of inferential statistics are used throughout the report. Three types of bivariate analyses are discussed throughout both the overall report and the county specific reports. The chi-square analysis refers to a bivariate technique where a relationship between two variables is tested to determine if there are any significant differences. For example, if we are interested in whether males and females differ on whether they have ever used alcohol, a chi-square test is used. If there is a statistically significant result, this indicates that the difference between females and males is unlikely to have occurred by chance. Thus, we would describe the difference for the gender groups as a *real difference* rather than one that could have occurred by chance.

In instances where the bivariate relationship of interest is a measure that is both a yes/no measure and one that is repeated, a McNemar's test is used. For example, if we are interested in whether there is a statistically significant decrease in the proportion of youth using alcohol in the past six months from intake to termination, we would use a McNemar's test. A statistically significant result would indicate that the observed difference in six month use from intake to termination is a real difference and one that likely did not occur by chance.

The third type of bivariate analysis used throughout the report is the t-test. T-tests are similar to chi-square tests in that they test two variables to determine whether there are significant differences. For example, if we are interested in whether females and males differ on their levels of posttraumatic stress symptoms, a t-test is used. Since the variable posttraumatic stress lies on a continuous scale, we examine whether the corresponding means for the two gender groups significantly differ. Independent samples t-tests are used when there are two distinct groups (e.g. female and male) while paired samples t-tests are used when we are interested in whether means for the same group from different time points differ significantly (e.g. pre/post differences).

While statistical significance is an indication of how likely differences between groups or time points could occur by chance, effect sizes measure the magnitude of these observed differences. In other words, while statistical significance tells us whether a difference exists, effect sizes tell us how much of a difference exists. Effect sizes as represented by Cohen's *d* are also presented using the recommended criteria for its interpretation in Cohen's (1988) seminal work. Interpretation of Cohen's *d* is based on the criteria where 0.2 indicates a small effect size, 0.5 indicates a medium effect, and 0.8 indicates a large effect[1].

[1] For a more thorough review see Cohen, J. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale, NJ: Lawrence Erlbaum.

## CUYAHOGA COUNTY

### DEMOGRAPHICS

Cuyahoga County has enrolled 371 youth in the BHJJ program since 2006. Of the 371 youth enrolled, 49.3% (n = 183) were female and 50.7% (n = 188) were male. Since July 2013, 62.2% (n = 56) of new enrollees have been male (see Table 3).

The majority of the overall sample of youth were either Caucasian (39.3%, n = 139) or African American (49.7%, n = 176). The remainder were categorized as "Other" (11.1%, n = 39). A similar pattern was found for youth enrolled since July 2013, as a larger proportion of African Americans (63.3%, n = 57) than Caucasians (25.6%, n = 163) were enrolled. The average age of the youth at intake into BHJJ was 16.2 years old (SD = 1.15) with a range between 11 and 17 years.

**Table 3. Demographic Information for BHJJ Youth in Cuyahoga County**

| | All Youth Enrolled (2006 - 2015) | Youth Enrolled between July 2013 – June 2015 |
|---|---|---|
| **Gender** | Female = 49.3% (n = 183) | Female = 37.8% (n = 34) |
| | Male = 50.7% (n = 188) | Male = 62.2% (n = 56) |
| **Race** | African American = 49.7% (n = 176) | African American = 63.3% (n = 57) |
| | Caucasian = 39.3% (n = 139) | Caucasian = 25.6% (n = 23) |
| | Other = 11.1% (n = 39) | Other = 11.1% (n = 10) |
| **Age at Intake** | 16.2 years (SD = 1.15) | 15.9 years (SD = 1.26) |

### CUSTODY ARRANGEMENT AND HOUSEHOLD INFORMATION

At intake, the majority of youth lived with the biological mother (60.4%, n = 209) (see Table 4). At time of enrollment, 82.9% (n = 287) of the BHJJ youth lived with at least one biological parent.

Over 78% of the BHJJ caregivers (78.1%, n = 257) had at least a high school diploma or GED, and 8.9% (n = 30) had a bachelor's degree or higher (see Table 5). More than one in five caregivers (21.9%, n = 74) reported that they did not graduate from high school.

Caregivers reported their annual household income. The median household income for BHJJ families was between $20,000 and $24,999 (see Table 6). Slightly over 70% (71.3%, n = 236) reported annual household incomes below $35,000 and 42.3% (n = 140) reported an annual household income below $20,000. More than 20% of BHJJ families (21.1%, n = 70) reported an annual household income below $10,000.

**Table 4. Custody Arrangement for BHJJ Youth in Cuyahoga County**

| Custody | BHJJ Youth |
|---|---|
| Two Biological Parents or One Biological and One Step or Adoptive Parent | 17.9% (n=62) |
| Biological Mother Only | 60.4% (n=209) |
| Biological Father Only | 4.6% (n=16) |
| Adoptive Parent(s) | 6.4% (n=22) |
| Sibling | 0.3% (n=1) |
| Aunt/Uncle | 1.4% (n=5) |
| Grandparents | 6.9% (n=24) |
| Friend | 0.0% (n=0) |
| Ward of the State | 0.6% (n=2) |
| Other | 1.4% (n=5) |

**Table 5. Educational Outcomes for Caregivers of BHJJ Youth in Cuyahoga County**

| Number of School Years Completed | Number of Caregivers |
|---|---|
| Less than High School | 21.9% (n=74) |
| High School Graduate or G.E.D. | 29.3% (n=99) |
| Some College or Associate Degree | 37.9% (n=128) |
| Bachelor's Degree | 6.2% (n=21) |
| More than a Bachelor's Degree | 2.7% (n=9) |

**Table 6. Annual Household Income for BHJJ Families in Cuyahoga County**

| Annual Household Income | BHJJ Families |
|---|---|
| Less than $5,000 | 14.2% (n=47) |
| $5,000 - $9,999 | 6.9% (n=23) |
| $10,000 - $14,999 | 12.7% (n=42) |
| $15,000 - $19,999 | 8.5% (n=28) |
| $20,000 - $24,999 | 14.8% (n=49) |
| $25,000 - $34,999 | 14.2% (n=47) |
| $35,000 - $49,999 | 15.4% (n=51) |
| $50,000 - $74,999 | 8.5% (n=28) |
| $75,000 - $99,999 | 3.6% (n=12) |
| $100,000 and over | 1.2% (n=4) |

## YOUTH AND FAMILY HISTORY

Caregivers were asked to respond to a series of questions designed to obtain data related to the youth's family history (see Table 7). Chi-square analysis was conducted on each item and significant differences are identified in Table 7. Caregivers reported that a significantly higher proportion of females had a history of sexual abuse, running away, talking about suicide, attempting suicide, and a family history of depression than males.

At intake, caregivers were asked if the youth had ever been pregnant (or if male, had ever impregnated a female) and if they were currently expecting a child. Caregivers reported that 20.1% (n = 27) of females had ever been pregnant and of those youth, 42.3% (n = 11) were currently expecting a child. Caregivers reported that 12.5% (n = 20) of males had ever impregnated a female and of those youth, 30.0% (n = 6) were currently expecting a child. Over 6% of females (6.5%, n = 3) and 8.2% (n = 5) of males currently had children. Of those who had children, 100% of females (n = 2) but none of the males currently lived with the child.

**Table 7. Youth and Family History in Cuyahoga County**

| Question | Females | Males |
|---|---|---|
| **Has the child ever been physically abused?** | 22.1% (n=38) | 16.8% (n=29) |
| **Has the child ever been sexually abused?** | 36.7% (n=62)*** | 7.0% (n=12) |
| **Has the child ever run away?** | 75.4% (n=129)** | 60.8% (n=104) |
| **Has the child ever had a problem with substance abuse, including alcohol and/or drugs?** | 84.1% (n=143) | 87.9% (n=152) |
| **Has the child ever talked about committing suicide?** | 60.8% (n=104)*** | 36.0% (n=63) |
| **Has the child ever attempted suicide?** | 30.4% (n=51)*** | 12.2% (n=21) |
| **Has the child ever been exposed to domestic violence or spousal abuse, of which the child was not the direct target?** | 48.0% (n=82) | 39.4% (n=69) |
| **Has anyone in the child's biological family ever been diagnosed with depression or shown signs of depression?** | 77.6% (n=128)** | 62.4% (n=106) |
| **Has anyone in the child's biological family had a mental illness, other than depression?** | 56.1% (n=92) | 52.4% (n=86) |
| **Has the child ever lived in a household in which someone was convicted of a crime?** | 43.4% (n=72) | 35.9% (n=61) |
| **Has anyone in the child's biological family had a drinking or drug problem?** | 70.2% (n=118) | 70.0% (n=119) |
| **Is the child currently taking any medication related to his/her emotional or behavioral symptoms?** | 50.6% (n=85) | 44.1% (n=75) |

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

## OHIO YOUTH ASSESSMENT SYSTEM

The OYAS is a criminogenic risk assessment tool designed to assist juvenile court staff with placement and treatment decisions based on a youth's risk score. Distribution of Cuyahoga County youth based on the OYAS risk categories by gender and race are presented in Table 8. Chi-square analysis of race and OYAS category revealed a statistically significant difference ($p = .002$). Chi-square

analyses revealed no significant group differences in the OYAS categories based on gender. Over 30% (31.8%, n = 57) of Nonwhite youth were identified as high risk to reoffend on the OYAS compared to 12.0% (n = 11) of White youth.

**Table 8. OYAS Categories by Race and Gender for Cuyahoga County**

| | OYAS Low | OYAS Moderate | OYAS High |
|---|---|---|---|
| **Female** | 25.2% (n = 27) | 48.6% (n = 52) | 26.2% (n = 28) |
| **Male** | 20.8% (n = 37) | 55.1% (n = 98) | 24.2% (n = 43) |
| **White** | 29.3% (n = 27) | 58.7% (n = 54) | 12.0% (n = 11) |
| **Nonwhite*** | 20.7% (n = 37) | 47.5% (n = 85) | 31.8% (n = 57) |

*p < .05

## DSM-IV DIAGNOSES

Workers were asked to report any DSM-IV Axis I diagnoses at intake into the BHJJ program. These diagnoses were either identified through a psychological assessment given as part of the enrollment process or in some cases, from psychological assessments given in close proximity to a youth's enrollment in BHJJ. The most common Axis I diagnosis for both females (69.5%, n = 123) and males (89.1%, n = 156) was Cannabis-related disorders (see Table 9).

A total of 977 Axis I diagnoses were identified for 352 youth with diagnostic information (2.77 diagnoses per youth). Females reported 464 Axis I diagnoses (2.62 diagnoses per female) and males reported 513 Axis I diagnoses (2.93 diagnoses per male). Chi-square analysis indicated that a significantly higher proportion of females were diagnosed with Post-traumatic Stress Disorder while a significantly higher proportion of males were diagnosed with Cannabis-related Disorders, Attention Deficit Hyperactivity Disorder and Oppositional Defiant Disorder. Of the youth who had available diagnostic information, 71.7% (n = 124) of females and 88.6% (n = 155) of males had a co-occurring substance use and mental health diagnosis.

**Table 9. Most Common DSM-IV Axis I Diagnoses in Cuyahoga County**

| DSM-IV Axis I Diagnosis | Females | Males |
|---|---|---|
| **Alcohol-related Disorders** | 29.9% (n = 53) | 29.1% (n = 51) |
| **Attention Deficit Hyperactivity Disorder** | 28.2% (n = 50) | 38.3% (n = 67)* |
| **Bipolar Disorder** | 6.8% (n = 12) | 4.6% (n = 8) |
| **Cannabis-related Disorders** | 69.5% (n = 123) | 89.1% (n = 156)*** |
| **Conduct Disorder** | 11.3% (n = 20) | 17.7% (n = 31) |
| **Depressive Disorders** | 24.9% (n = 44) | 21.7% (n = 38) |
| **Mood Disorder** | 14.1% (n = 25) | 8.6% (n = 15) |
| **Oppositional Defiant Disorder** | 17.5% (n = 31) | 26.3% (n = 46)* |
| **Post-traumatic Stress Disorder** | 14.7% (n = 26)* | 6.9% (n = 12) |

*p < .05, ***p < .001

## EDUCATIONAL AND VOCATIONAL INFORMATION

### EDUCATIONAL DATA

Several items that focused on educational and vocational information were included in the evaluation packet at both intake and termination from the BHJJ program. The items were completed by the worker with help from the youth and caregiver. In the 12 months prior to intake, 74.4% (n = 201) were either suspended or expelled from school. While in treatment with BHJJ, 34.4% (n = 85) of BHJJ youth were either suspended or expelled from school.

Educational data were analyzed for youth who were eligible for inclusion (youth on summer break or who had graduated at the time of the survey were not included in the analyses). At intake, 68.4% (n = 171) of youth were currently attending school excluding those on summer break. At termination, 77.8% (n = 179) of youth were attending school. If the youth was attending school, the worker was asked to identify the types of grades the youth typically received (see Table 10). Table 11 presents the academic performance of BHJJ youth in Cuyahoga County from intake to termination based on completion status. At termination, 62.7% (n = 101) of successful completers received mostly A's, B's and C's while 44.7% (n = 25) of unsuccessful completers received mostly A's, B's, and C's.

At termination, workers reported that 62.1% (n = 154) of youth were attending school more than before starting treatment and 27.0% (n = 67) of youth were attending school 'about the same' amount compared to before starting treatment. Workers reported 6.5% (n = 16) of youth were attending school less often than before treatment in BHJJ.

**Table 10. Academic Performance in Cuyahoga County**

| Typical Grades | Frequency at Intake | Frequency at Termination |
|---|---|---|
| **Mostly A's and B's** | 11.4% (n = 29) | 16.7% (n = 37) |
| **Mostly B's and C's** | 25.2% (n = 64) | 40.7% (n = 90) |
| **Mostly C's and D's** | 30.7% (n = 78) | 31.7% (n = 70) |
| **Mostly D's and F's** | 32.7% (n = 83) | 10.9% (n = 24) |

**Table 11. Academic Performance in Cuyahoga County by Completion Status**

| | Unsuccessful Completers | | Successful Completers | |
|---|---|---|---|---|
| **Typical Grades** | Frequency at Intake | Frequency at Termination | Frequency at Intake | Frequency at Termination |
| **Mostly A's and B's** | 14.3% (n = 7) | 14.3% (n = 8) | 13.3% (n = 21) | 18.0% (n = 29) |
| **Mostly B's and C's** | 28.6% (n = 14) | 30.4% (n = 17) | 20.9% (n = 33) | 44.7% (n = 72) |
| **Mostly C's and D's** | 36.7% (n = 18) | 37.5% (n = 21) | 31.0% (n = 49) | 29.2% (n = 47) |
| **Mostly D's and F's** | 20.4% (n = 10) | 17.9% (n = 10) | 34.8% (n = 55) | 8.1% (n = 13) |

## OHIO SCALES

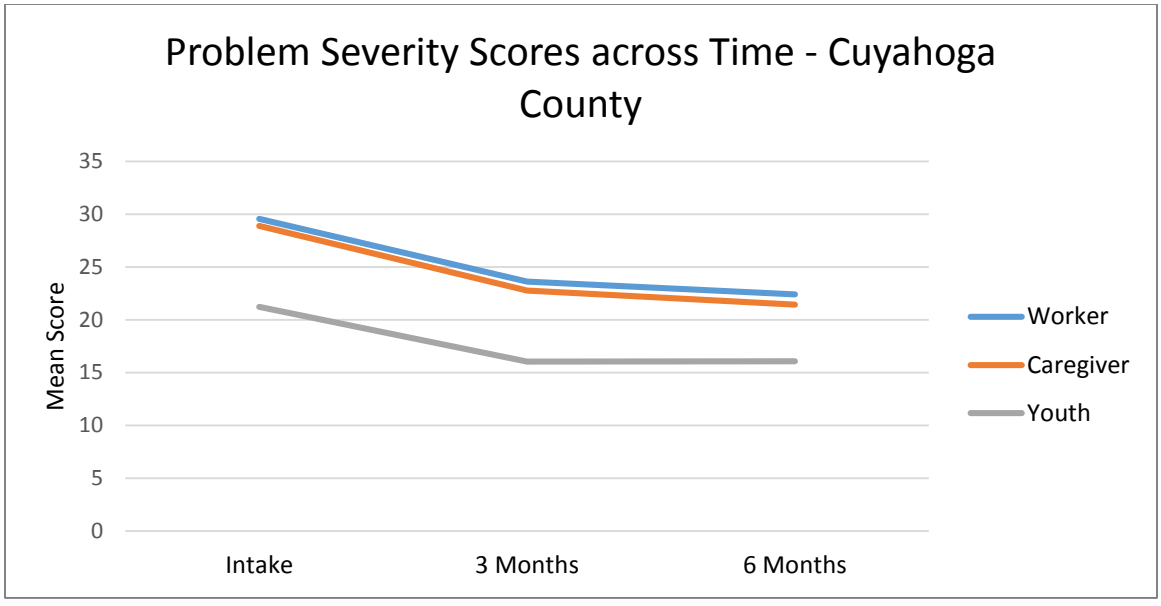
One of the main measures in the data collection packet was the Ohio Scales. The Ohio Scales were completed by the youth, caregiver, and worker at intake and then every three months following intake until termination from services. Because termination can occur at any point in time along the continuum of service, separate charts are included that display the means from intake to termination. Decreases in Problem Severity and increases in Functioning correspond to positive change.

All Problem Severity and Functioning analyses were conducted on assessment periods with enough valid cases to produce meaningful results. Paired samples t-tests were used to compare Problem Severity scores at intake to Problem Severity scores at the other assessment periods. A paired samples t-test compares the means of two variables by computing the difference between the two variables for each case and testing to see if the average difference is significantly different from zero. In order for a case to be included in the analyses, the rater must have scores for both assessment periods. For example, a caregiver must supply scores for both the intake and 3 month assessment period to be included in the paired samples t-test for that time point. If the caregiver only has an intake score, his or her data is not included in the analysis.

## PROBLEM SEVERITY

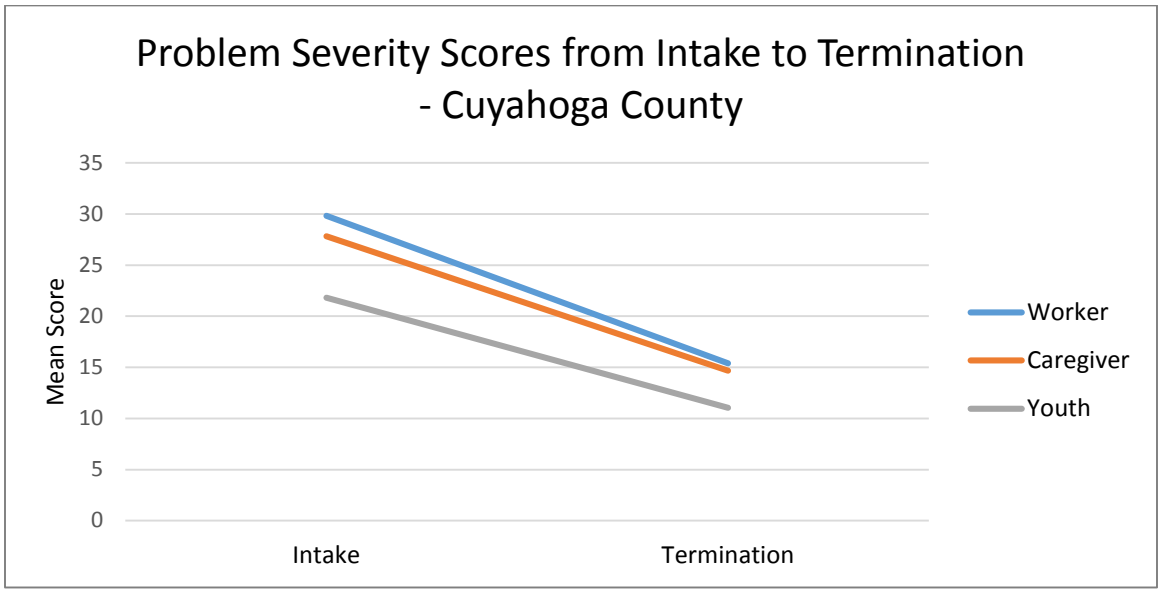
Overall means for the Problem Severity scale by rater and assessment period for Cuyahoga County youth are represented graphically in Figure 1. Means from intake to termination are presented in Figure 2.

**Figure 1. Problem Severity Scores across Time - Cuyahoga County**




*all comparisons from intake to each successive time point are significant at least at the p < .01 level

**Figure 2. Problem Severity Scores from Intake to Termination - Cuyahoga County**




*all comparisons from intake to termination are significant at the p < .001 level

## CAREGIVER RATING

**Paired samples t-tests revealed significant improvements in Problem Severity at each measurement interval (see Table 12) compared to intake.** Significant improvements were noted at three months $t(254) = 5.31$, $p < .001$; six months: $t(203) = 5.85$, $p < .001$; and at termination: $t(202) = 9.00$, $p < .001$. Small effect sizes were noted for intake to three months and intake to six months, while a large effect size was noted for intake to termination.

**Table 12. Paired Samples T-Tests for Caregiver Report Problem Severity Scores for Cuyahoga County**

| | Mean Time 1 | Mean Time 2 | *t* | *d* |
|---|---|---|---|---|
| **Intake to Three Months** | 28.86 (SD=18.24; n=255) | 22.95 (SD=15.63; n=255) | 5.31*** | .35 |
| **Intake to Six Months** | 29.78 (SD=19.13; n=204) | 21.37 (SD=15.69; n=204) | 5.85*** | .48 |
| **Intake to Termination** | 27.82 (SD=17.50; n=203) | 14.67 (SD=14.34; n=203) | 9.00*** | .82 |

***p < .001

## WORKER RATING

**For workers, paired samples t-tests indicated significant improvement in Problem Severity at every data collection point (see Table 13).** Significant improvements were noted at three months $t(265) = 6.16$, $p < .001$; six months: $t(211) = 7.38$, $p < .001$; and at termination: $t(233) = 12.46$, $p < .001$. A small effect size was noted for intake to three months, while a moderate effect size was noted for intake to six months. A large effect size was noted for the time period between intake and termination.

**Table 13. Paired Samples T-Tests for Worker Report Problem Severity Scores for Cuyahoga County**

| | Mean Time 1 | Mean Time 2 | *t* | *d* |
|---|---|---|---|---|
| **Intake to Three Months** | 29.70 (SD=13.70; n=266) | 23.60 (SD=13.40; n=266) | 6.16*** | .45 |
| **Intake to Six Months** | 30.94 (SD=14.29; n=212) | 22.12 (SD=12.29; n=212) | 7.38*** | .66 |
| **Intake to Termination** | 29.83 (SD=13.59; n=234) | 15.39 (SD=11.03; n=234) | 12.46*** | 1.17 |

***p < .001

## YOUTH RATING

**Scores on the Problem Severity scale as reported by youth showed significant improvement for all three measurement intervals (see Table 14).** Significant improvements were noted at three months $t(255) = 6.09$, $p < .001$; six months: $t(207) = 5.67$, $p < .001$; and at termination: $t(207) = 8.45$, $p < .001$. Small effect sizes were noted for intake to three months and intake to six months, while a moderate effect size was noted for intake to termination.

**Table 14. Paired Samples T-Tests for Youth Report Problem Severity Scores for Cuyahoga County**

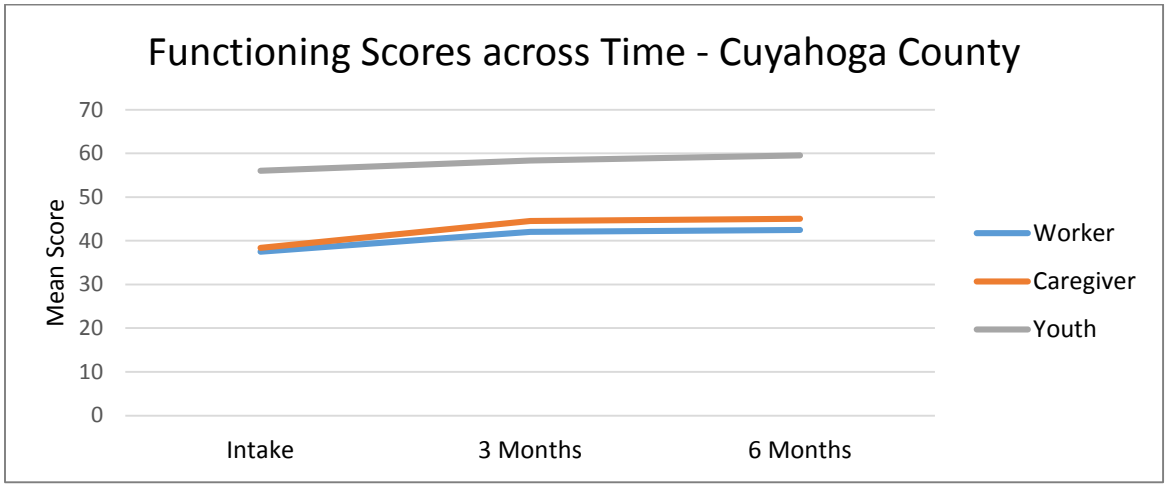
| | Mean Time 1 | Mean Time 2 | *t* | *d* |
|---|---|---|---|---|
| **Intake to Three Months** | 21.61 (SD=15.66; n=256) | 16.10 (SD=13.08; n=256) | 6.09*** | .38 |
| **Intake to Six Months** | 22.91 (SD=16.11; n=208) | 16.20 (SD=13.72; n=208) | 5.67*** | .45 |
| **Intake to Termination** | 21.82 (SD=16.61; n=208) | 11.04 (SD=12.04; n=208) | 8.45*** | .74 |

***p < .001

## FUNCTIONING

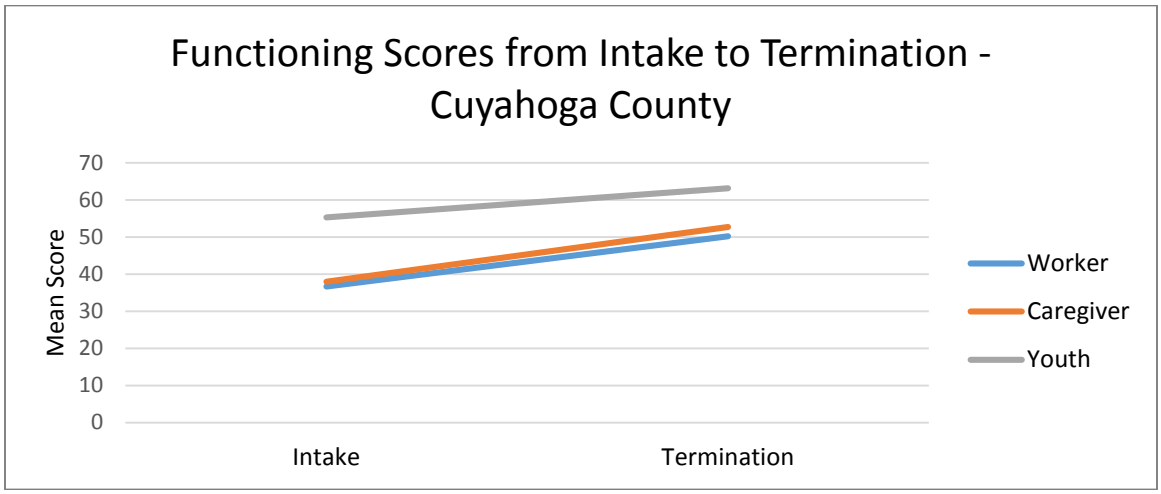
Overall means for the Functioning scale by rater and assessment period for Cuyahoga County youth are represented in Figure 3. Means from intake to termination are presented in Figure 4.

**Figure 3. Functioning Scores across Time - Cuyahoga County**




*all comparisons from intake to each successive time point are significant at least at the p < .01 level

**Figure 4. Functioning Scores from Intake to Termination - Cuyahoga County**




*all comparisons from intake to termination are significant at the p < .001 level

## CAREGIVER RATING

**Paired samples t-tests revealed significant improvements in Functioning at each measurement interval (see Table 15) compared to intake.** Significant improvements were noted at three months: *t*(255) = -6.37, p < .001; six months: *t*(204) = -5.87, p < .001; and termination: *t*(203) = -11.20, p < .001. Small effect sizes were observed for the intervals between intake and three months and between intake and six months while a large effect size was observed between intake and termination.

**Table 15. Paired Samples T-Tests for Caregiver Report Functioning Scores for Cuyahoga County**

| | Mean Time 1 | Mean Time 2 | *t* | *d* |
|---|---|---|---|---|
| **Intake to Three Months** | 37.83 (SD=16.38; n=256) | 44.46 (SD=14.34; n=256) | -6.37*** | .44 |
| **Intake to Six Months** | 37.16 (SD=16.37; n=205) | 45.02 (SD=16.04; n=205) | -5.87*** | .49 |
| **Intake to Termination** | 37.94 (SD=15.72; n=204) | 52.75 (SD=17.70; n=204) | -11.20*** | .89 |

***p < .001

## WORKER RATING

**For workers, paired samples t-tests indicated significant improvement in the Functioning scale for each of the measurement intervals (see Table 16).** Significant improvements were noted at three months: *t*(258) = -5.43, p < .001; six months: *t*(211) = -5.14, p < .001; and termination: *t*(233) = -12.40, p < .001. Small effect sizes were noted for intake to three months and intake to six months while a large effect size was noted for intake to termination.

**Table 16. Paired Samples T-Tests for Worker Report Functioning Scores for Cuyahoga County**

| | Mean Time 1 | Mean Time 2 | *t* | *d* |
|---|---|---|---|---|
| **Intake to Three Months** | 37.48 (SD=10.20; n=259) | 42.13 (SD=12.62; n=259) | -5.43*** | .40 |
| **Intake to Six Months** | 36.97 (SD=10.90; n=212) | 42.57 (SD=12.92; n=212) | -5.14*** | .47 |
| **Intake to Termination** | 36.74 (SD=10.41; n=234) | 50.27 (SD=13.37; n=234) | -12.40*** | 1.12 |

***p < .001

## YOUTH RATING

**Paired samples t-tests conducted on the youth ratings of Functioning indicated significant improvement at all three data collection points (see Table 17).** Significant improvements were observed at three months: $t(254) = -2.44$, $p < .05$; six months: $t(204) = -4.58$, $p < .001$; and termination: $t(204) = -6.81$, $p < .001$. Small effect sizes were noted for intake to three months and intake to six months, and a moderate effect size was noted for intake to termination.

**Table 17. Paired Samples T-Tests for Youth Report Functioning Scores for Cuyahoga County**

| | Mean Time 1 | Mean Time 2 | *t* | *d* |
|---|---|---|---|---|
| **Intake to Three Months** | 56.10 (SD=12.81; n=255) | 58.31 (SD=12.84; n=255) | -2.44** | .17 |
| **Intake to Six Months** | 54.38 (SD=12.99; n=205) | 59.53 (SD=13.18; n=205) | -4.58*** | .39 |
| **Intake to Termination** | 55.30 (SD=12.47; n=205) | 63.20 (SD=13.46; n=205) | -6.81*** | .61 |

**p < .01, ***p < .001

## TSCC

The Trauma Symptom Checklist for Children (TSCC) was administered to youth in the BHJJ program in Cuyahoga County at both intake and termination. The TSCC is made up of six subscales: Anxiety, Depression, Anger, Posttraumatic Stress, Dissociation, and Sexual Concerns. Higher scores on each of the subscales indicate higher levels of trauma symptoms. Table 18 shows the mean TSCC scores at intake and at termination. As described in the TSCC section in the overall BHJJ report, TSCC subscale scores are reported for youth ages 13-17 and those who were not identified as either underresponders or hyperresponders. The removal of such a large number of youth who were identified as "Underresponders" had a significant impact on the paired samples t-test results and the effect sizes. We are currently examining the practicality of removing these youth from the analyses.

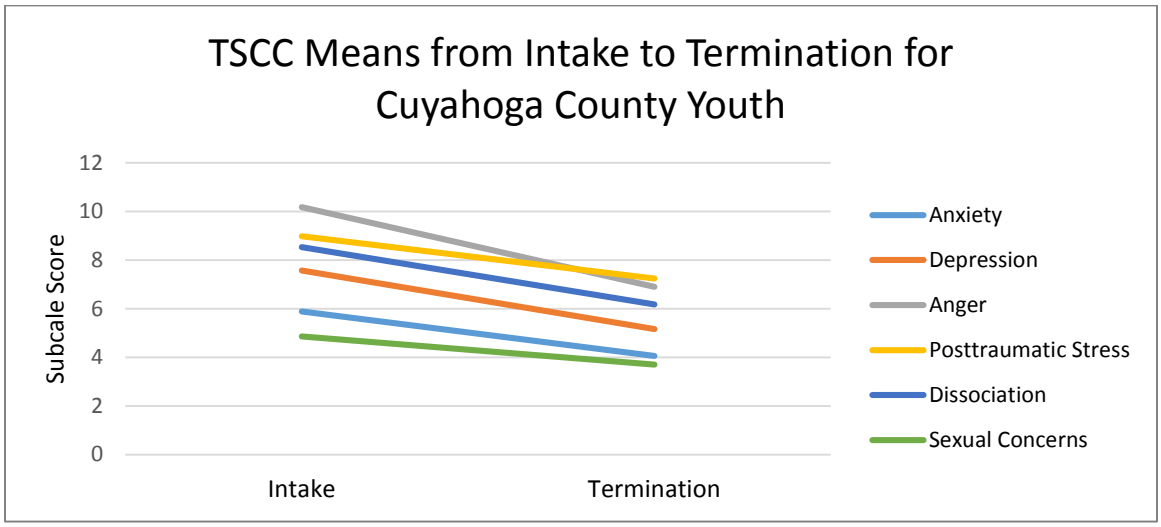
Paired samples t-tests were conducted for Cuyahoga County BHJJ youth who have subscale scores at intake and termination (see Table 18). Data were available for youth aged 8-17 and who were not identified as either underresponders or hyperresponders. Statistically significant improvements were noted for all subscales including: Anxiety ($t(79) = 4.38$, $p < .001$), Depression ($t(78) = 4.26$, $p < .001$), Anger ($t(79) = 4.66$, $p < .001$), Posttraumatic Stress ($t(79) = 2.52$, $p < .05$), Dissociation ($t(78) = 3.80$, $p < .001$, and Sexual Concerns ($t(79) = 3.04$, $p < .01$). The data indicated small effect sizes for Anxiety, PTS, Dissociation, and Sexual Concerns. Moderate effect sizes were noted for Depression and Anger. Means are reported in Table 18 and Figure 5.

**Table 18. Paired Samples T Tests for TSCC Subscales for Cuyahoga County Youth**

| | Intake | Termination | t | d |
|---|---|---|---|---|
| **Anxiety** | 5.89 (SD=4.66; n=80) | 4.06 (SD=3.56; n=80) | 4.38*** | .44 |
| **Depression** | 7.58 (SD=5.38; n=79) | 5.16 (SD=3.78; n=79) | 4.26*** | .52 |
| **Anger** | 10.18 (SD=6.25; n=80) | 6.90 (SD=4.92; n=80) | 4.66*** | .58 |
| **PTS** | 8.97 (SD=5.64; n=80) | 7.24 (SD=5.21; n=80) | 2.52* | .32 |
| **Dissociation** | 8.53 (SD=5.28; n=79) | 6.18 (SD=5.05; n=79) | 3.80*** | .45 |
| **Sexual Concerns** | 4.86 (SD=4.07; n=80) | 3.70 (SD=4.07; n=80) | 3.04** | .28 |

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

**Figure 5. TSCC Means from Intake to Termination for Cuyahoga County Youth**



## SUBSTANCE USE

Every six months the youth completed a self-report measure of substance use. The survey was designed to measure any lifetime use of each drug as well as patterns of current use. Table 19 presents the percentages of BHJJ youth who reported ever using alcohol or drugs and the average age of first use. Alcohol, cigarettes, and marijuana were the three most commonly used substances for both males and females. Chi-square analyses revealed that a significantly higher proportion of males reported lifetime use of chewing tobacco than females. Females reported a significantly higher lifetime use of cocaine, heroin, Ritalin, barbiturates, and Ecstasy than males.

**Table 19. Self-Report Substance Use at Intake for Cuyahoga County BHJJ Youth**

| | Males | | Females | |
|---|---|---|---|---|
| | % Ever Used | Age of First Use | % Ever Used | Age of First Use |
| **Alcohol** | 79.2% (n = 137) | 13.40 (SD = 2.19) | 85.5% (n = 141) | 13.13 (SD = 2.14) |
| **Cigarettes** | 72.3% (n = 125) | 12.89 (SD = 2.28) | 74.9% (n = 128) | 12.70 (SD = 2.18) |
| **Chewing Tobacco** | 14.6% (n = 25)** | 14.40 (SD = 1.80) | 4.1% (n =7) | 11.50 (SD = 2.88) |
| **Marijuana** | 95.4% (n = 165) | 12.99 (SD = 1.91) | 89.8% (n = 150) | 13.17 (SD = 1.90) |
| **Cocaine** | 9.4% (n = 16) | 15.44 (SD = 3.08) | 17.8% (n = 30)* | 14.60 (SD = 1.33) |
| **Pain Killers (use inconsistent with prescription)** | 23.1% (n = 39) | 14.37 (SD = 1.14) | 28.2% (n = 48) | 14.48 (SD = 1.64) |
| **GHB** | 0.0% (n = 0) | N/A | 1.8% (n = 3) | 14.33 (SD = 1.53) |
| **Inhalants** | 4.1% (n = 7) | 14.00 (SD = 1.55) | 9.0% (n = 15) | 13.13 (SD = 1.92) |
| **Heroin** | 1.2% (n = 2) | 15.50 (SD = 0.71) | 8.9% (n = 15)** | 14.80 (SD = 1.47) |
| **Amphetamines** | 5.3% (n = 9) | 13.71 (SD = 1.60) | 8.0% (n = 13) | 13.54 (SD = 2.73) |
| **Ritalin (use inconsistent with prescription)** | 8.2% (n = 14) | 14.25 (SD = 1.66) | 17.6% (n = 30)** | 14.41 (SD = 1.48) |
| **Barbiturates** | 1.2% (n = 2) | 15.00 (SD = 1.41) | 6.0% (n = 10)* | 14.63 (SD = 1.30) |
| **Non-prescription Drugs** | 10.1% (n = 17) | 15.00 (SD = 1.60) | 12.4% (n = 20) | 14.05 (SD = 1.27) |
| **Hallucinogens** | 12.3% (n = 21) | 14.90 (SD = 1.09) | 13.8% (n = 23) | 14.39 (SD = 1.53) |
| **PCP** | 1.2% (n = 2) | 16.00 (SD = 1.41) | 5.3% (n = 9)* | 14.44 (SD = 1.42) |
| **Ketamine** | 4.1% (n = 7) | 15.00 (SD = 1.10) | 5.3% (n = 9) | 14.38 (SD = 1.41) |
| **Ecstasy** | 9.9% (n = 17) | 14.47 (SD = 1.25) | 24.7% (n = 41)** | 14.44 (SD = 1.54) |
| **Tranquilizers** | 10.5% (n = 18) | 14.22 (SD = 1.48) | 14.8% (n = 25) | 14.44 (SD = 1.16) |

*p < .05; ** p < .01

## SIX MONTH SUBSTANCE USE

Youth were also asked to report whether they had used each substance in the past six months. Figure 6 and Figure 7 present past six month use for the most commonly reported substances for males and females respectively among those who reported lifetime use. The percentage of those using substances decreased for both males and females among the most commonly reported substances. Six

month alcohol use decreased for males from 64.9% (n = 85) at intake to 44% (n = 33) at termination. Among females, six month alcohol use decreased from 78.9% (n = 105) at intake to 29.5% (n = 23) at termination. Six month cigarette use among males decreased from 90.7% (n = 107) at intake to 77.5% (n = 55) at termination. Among females, six month cigarette use decreased from 85.4% (n = 105) at intake to 77.1% (n = 54) at termination. Six month marijuana use among males decreased from 88.6% (n = 140) at intake to 56.8% (n= 54) at termination. Among females, six month marijuana use decreased from 85.4% (n = 123) at intake to 35.4% (n = 29) at termination. McNemar's tests revealed a significant decrease in all three substances from intake to termination.

**Figure 6. Self-Report Previous 6 Month Substance Use from Intake to Termination for Males - Cuyahoga County**

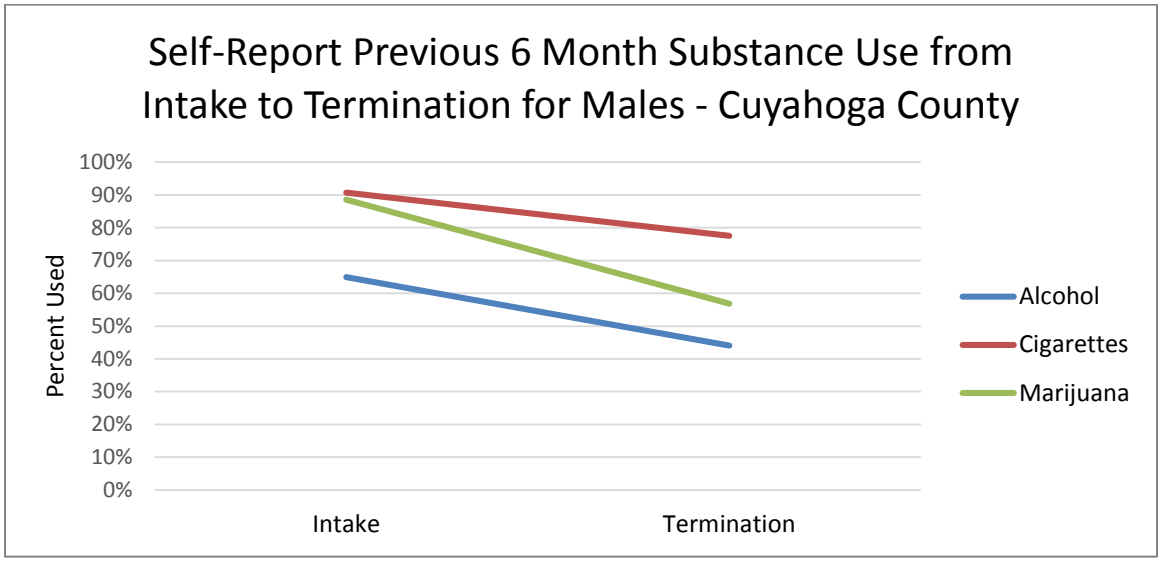
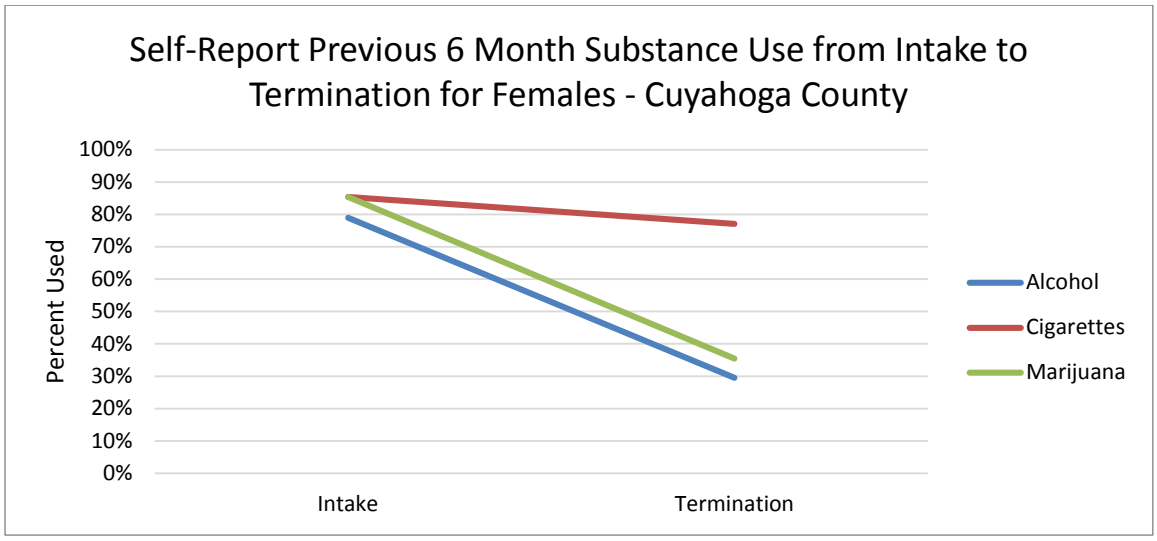



**Figure 7. Self-Report Previous 6 Month Substance Use from Intake to Termination for Females – Cuyahoga County**



## 30 DAY SUBSTANCE USE

If youth had reported any lifetime use and if they had reported use in the past six months, they were asked how many days they had used each substance in the past 30 days. Figure 8 and Figure 9 show the average number of days use in the previous 30 days for the three most commonly reported substances by gender. Thirty day use declined from intake to termination with the exception of cigarette use among males. Males reported 2.63 days of alcohol use (SD = 4.05; n = 57) at intake and 0.70 days of alcohol use (SD = 1.80; n = 44) at termination. Females reported 2.44 days (SD = 5.23; n = 86) at intake and 0.51 days of alcohol use (SD = 1.60; n = 59) at termination. Among males who reported both lifetime and past six month marijuana use, they reported 8.71 days of use (SD = 12.3; n = 98) at intake and 3.21 days of use (SD = 6.85; n = 75) at termination. Females reported 6.61 days of marijuana use (SD = 10.86; n = 101) intake and 1.82 days of use (SD = 5.27; n = 68) at termination. Paired t-tests revealed a statistically significant difference from intake to termination for marijuana use among both males and females, and a significant difference for alcohol use among females.

**Figure 8. Average Previous 30 Day Substance Use for Males – Cuyahoga County**

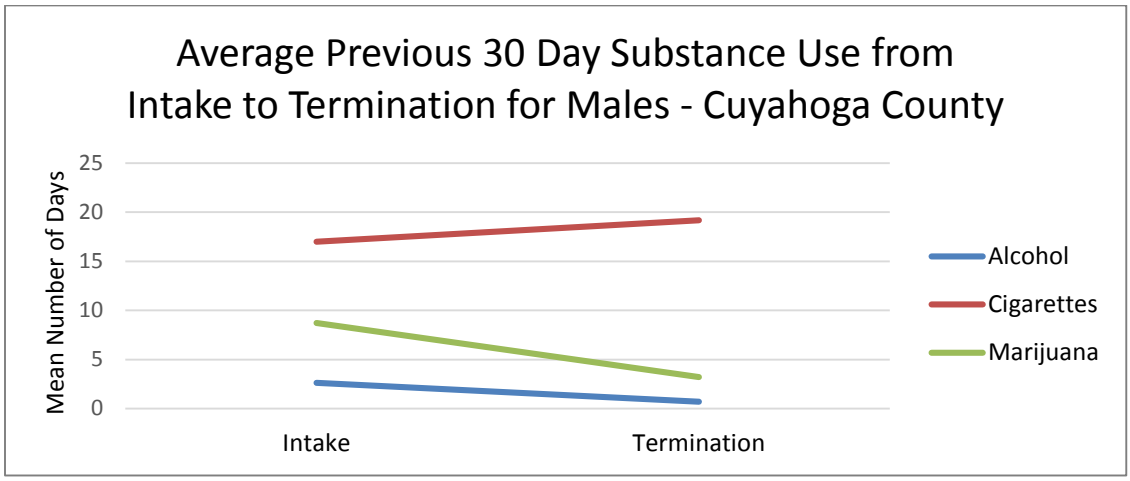
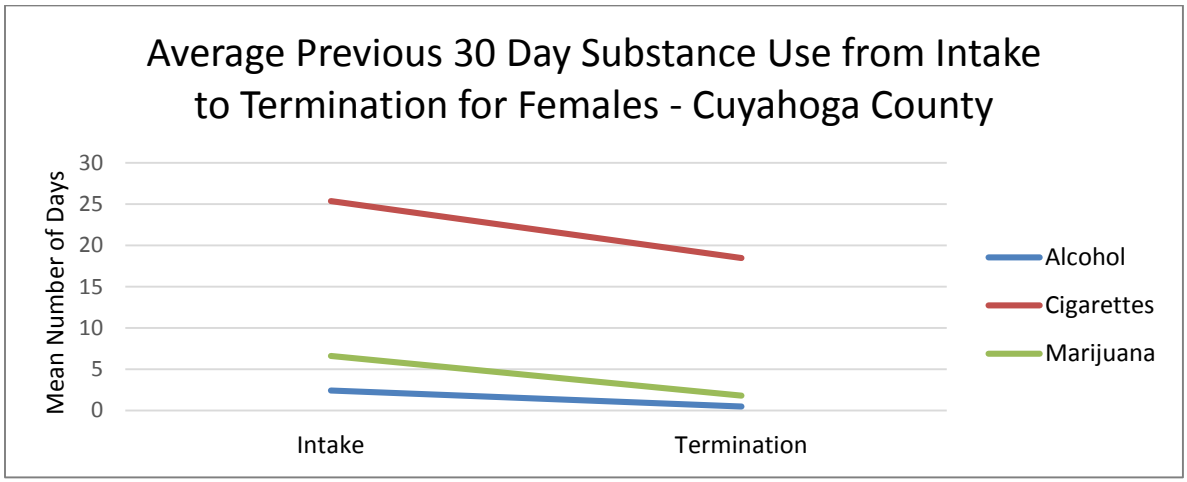


**Figure 9. Average Previous 30 Day Substance Use for Females – Cuyahoga County**




## OHIO SCALES AND SUBSTANCE USE

The Ohio Scales contain one Likert-scale item about the youth's problems with alcohol and drugs during the past 30 days. This question appears on all three versions of the Ohio Scales (Caregiver, Worker, and Youth). The responses range from zero to five, with zero indicating no problems at all with drugs or alcohol in the past 30 days and five indicating problems with drugs or alcohol all of the time. Scores on this item were examined at intake and termination for the three raters. All raters reported fewer problems with drugs or alcohol at termination from BHJJ (see Figure 10, Figure 11, and Figure 12). At intake 37.5% (n = 127) of caregivers and 32.5% (n = 113) of workers reported no problems with drugs or alcohol in the past 30 days while 63.3% (n = 131) of caregivers and 62.8% (n = 155) of workers reported no problems at termination. Similarly, 44.7% (n = 155) of youth reported no problems in the past 30 days with drugs or alcohol at intake while 73.6% (n = 159) of youth reported no problems at termination.

**Figure 10. Problems with Drugs or Alcohol in the Past 30 Days for Cuyahoga County Youth - Caregiver Ratings**

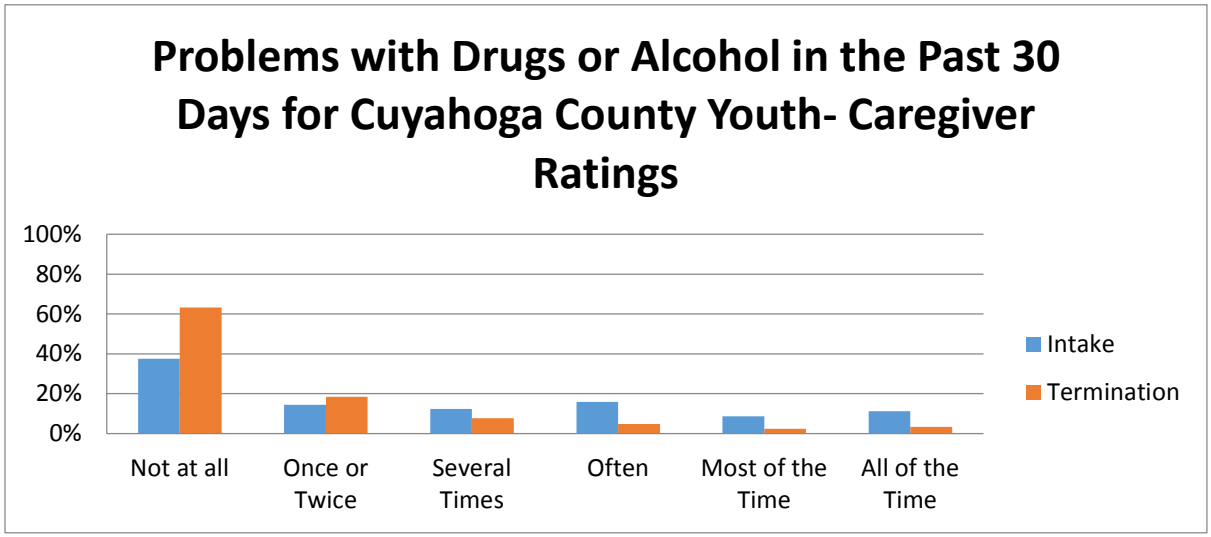


**Figure 11. Problems with Drugs or Alcohol in the Past 30 Days for Cuyahoga County Youth - Worker Ratings**

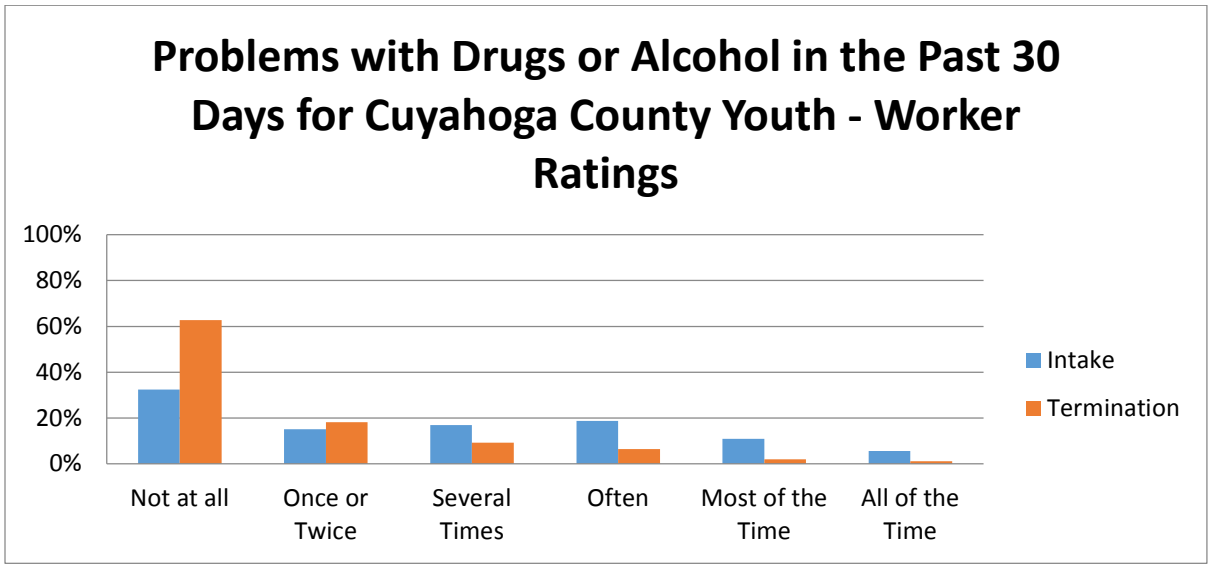
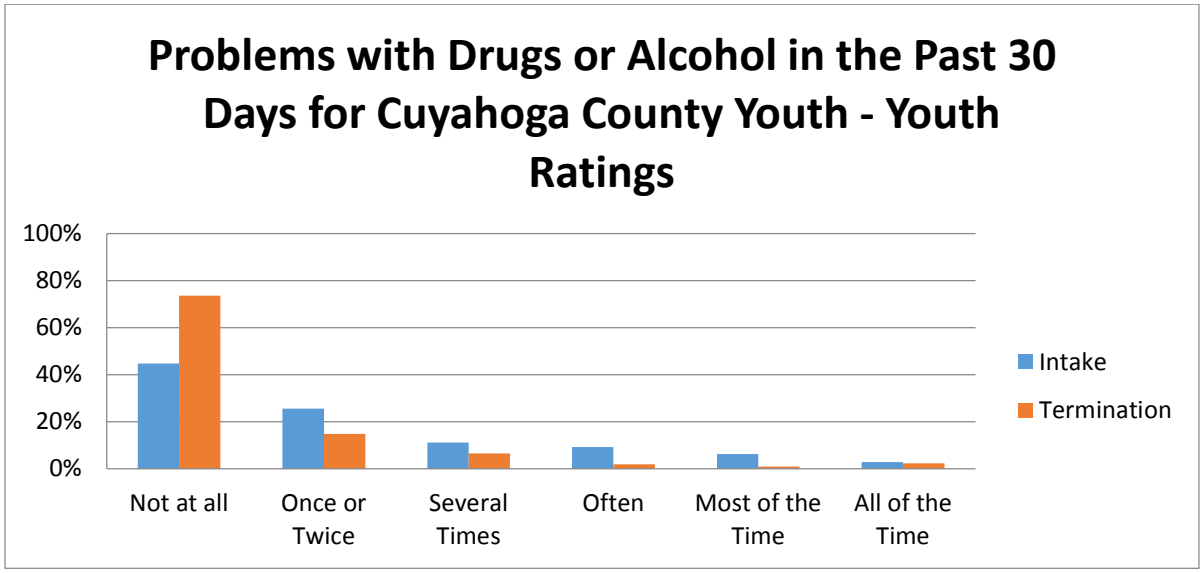



**Figure 12. Problems with Drugs or Alcohol in the Past 30 Days for Cuyahoga County Youth - Youth Ratings**



## TERMINATION INFORMATION

### REASONS FOR TERMINATION

Upon termination of treatment from BHJJ, the case worker is asked to identify the reason for the youth's termination from the program. This information is typically focused on treatment outcomes and driven by local definitions of success, not necessarily whether the youth received new court charges or adjudications (recidivism), although youth may be terminated from the BHJJ program due to new involvement with the court. Typically, successful treatment completion is tied to attendance at meetings, progress in therapy, compliance with terms of the treatment plan, etc. County-specific definitions of successful termination are described in detail in the Project Descriptions section.

To date, there have been 316 youth terminated from the BHJJ program in Cuyahoga County. **Sixty-eight percent (n = 215) of the youth terminated from the BHJJ program were identified as successful treatment completers.** An additional 1.9% of youth (n = 6) were terminated from the program when the youth or family moved out of the county. Therefore, nearly 70% (69.9%, n = 221) of youth enrolled in BHJJ were terminated successfully or because the youth or family moved out of the county and were no longer able to receive BHJJ services. In Cuyahoga County, 1.3% of youth (n = 4) were withdrawn from the program and 10.1% (n = 32) were terminated from the program due to an out of home placement. Table 20 presents all of the reasons for termination from BHJJ.

In the latest evaluation period that began July 2013 and ended in June 2015, 73.9% (n = 34) of youth terminated successfully from the BHJJ program in Cuyahoga County.

**Table 20. Reasons for Termination from BHJJ – Cuyahoga County**

| Termination Reason | All Youth | Youth Enrolled from July 2013 to June 2015 |
|---|---|---|
| **Successfully Completed Services** | 68.0% (n = 15) | 73.9% (n = 34) |
| **Client Did Not Return/Rejected Services** | 4.7% (n = 15) | 0.0% (n = 0) |
| **Out of Home Placement** | 10.1% (n = 32) | 13.0% (n = 6) |
| **Client/Family Moved** | 1.9% (n = 6) | 0.0% (n = 0) |
| **Client Withdrawn** | 1.3% (n = 4) | 4.3% (n = 2) |
| **Client AWOL** | 6.0% (n = 19) | 2.2% (n = 1) |
| **Client Incarcerated** | 4.4% (n = 14) | 0.0% (n = 0) |
| **Other** | 3.5% (n = 11) | 6.5% (n = 3) |

### AVERAGE LENGTH OF STAY

The average length of stay for youth in the Cuyahoga County BHJJ program was 330 days. For youth identified as completing treatment successfully, the average length of stay was 334 days and for youth identified as unsuccessful treatment completers, the average length of stay was 323 days. For youth enrolled since July 1, 2013, the average length of stay in BHJJ was 230 days.

## RISK FOR OUT OF HOME PLACEMENT

At intake into and termination from the BHJJ program, workers were asked whether the youth was at risk for out of home placement. Upon entering the program, 66.2% of the youth (n = 260) in Cuyahoga County were at risk for out of home placement. At termination, 20.1% (n = 61) of youth were at risk for out of home placement. Of those youth who successfully completed BHJJ treatment, 7.1% (n = 15) were at risk for out of home placement at termination while 52.3% (n = 46) of youth who terminated unsuccessfully from the program were at risk for out of home placement.

## POLICE CONTACTS

With help from the caregiver and youth, the worker was asked to estimate the frequency of police contacts since the youth has been receiving mental health services through BHJJ. Workers reported that police contacts had been reduced for 75.7% (n = 190) of the youth and had stayed the same for 13.9% (n = 35) of the youth. Police contacts increased for 3.2% (n = 8) of the youth and the worker was unable to estimate for 7.2% (n = 18).

## SATISFACTION WITH SERVICES

Upon completion of the BHJJ program, the caregiver was asked about their overall satisfaction with the BHJJ program (see Table 21). At termination from the BHJJ program, 87.4% (n = 159) of caregivers either strongly agreed or agreed that they were satisfied with the services their child received and 83.5% (n = 151) either strongly agreed or agreed that the services their child and/or family received were right for them. A strong majority (94.5%, n = 123) of caregivers either strongly agreed or agreed that staff treated them with respect and 93.8% (n = 167) strongly agreed or agreed that they were satisfied with the cultural and ethnic sensitivity of BHJJ staff.

**Table 21. Satisfaction with Services – Cuyahoga County**

| | Strongly Agree | Agree | Undecided | Disagree | Strongly Disagree |
|---|---|---|---|---|---|
| **Overall I am satisfied with the services my child received** | 46.7% | 40.7% | 8.8% | 2.7% | 1.1% |
| **The services my child and/or family received were right for us** | 44.8 % | 38.7% | 12.7% | 2.2% | 1.7% |
| **Staff treated me with respect** | 68.0% | 26.5% | 3.3% | 1.1% | 1.1% |
| **Staff were sensitive to my cultural/ethnic background** | 53.9% | 39.9% | 3.9% | 1.1% | 1.1% |

## RECIDIVISM

Court data were provided by the Cuyahoga County Juvenile Court, and consisted of charges, adjudications, and commitments to ODYS (at any time after their BHJJ enrollment, including after termination from BHJJ). Data were divided into charges prior to enrollment, charges after enrollment, and charges after termination from BHJJ. We also present the data by treatment completion status (successful vs. unsuccessful). Technical or probation violations were not considered to be new charges and thus were not included in the analyses. Data specific to charges for misdemeanor and felony charges are presented in the following sections. Juvenile court history and recidivism information are presented at 3, 6, 12, and 18 month intervals.

Several criteria for inclusion in the analysis were considered based on the time period of interest. While all youth 18 years of age and under are included in the analyses prior to enrollment, not all youth are included in each assessment period after enrollment and after termination. Any charges for youth over 18 years of age would likely be filed in adult court, and therefore would not appear in juvenile court records. A youth over 18 at the time of termination may show no future juvenile court involvement; however the individual may have charges in the adult system. Because we did not have access to adult records, youth 18 years of age or older at termination were eliminated from all analyses that examined charges after termination. Also, youth who turned 18 years old during the measurement interval in question (3, 6, 12, 18 months after enrollment or termination) were eliminated from the analysis because we lacked a complete picture of their possible court involvement.

Enrollment and termination dates were also used to identify youth for the analyses. For example, when examining recidivism data three months after termination from BHJJ we chose to include only those youth who had been terminated from BHJJ for at least three months prior to the end of the data collection period, June 30, 2015. If the youth was terminated one month prior to the end of the data collection, that youth only had one month to recidivate. Therefore, the full extent of their recidivism is not known. For example, in order to be included in the three month after termination analyses, a youth had to have been 17.75 years old or younger at the time of termination and must have been terminated at least three months prior to the end of the data collection period. To be included in the 6 month analysis, youth had to have been 17.50 years old or younger at termination and have been terminated 6 months prior to June 30, 2015. The same criteria were applied to the intervals following enrollment in BHJJ. When examining new charges occurring within three months after intake, youth must be 17.75 years old or younger at the time of enrollment and the enrollment date must be at least three months prior to the end of the data collection period for inclusion in the analysis.

## JUVENILE COURT INVOLVEMENT PRIOR TO INTAKE

In the 12 months prior to their BHJJ enrollment, 70.3% (n = 249) of the BHJJ youth had a misdemeanor charge, 28.0% (n = 99) had a felony charge, and 77.1% (n = 273) were adjudicated delinquent (see Table 22).

Previous juvenile court information is presented for youth based on BHJJ treatment completion status (successful vs. unsuccessful) (see Table 22). In the 12 months prior to enrollment, 78.4% (n = 167) of successful completers and 78.1% (n = 75) of unsuccessful completers were adjudicated delinquent. A slightly lower percentage of successful completers had a felony charge in the 12 months prior to intake (25.8%, n = 55) than unsuccessful completers (27.1%, n = 26).

**Table 22. Charges Prior to BHJJ Enrollment – Cuyahoga County**

| | Overall | | | Successful | | | Unsuccessful | | |
|---|---|---|---|---|---|---|---|---|---|
| | Misdemeanors | Felonies | Adjudicated Delinquent | Misdemeanors | Felonies | Adjudicated Delinquent | Misdemeanors | Felonies | Adjudicated Delinquent |
| **3 months** | 26.0% (n = 92) | 7.3% (n = 26) | 27.4% (n = 97) | 26.3% (n = 56) | 7.0% (n = 15) | 28.2% (n = 60) | 29.2% (n = 28) | 6.3% (n = 6) | 28.1% (n =27) |
| **6 months** | 49.2% (n = 174) | 14.7% (n = 52) | 53.1% (n = 188) | 51.6% (n = 110) | 12.7% (n = 27) | 54.9% (n = 117) | 46.9% (n = 45) | 15.6% (n = 15) | 51.0% (n = 49) |
| **12 months** | 70.3% (n = 249) | 28.0% (n = 99) | 77.1% (n = 273) | 73.2% (n = 156) | 25.8% (n = 55) | 78.4% (n = 167) | 68.8% (n = 66) | 27.1% (n = 26) | 78.1% (n = 75) |
| **18 months** | 79.7% (n = 282) | 31.6% (n = 112) | 86.2% (n = 305) | 82.6% (n = 176) | 30.0% (n = 64) | 87.8% (n = 187) | 72.9% (n = 70) | 29.2% (n = 28) | 84.4% (n = 81) |

## RECIDIVISM AFTER ENROLLMENT

We defined recidivism after enrollment as receiving a new charge or adjudication at 3, 6, 12, and 18 months after a youth's BHJJ enrollment date. Once again even if a charge was eventually dismissed, it was included in the 'Misdemeanors' and 'Felonies' columns of the associated tables but would not be included in the calculations of delinquent adjudications.

In the 12 months after enrollment in BHJJ, 42.8% (n = 92) of youth were charged with at least one new misdemeanor and 21.4% (n = 46) were charged with at least one new felony. Forty five percent (45.1%, n = 97) of the youth were adjudicated delinquent in the 12 months after their enrollment in BHJJ (see Table 23).

In the 12 months after enrollment in BHJJ 38.3% (n = 54) of successful completers were charged with at least one new misdemeanor, 17.0% (n = 24) were charged with at least one new felony, and 38.3% (n = 54) were adjudicated delinquent. Of the youth who completed unsuccessfully, 52.5% (n = 32) were charged with at least one new misdemeanor, 21.3% (n = 13) were charged with at least one new felony, and 55.7% (n = 34) were adjudicated delinquent in the 12 months after their enrollment in BHJJ.

**Table 23. Charges after BHJJ Enrollment – Cuyahoga County**

| | Overall | | | Successful | | | Unsuccessful | | |
|---|---|---|---|---|---|---|---|---|---|
| | Misdemeanors | Felonies | Adjudicated Delinquent | Misdemeanors | Felonies | Adjudicated Delinquent | Misdemeanors | Felonies | Adjudicated Delinquent |
| **3 months** | 18.7% (n = 58) | 9.7% (n = 30) | 20.3% (n = 63) | 16.7% (n = 33) | 7.1% (n = 14) | 18.2% (n = 36) | 23.5% (n = 19) | 11.1% (n = 9) | 22.2% (n = 18) |
| **6 months** | 28.9% (n = 83) | 13.2% (n = 38) | 30.7% (n = 88) | 23.0% (n = 42) | 9.3% (n = 17) | 24.0% (n = 44) | 39.5% (n = 32) | 17.3% (n = 14) | 40.7% (n = 33) |
| **12 months** | 42.8% (n = 92) | 21.4% (n = 46) | 45.1% (n = 97) | 38.3% (n = 54) | 17.0% (n = 24) | 38.3% (n = 54) | 52.5% (n = 32) | 21.3% (n = 13) | 55.7% (n = 34) |
| **18 months** | 46.2% (n = 66) | 25.2% (n = 36) | 48.3% (n = 69) | 43.7% (n = 38) | 21.8% (n = 19) | 43.7% (n = 38) | 54.0% (n = 27) | 30.0% (n = 15) | 58.0% (n = 29) |

## RECIDIVISM AFTER TERMINATION

We defined recidivism after termination as receiving a new charge or adjudication any time after a youth's BHJJ termination date. If a charge was eventually dismissed, it was still included in the 'Misdemeanors' and 'Felonies' column of the associated tables but would not be included in the calculations of delinquent adjudications.

In the 12 months after termination from BHJJ, 24.2% (n = 29) of youth were charged with at least one new misdemeanor, 10.8% (n = 13) were charged with at least one new felony, and 23.3% (n = 28) were adjudicated delinquent (see Table 24).

In the 12 months following their termination from BHJJ, 24.3% (n = 18) of successful completers were charged with at least one new misdemeanor, 9.5% (n = 7) were charged with at least one new felony, and 24.3% (n = 18) were adjudicated delinquent. Of the youth who completed unsuccessfully, 26.2% (n = 11) were charged with at least one new misdemeanor, 14.3% (n = 6) were charged with at least one new felony, and 23.8% (n = 10) were adjudicated delinquent in the 12 months after their termination from BHJJ.

**Table 24. Charges after Termination from BHJJ – Cuyahoga County**

| | Overall | | | Successful | | | Unsuccessful | | |
|---|---|---|---|---|---|---|---|---|---|
| | Misdemeanors | Felonies | Adjudicated Delinquent | Misdemeanors | Felonies | Adjudicated Delinquent | Misdemeanors | Felonies | Adjudicated Delinquent |
| **3 months** | 10.1% (n = 19) | 3.2% (n = 6) | 9.6% (n = 18) | 9.6% (n = 11) | 2.6% (n = 3) | 9.6% (n = 11) | 10.0% (n = 7) | 2.9% (n = 2) | 8.6% (n = 6) |
| **6 months** | 16.5% (n = 26) | 5.1% (n = 8) | 15.2% (n = 24) | 17.6% (n = 16) | 4.4% (n = 4) | 17.6% (n = 16) | 14.3% (n = 9) | 4.8% (n = 3) | 11.1% (n = 7) |
| **12 months** | 24.2% (n = 29) | 10.8% (n = 13) | 23.3% (n = 28) | 24.3% (n = 18) | 9.5% (n = 7) | 24.3% (n = 18) | 26.2% (n = 11) | 14.3% (n = 6) | 23.8% (n = 10) |
| **18 months** | 30.8% (n = 20) | 10.8% (n = 7) | 29.2% (n = 19) | 27.8% (n = 10) | 8.3% (n = 3) | 27.8% (n = 10) | 37.0% (n = 10) | 14.8% (n = 4) | 33.3% (n = 9) |

## FELONY OFFENDERS AND ODYS COMMITMENTS

We examined data for those youth who committed felony offenses in the 12 months prior to their BHJJ enrollment to determine if they had new felony charges after their BHJJ termination. A total of 28 felony offenders remained in the analysis after the data were restricted to youth 17 years old or younger, who had one full year to recidivate and for whom we had both recidivism and termination data. Of the youth, 21.4% (n = 6) were charged with a new felony in the 12 months after their termination from BHJJ.

**Thirteen of the 354 BHJJ youth (3.7%) from Cuyahoga County for whom we had recidivism data were committed to an ODYS facility at any time following their enrollment.**

## SUCCESS STORY

The youth, who was on community control for Assault F-5 was referred to the Cuyahoga County BHJJ program by the Court's Alternative Case Planning (ACP) team due to being considered for an out of home placement. The concerns reported by the previous Probation Officer included: significant mental health and substance abuse concerns, aggression, criminogenic behavior, associating with negative peers, poor child/parent relationship and disruptive behavior at school. This youth was previously unsuccessful on traditional probation through the court and continued to acquire new charges.

After receiving his mental health assessment the youth was recommended by the BHJJ Assessor to receive Bellefaire Integrated Co-Occurring Treatment (ICT) Services to address the co-occurring disorders. A referral was made by the Care Coordinator for this service shortly after receiving the case. Since services started with Bellefaire ICT, the youth consistently provided clean drug screens. He and his mother consistently participated in these services and with family therapy. His mother showed improvement holding the youth more accountable in the home and decreasing enabling behavior. Initially, the youth was getting into verbal and physical altercations as well as lacking focus and concentration with school work. However, since working with the BHJJ Placement Aftercare Coordinator, BHJJ Care Coordinator, ICT therapist and school professionals, the youth was able to increase compliance and reduce the amount of behavioral concerns at school. School professionals reported an increase in completed school work, focus, and respect with school rules and adults.

Over the last couple months there have been no reported physical altercations. Also, the youth was referred to a youth employment program and was successfully linked to a job at a local retailer within the completion of the 6 week program. He was also referred for the Youth Advisory Committee for Juvenile Court and completed his assigned community service hours. During his time in the BHJJ program the youth had no new charges and was recently successfully terminated from community control.

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