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# Executive Summary: An Evaluation of the Trumbull County Behavioral Health Juvenile Justice (BHJJ) Initiative

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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 designed to provide these youth evidence and community-based behavioral health treatment in lieu of detention. Twelve counties participated in BHJJ during the most recent biennium: Ashtabula, Cuyahoga, Franklin, Hamilton, Holmes, Lorain, Lucas, Mahoning, Montgomery, Summit, Trumbull, and Wayne. BHJJ was funded through 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 evaluation services for the program. **The majority of findings presented here represent data collected between July 1, 2015 through June 30, 2019.**

## Demographics and Youth Characteristics

- ❖ Since 2013, 84 youth have been enrolled in BHJJ (55% male, 65% White). The average age of youth entering the program was 15.0 years old.
- ❖ Between July 1, 2017 and June 30, 2019, 20 youth were enrolled in BHJJ (50% male, 60% White). The average age of youth entering the program was 15.2 years old.
- ❖ The most common DSM diagnosis for BHJJ youth was Oppositional Defiant Disorder.
- ❖ 5% of males and females had both a mental health and substance use diagnosis.
- ❖ Caregivers reported that 35% of the females had a history of sexual abuse, 71% talked about suicide, and 25% had attempted suicide. 90% of females and 65% of males had family members who were diagnosed with or showed signs of depression.
- ❖ 65% of BHJJ females and 59% of BHJJ males had biological family members with alcohol or drug problems.
- ❖ 32% of youth reported seeing a parent hit/slapped by the other parent/partner in the past year.
- ❖ 66% of BHJJ youth scored moderate or high risk to reoffend on the OYAS.
- ❖ Prior to BHJJ, 59% of the youth had a history of child welfare involvement, 6% had received substance use treatment, and 88% had received mental health treatment.

### **Educational Information**

- ❖ About 39% of the youth were suspended or expelled from school in the year prior to their BHJJ enrollment. During treatment, 32% were suspended or expelled.
- ❖ At termination, workers reported that 95% of youth were attending school more or about the same amount as they were before starting treatment.

### **Mental/Behavioral Health Outcomes**

- ❖ BHJJ youth reported a significant decrease in trauma symptoms related to anger, posttraumatic stress, and dissociation from intake to termination.
- ❖ Results from the Ohio Scales indicated workers reported significantly increased youth functioning and decreased youth problem severity while in BHJJ treatment.
- ❖ The percentage of youth who reported 30-day alcohol or drug use decreased from 14% at intake to 0% at termination.

### **Termination and Recidivism Information**

- ❖ 91% of the youth terminated from the BHJJ program completed treatment successfully. The average length of stay in the program was 147 days.
- ❖ Workers reported that police contacts have been reduced for 74% of the youth.
- ❖ At intake, 80% of the youth were at risk for out of home placement. At termination, 18% of youth were at risk for out of home placement. Of those youth who successfully completed BHJJ treatment, 10% were at risk for out of home placement at termination.
- ❖ One year after termination, 38% of youth had a new misdemeanor charge and 10% had a new felony charge.
- ❖ Since 2015, one youth (2.1%) enrolled in BHJJ for whom we had recidivism data was committed to an ODYS facility at any time following their enrollment in BHJJ.
- ❖ The average number of misdemeanor charges in the 12 months prior to and after BHJJ declined from 1.1 to 0.5.

## 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 meet the needs of 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 comprehensive 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

Twenty 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 youths 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, this initiative was designed to divert JJI youth with mental health or substance use issues from detention 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 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, 18 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 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 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 & Singer, 2016; Kretschmar, Butcher, Canary, & Devens, 2015). For information or copies of previous evaluation reports, please contact Dr. Jeff Kretschmar at [jeff.kretschmar@case.edu](mailto:jeff.kretschmar@case.edu) or visit <http://begun.case.edu/research/juvenile-justice/bhjj/>.

## 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 Problems, 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 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 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.

### Victimization and Delinquency Questionnaire (VDQ)

The Victimization and Delinquency Questionnaire (VDQ) is a 33-item survey designed to gather information on childhood victimization as a witness or victim, delinquency, and negative peer interactions. This self-report instrument is measured on a 0 (Never) to 4 (Almost every day) scale. The items were adapted from a variety of sources, including the Juvenile Victimization Questionnaire (Finkelhor, Hamby, Ormrod, & Turner, 2005). This survey replaced the Recent Exposure to Violence Scale (REVS) used in previous BHJJ evaluations.

### 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.

### Resiliency Survey

The Resiliency Survey is a 16-item, self-report survey designed to measure the external and internal assets associated with positive youth development. This survey is completed by youth at both intake into and termination from the BHJJ program. Items are scored on a four-point Likert scale ranging from "Not at all True" to "Very Much True".

### 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 required 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
Resiliency Survey	Youth	Intake, Term

Table 2. Optional BHJJ Questionnaires

Measure	Who Completes	When Administered
Ohio Scales	Caregiver	Intake, every 3 months, Term
Victimization and Delinquency Questionnaire	Youth	Intake, Term
Caregiver Information Questionnaire – Term (CIQ-F)	Caregiver with Program Staff	Term
Youth Service Survey for Families (YSSF)	Caregiver	Term

## Date of BHJJ Participation

To date, 18 counties throughout Ohio have participated in the BHJJ program (see Table 3). The aggregate report includes data from all 18 counties. Currently, there are 12 BHJJ counties. In addition to the aggregate report, individual county reports are included for each of these current counties.

Table 3. Dates of BHJJ Participation

County	BHJJ Participation Dates
Ashtabula	2016 - present
Butler	2008 – 2009
Champaign	2006 - 2009
Cuyahoga	2006 – present
Fairfield	2006 - 2009
Franklin	2006 - present
Hamilton	2008 – present
Holmes	2013 - present
Logan	2006 - 2009
Lorain	2013 – present
Lucas	2009 – present
Mahoning	2013 – present
Montgomery	2006 - present
Summit	2009 - present
Trumbull	2013 – present
Union	2006 - 2009
Wayne	2013 - present
Wood	2013 - 2015

## Project Description

The BHJJ program that serves Trumbull, Ashtabula, and Mahoning Counties is part of a collaborative project that allows for the implementation of evidence-based programs across the three most northeastern counties in Ohio. Cadence Care Network (formerly Homes For Kids) provides services (MST and TIP Informed High Fidelity Wraparound) for the project and the program serves male and female youth ages 12 to 17. The defined target population is multi-system involved youth who are at risk for out of home placement, incarceration, or who are returning from an out of home placement. All youth entering the program are identified as Severely Emotionally Disturbed (SED) and many will have a co-occurring substance abuse diagnosis. The program implements two evidence based practices, Multisystemic Therapy (MST) and the Transition to Independence Process (TIP), as well as evidence informed High Fidelity Wraparound. The primary goals are to: reduce out of home placements; divert youth from juvenile court programs or ODYS institutions to evidence based, family-focused programming in the community; maintain or reduce commitments to ODYS; improve intersystem communication and collaboration; and share outcomes (successes and failures) across three contiguous counties that have some distinct similarities and differences.

Due to the project's focus on Multi-System Involved Youth (Cross Over), youth can and do enter the program from various channels that include juvenile court, children services boards, or county family and children first councils. Prior to referral, the juvenile court administers the Ohio Youth Assessment System (OYAS) to determine the risk of recidivism. Cadence Care Network (formerly Homes For Kids) provides MST services to each youth identified as appropriate for the program. Upon completion of the MST Program, youth and families who are inclined and willing are transferred to Wraparound within the counties' System of Care framework. Wraparound Facilitators incorporate the TIP treatment model in engaging youth and empowering families to lead healthier lives.

Trauma Informed Care is heavily embedded in the MST Collaborative with trauma informed protocols. Cultural Competence is also embedded through the entire project, as it is a core component of MST, TIP, and High-Fidelity Wraparound models. Youth participating in the program are screened and assessed (at intake and discharge) for trauma utilizing the Trauma Symptom Checklist for Children (TSCC) and for substance abuse utilizing the Substance Use Survey (SUS) also at intake and discharge.

The project provides the region with two teams of four MST Therapists, capable of serving approximately 120 youth annually. MST is an effective evidence based tool that has been proven to work with the toughest offenders' ages 12-17 who have a long history of arrests. All eight MST Therapists are employed by Cadence Care Network.

Youth referred to the program are assessed by an MST Therapist and if appropriate and a good fit for the program, the case is opened and an initial session is scheduled with the family within 48 hours. The therapist meets with the family in the family's home to conduct family therapy sessions utilizing the MST model of treatment. MST therapists meet with families at minimum three times a week in the home working on getting the parent back in the driver seat of their family. MST clinicians go to where the child is and are on call 24 hours a day, seven days a week. They work intensively with parents and caregivers to put them in control. The therapist works with the caregivers to keep the adolescent focused on school, creating positive peer relationships, and gaining job skills. The therapist and caregivers introduce the youth to sports and recreational activities as an alternative to idle time. The therapist and caregiver work intensively to improve family functioning and cohesiveness.

As with all evidence-based programs, model adherence is a central theme. All client families complete Therapist Adherence Measures (TAMs) two weeks into treatment and every 30 days thereafter on their assigned therapist to ensure the therapist is adhering to the MST model. The MST supervisor enters these TAMs onto the MST services secure website. To date, adherence to the model falls within the expected targets. The eight therapists on the MST team and the MST supervisor attend weekly MST group supervision for two hours followed by one hour of case consultation with an MST consultant employed by the Center for Innovative Practices at Case Western Reserve University. In addition to weekly three-hour supervision and consultation, MST therapists attend treatment staffings at juvenile court and children services as scheduled. The MST team also has quarterly booster trainings with the MST consultant on topics picked by the MST team, supervisor and consultant aimed at increasing adherence to the model and increasing successful case outcomes.

As the MST treatment episode ends, the therapist, probation officer, and child welfare staff continue to collaborate and link the youth and family with community resources as needed, to help sustain the changes made during treatment. The families are offered the option of a step down into High-Fidelity Wraparound services and this is coordinated with the family by the MST therapist for a smooth

transition from MST to wraparound. The MST therapist schedules with the wraparound facilitator to accompany them to the family's home to meet them and step the family down into wraparound services. A client and family is deemed to be successfully terminated from MST if they: completed the three to five months of the program, learned new skills for sustainability in regards to utilizing informal supports as respite, improved their cohesion level as a family, decreased all referral behaviors, are living in the home or community at time of discharge, and are attending work or school and has no new charges since entering the program.

## Data Analysis Plan

The report is divided into two main sections. The first is an aggregate report using data from all the BHJJ counties. This includes data collected from the beginning of the BHJJ program in 2005 through June 30, 2019 and includes data from all counties who have participated, regardless of their current participation status. After the aggregate report are individual county reports highlighting data from each current BHJJ county since they have been participating in the BHJJ program.

### 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<sup>1</sup>.

One-way ANOVAs are used when we are interested in whether mean differences on a dependent variable are significant along a categorical independent variable. For instance, one-way ANOVAs are conducted when we are interested in whether caregivers, youth, and workers differ significantly on mean Ohio Scales Functioning scores. The question of interest here is whether there are *real differences* between mean scores for the three different reporters.

Logistic regression is a multivariate statistical technique where the question to be answered is whether or not a variable predicts group membership. The use of the term multivariate here indicates that there is more than one independent variable included in the analysis. Each of the variables in the model contributes to the prediction of group membership and therefore, the effects of each variable in the analysis are controlled. Consider the question of whether recidivism can be predicted by risk assessment scores, age, race, and gender. Group membership in this case refers to whether or not an individual recidivated (yes/no). Results of the logistic regression will indicate the probability of recidivism for a male youth compared to a female, while controlling for, or holding constant, risk assessment scores, age, and race.

### Sample Size

**For county-specific reports, where possible, we included data from July 1, 2015 through June 30, 2019.**

This is a departure from previous reports, where all project data from every project site that ever participated, was included. We decided to include only the most recent data to allow stakeholders at the State and local level to detect recent changes in their outcomes, that otherwise may be masked by analyzing such a large sample size. However, if a larger dataset was needed to conduct statistical analyses, we expanded the pool to include additional years. A few sections contain data from the entire sample as well as from the previous biennium (e.g. termination reasons).

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

## Demographics

As of June 30, 2019, 84 youth were enrolled into the BHJJ program in Trumbull County. The average age at enrollment was 15.0 years (SD=1.49). More males (55.4%, n = 46) than females (44.6%, n = 37) have been enrolled. White youth (65.4%, n = 53), Black youth (23.5%, n = 19) and Multiracial youth (7.4%, n = 6) comprised the majority of the total sample.

There were 20 new enrollments in Trumbull County during the current reporting period (July 1, 2017 through June 30, 2019). The average age at enrollment was 15.2 (SD = 1.53). There were an equal number of males (50.0%, n = 10) and females (50.0%, n = 10), and more White youth (60.0%, n = 12) than Black youth (30.0%, n = 6). Twenty percent (20.0%, n = 4) of youth self-identified as Hispanic/Latinx.

**Unless otherwise noted, the following sections describe data from the past four years of BHJJ programming from July 1, 2015 through June 30, 2019.**

## Custody Arrangement and Household Information

At intake, 40.0% of youth (n = 18) lived with their biological mother only, while 22.2% (n = 10) lived with two biological parents or one biological and one step/adoptive parent (see Table 4). Over seventy-one percent (71.1%, n = 32) of BHJJ youth lived with at least one biological at enrollment.

Over eighty-nine percent (89.9%; n = 40) of the BHJJ caregivers had at least a high school diploma or GED, and 22.2% (n = 10) had a bachelor's degree or higher. Over eleven percent of caregivers (11.1%; n = 5) reported they did not graduate from high school (see Table 5).

Caregivers were asked to report their annual household income (see Table 6). The income range with the highest endorsement was \$10,000 - \$14,999 (22.7%, n = 10). Overall, 59.1% (n = 26) reported a family income of \$24,999 or less. When examined by race, 33.3% (n = 9) of White families, 63.6% (n = 7) of Black families, and 33.3% (n = 1) of Multiracial families reported a household income of \$14,999 or less. Table 6 displays the reported household income overall and by race.

Table 4. Custody Arrangement for BHJJ Youth

Custody	BHJJ Youth
<b>Two Biological Parents or One Biological and One Step or Adoptive Parent</b>	22.2% (n = 10)
<b>Biological Mother Only</b>	40.0% (n = 18)
<b>Biological Father Only</b>	8.9% (n = 4)
<b>Adoptive Parent(s)</b>	4.4% (n = 2)
<b>Aunt/Uncle</b>	6.7% (n = 3)
<b>Grandparents</b>	13.3% (n = 6)
<b>Other</b>	4.4 (n = 2)

Table 5. Educational Outcomes for Caregivers of BHJJ Youth

Number of School Years Completed	Number of Caregivers
Less than High School	11.1% (n = 5)
High School Graduate or G.E.D.	35.6% (n = 16)
Some College or Associate Degree	33.3% (n = 15)
Bachelor's Degree	11.1% (n = 5)
More than a Bachelor's Degree	11.1% (n = 5)

Table 6. Annual Household Incomes for BHJJ Families by Race

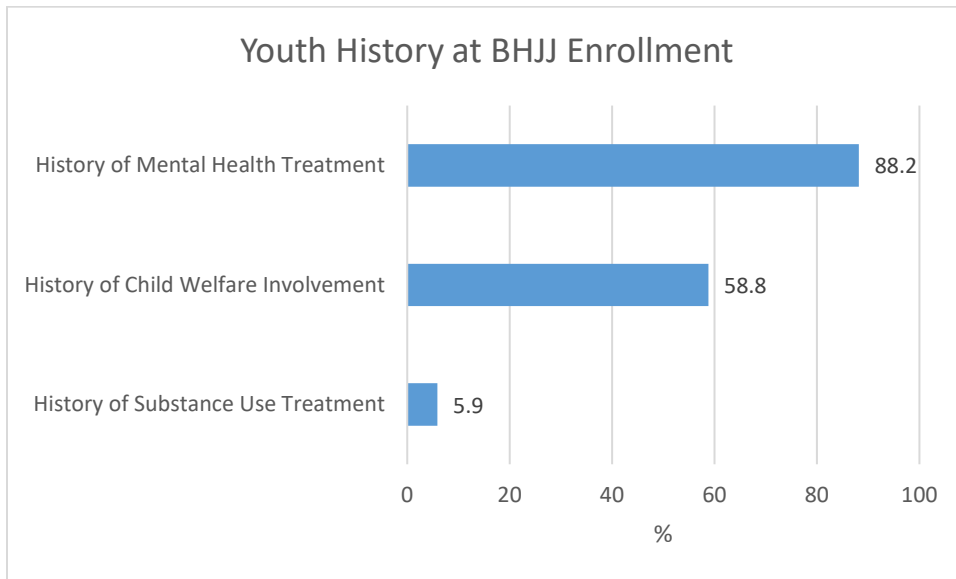
Household Income	Overall	White	Black	Multiracial
Less than \$5,000	11.4% (n = 5)	11.1% (n = 3)	9.1% (n = 1)	0
\$5,000 - \$9,999	9.1% (n = 4)	3.7% (n = 1)	27.3% (n = 3)	0
\$10,000 - \$14,999	22.7% (n = 10)	18.5% (n = 5)	27.3% (n = 3)	33.3% (n = 1)
\$15,000 - \$19,999	6.8% (n = 3)	11.1% (n = 3)	0	0
\$20,000 - \$24,999	9.1% (n = 4)	7.4% (n = 2)	9.1% (n = 1)	0
\$25,000 - \$34,999	6.8% (n = 3)	11.1% (n = 3)	0	0
\$35,000 - \$49,999	18.2% (n = 8)	18.5% (n = 5)	9.1% (n = 1)	66.7% (n = 2)
\$50,000 - \$74,999	11.4% (n = 5)	11.1% (n = 3)	18.2% (n = 2)	0
\$75,000 or greater	4.6% (n = 2)	7.4% (n = 2)	0	0



## Youth and Family History

Workers were asked to identify a youth's prior behavioral health and child welfare system involvement (see Figure 1). These three items were new to the past biennium, therefore, data are only available for youth enrolled between July 1, 2017 and June 30, 2019. Over fifty-eight percent of the youth (58.8%, n = 10) had a history of child welfare involvement prior to BHJJ enrollment. Six percent (5.9%, n = 1) of youth had received substance use treatment in their lifetime prior to BHJJ enrollment and 88.2% (n = 15) of youth had received mental health treatment in their lifetime prior to BHJJ enrollment.

Figure 1.



Caregivers were asked to respond to a series of questions designed to obtain data related to the youth's family history. Chi-square analyses were conducted on each item to test for gender differences and significant differences are identified in Table 7. A significantly larger proportion of the caregivers of females reported lifetime histories of sexual abuse and talking about suicide.

Caregivers reported that 25.0% (n = 5) of females and 25.0% (n = 6) of males had a history of being physically abused while 35.0% (n = 7) of females and 8.0% (n = 2) of males had a history of being sexual abused. Caregivers of 71.4% (n = 15) of females and 37.5% (n = 9) of males reported hearing the child talking about committing suicide and 25.0% (n = 5) of females and 12.0% (n = 3) of males had attempted suicide at least once. A majority of the caregivers of females (90.0%, n = 18) and males (65.2%, n = 15) reported a family history of depression. Caregiver of 65.0% of females (n = 13) and 59.1% of males (n = 13) reported a family history of problems with substance use.

Table 7. Youth and Family History

Question	Females	Males
<b>Has the child ever been physically abused?</b>	25.0% (n = 5)	25.0% (n = 6)
<b>Has the child ever been sexually abused?</b>	35.0% (n = 7)*	8.0% (n = 2)
<b>Has the child ever run away?</b>	42.9% (n = 9)	44.0% (n = 11)
<b>Has the child ever had a problem with substance abuse, including alcohol and/or drugs?</b>	14.3% (n = 3)	39.1% (n = 9)
<b>Has the child ever talked about committing suicide?</b>	71.4% (n = 15)*	37.5% (n = 9)
<b>Has the child ever attempted suicide?</b>	25.0% (n = 5)	12.0% (n = 3)
<b>Has the child ever been exposed to domestic violence or spousal abuse, of which the child was not the direct target?</b>	42.1% (n = 8)	48.0% (n = 12)
<b>Has anyone in the child's biological family ever been diagnosed with depression or shown signs of depression?</b>	90.0% (n = 18)	65.2% (n = 15)
<b>Has anyone in the child's biological family had a mental illness, other than depression?</b>	68.4% (n = 13)	50.0% (n = 11)
<b>Has the child ever lived in a household in which someone was convicted of a crime?</b>	28.6% (n = 6)	47.8% (n = 11)
<b>Has anyone in the child's biological family had a drinking or drug problem?</b>	65.0% (n = 13)	59.1% (n = 13)
<b>Is the child currently taking any medication related to his/her emotional or behavioral symptoms?</b>	47.6% (n = 10)	33.3% (n = 8)

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

## Problems Leading to Service

The case worker or staff member assigned to the family typically completed a diagnostic assessment as part of the intake process. The workers were asked to identify the problems leading to the youth being referred for BHJJ services. For both females and males, the most common problem leading to BHJJ services was conduct/delinquency-related problems (100.0% and 100.0% respectively) (see Table 8). Chi-square analysis indicated females had significantly higher rates of problems related to anxiety, depression, and suicide.

Table 8. Problems Leading to Services

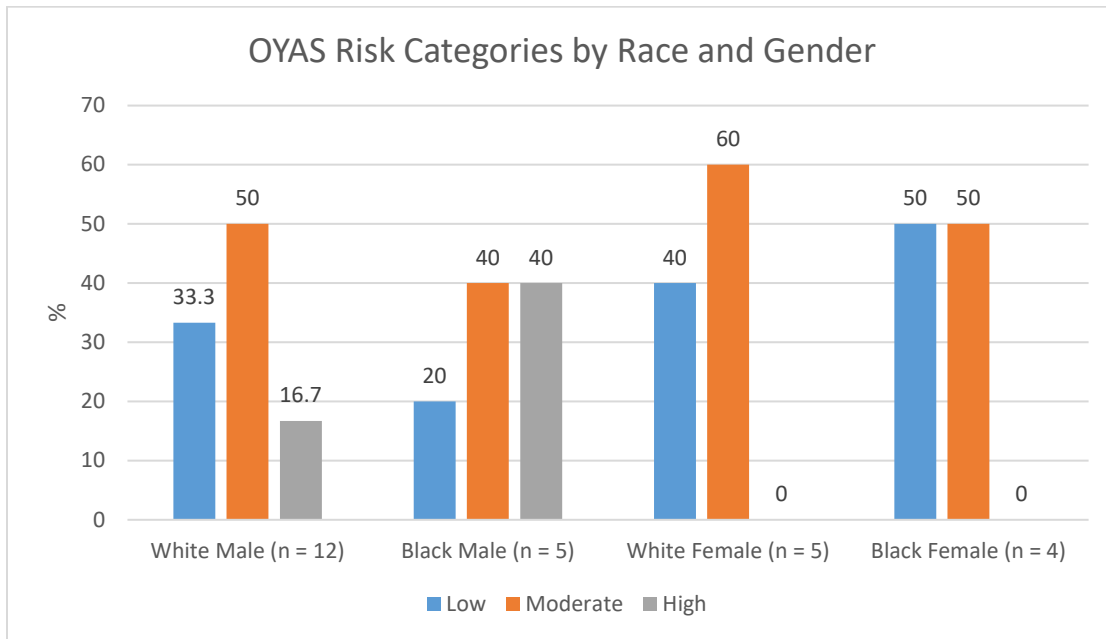
Problems Leading to Services	Females	Males
<b>Adjustment-related problems</b>	18.2% (n = 4)	4.3% (n = 1)
<b>Anxiety-related problems</b>	40.9% (n = 9)*	13.0% (n = 3)
<b>Conduct/delinquency-related problems</b>	100.0% (n = 22)	100.0% (n = 23)
<b>Depression-related problems</b>	40.9% (n = 9)*	13.0% (n = 3)
<b>Eating disorders</b>	4.5% (n = 1)	0
<b>Hyperactive and attention-related problems</b>	27.3% (n = 6)	30.4% (n = 7)
<b>Learning disabilities</b>	9.1% (n = 2)	4.3% (n = 1)
<b>Pervasive development disabilities</b>	0	0
<b>Psychotic behaviors</b>	4.5% (n = 1)	0
<b>School performance problems not related to learning disabilities</b>	45.5% (n = 10)	43.5% (n = 10)
<b>Specific developmental disabilities</b>	0	0
<b>Substance use, abuse, dependence-related problems</b>	14.3% (n = 2)	22.2% (n = 4)
<b>Suicide-related problems</b>	31.8% (n = 7)*	4.3% (n = 1)

\* < .05, \*\* < .01, \*\*\* < .001

## Ohio Youth Assessment System

Ohio Youth Assessment System (OYAS) data were collected at the time point closest to a youth's respective enrollment dates. Figure 2 shows the distribution of OYAS risk categories for BHJJ youth by race and gender. In Trumbull County, 16.7% (n = 2) of White males and 40.0% (n = 2) of Black males enrolled in the BHJJ program were identified as High risk on the OYAS, while no White or Black females were identified as High risk. Due to small sample sizes, caution should be applied when making any comparisons.

Figure 2.



## DSM Diagnoses

Workers were asked to report any DSM diagnoses at intake in 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 diagnosis for females and males was Oppositional Defiant Disorder (see Table 9). Chi-square analysis indicated females were significantly more likely than males to be diagnosed with Unspecified Mood Disorders.

Table 9. Most Common DSM Diagnoses

DSM Diagnosis	Females (n = 21)	Males (n = 22)
<b>Adjustment Disorder</b>	0	0
<b>Alcohol-related Disorders</b>	0	0
<b>Attention Deficit Hyperactivity Disorder</b>	19.0% (n = 4)	22.7% (n = 5)
<b>Bipolar Disorder</b>	4.8% (n = 1)	0
<b>Cannabis-related Disorders</b>	4.8% (n = 1)	4.5% (n = 1)
<b>Conduct Disorder</b>	4.8% (n = 1)	0
<b>Depressive Disorders</b>	4.8% (n = 1)	4.5% (n = 1)
<b>Disruptive Behavior Disorder</b>	0	0
<b>Unspecified Mood Disorder</b>	33.3% (n = 7)*	9.1% (n = 2)
<b>Oppositional Defiant Disorder</b>	<b>52.4% (n = 11)</b>	<b>77.3% (n = 17)</b>
<b>Post-traumatic Stress Disorder</b>	19.0% (n = 4)	9.1% (n = 2)
<b>Unspecified Trauma and Stressor Related Disorder</b>	0	0
<b>Disruptive Mood Dysregulation Disorder</b>	9.5% (n = 2)	9.1% (n = 2)
<b>Co-Occurring Disorder</b>	4.8% (n = 1)	4.5% (n = 1)

\* < .05, \*\* < .01, \*\*\* < .001

## Educational Information

Several items focused on educational information were included in the evaluation packet at both intake into and termination from the BHJJ program. The items were completed by the worker with help from the youth and caregiver. The wording on some items (e.g. IEP at intake, attendance at intake) was changed from previous versions of the forms. For those items, we present data from only the past biennium (when the new forms were in use). Those items will have smaller sample sizes compared to items that have been consistent for the past four years.

Thirty-nine percent (39.0%, n = 16) of youth were either suspended or expelled from school in the 12 months prior to their enrollment in the BHJJ project. While in BHJJ treatment BHJJ, 31.8% (n = 7) of the youth were expelled or suspended from school (a 18.5% decrease from intake to termination).

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, 90.0% (n = 9) of youth were currently attending school while at termination, 80.0% (n = 16) of BHJJ youth were attending school.

If the youth was attending school, the worker was asked to identify the types of grades the youth typically received. Table 10 displays the grades typically received by the BHJJ youth at intake and termination from the program while Table 11 displays this information based on completion status. At intake, 47.7% of youth were earning mostly A's and B's, and C's while at termination, 33.3% were earning mostly A's, B's, or C's. Academic improvement varied by BHJJ completion status (see Table 11). For example, at intake, 0% of youth who would go on to be unsuccessful completers and 50.0% of youth who would go on to be successful completers received mostly A's, B's, or C's. At termination, 0% of unsuccessful completers and 36.9% of successful completers received mostly A's, B's, or C's.

Table 10. Academic Performance

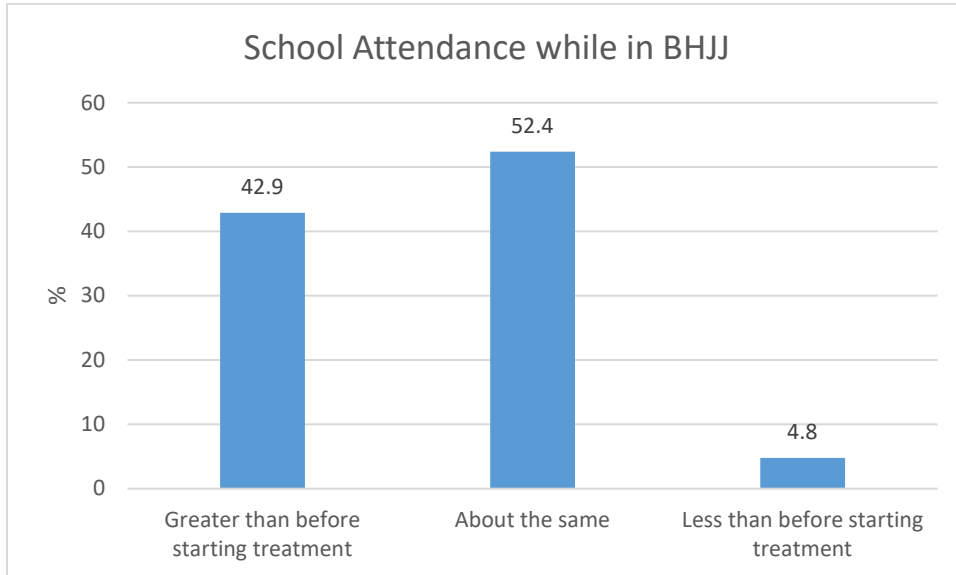
Typical Grades	Frequency at Intake	Frequency at Termination
Mostly A's and B's	16.7% (n = 7)	14.3% (n = 3)
Mostly B's and C's	31.0% (n = 12)	19.0% (n = 4)
Mostly C's and D's	31.0% (n = 13)	38.1% (n = 8)
Mostly D's and F's	21.4% (n = 9)	28.6% (n = 6)

Table 11. Academic Performance for Youth by Completion Status

Typical Grades	Unsuccessful Completers		Successful Completers	
	Frequency at Intake	Frequency at Termination	Frequency at Intake	Frequency at Termination
Mostly A's and B's	0	0	22.2% (n = 4)	15.8% (n = 3)
Mostly B's and C's	0	0	27.8% (n = 5)	21.1% (n = 4)
Mostly C's and D's	50.0% (n = 1)	0	27.8% (n = 5)	42.1% (n = 8)
Mostly D's and F's	50.0% (n = 1)	100% (n = 2)	22.2% (n = 4)	21.1% (n = 4)

At termination, workers reported that 42.9% (n = 9) of youth were attending school more than before starting treatment and 52.4% (n = 11) of youth were attending school 'about the same' amount compared to before starting treatment (see Figure 3). At intake, 41.7% (n = 5) of youth attending school had Individualized Education Plans (IEPs) while at termination, 27.3% (n = 6) of the youth attending school had Individualized Education Plans (IEPs).

Figure 3.



## Ohio Scales

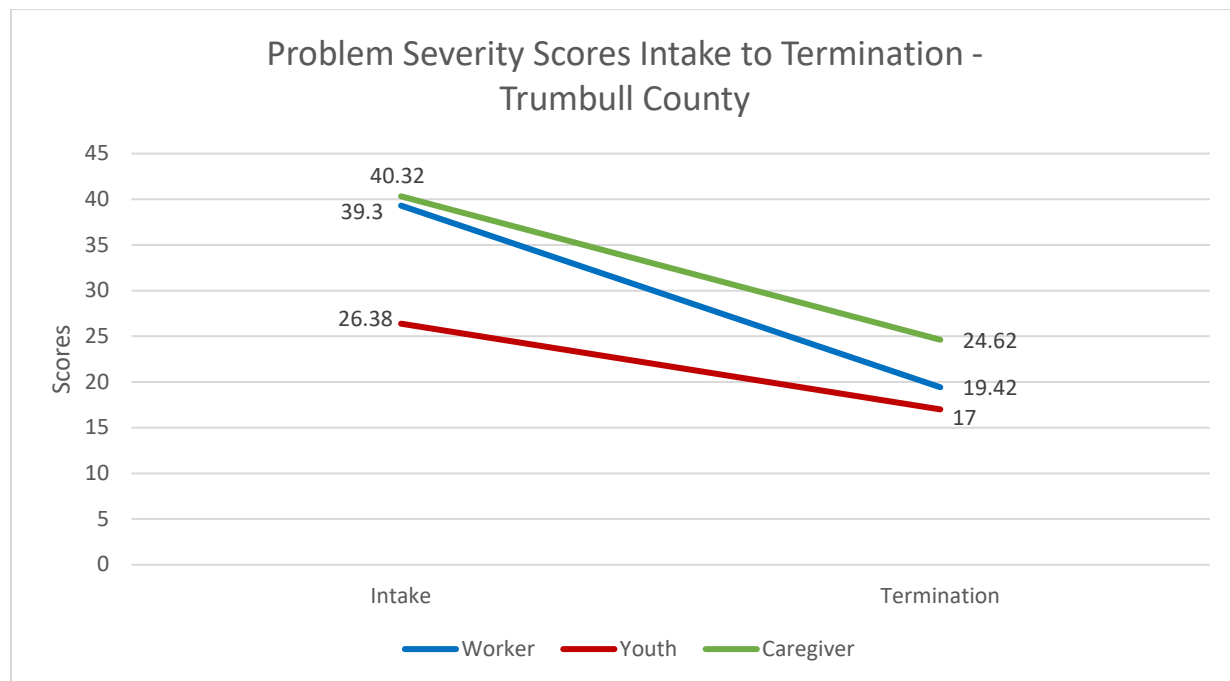
One of the main measures in the data collection packet was the Ohio Scales. The Ohio Scales were completed by the youth, caregiver, and worker at intake and then every three months following intake until termination from services. Because termination can occur at any point in time along the continuum 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. Results for Trumbull County will be limited to intake and termination data.

Paired samples t-tests were used to compare Problem Severity scores at intake to Problem Severity scores at termination. 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 termination to be included in the analysis. If the caregiver only has an intake score, his or her data is not included.

## Problem Severity

Overall means for the Problem Severity scale by rater between intake and termination for Trumbull County youth are presented in Figure 4.

Figure 4.





### Worker Ratings

For workers, paired samples t-tests revealed significant improvements in Problem Severity from intake to termination  $t(15) = 5.64$ ,  $p < .001$  with a large effect size (see Table 12).

Table 12. Paired Samples T-Tests for Problem Severity – Worker

	Mean Time 1	Mean Time 2	t	d
<b>Intake to Termination</b>	37.62 (SD=11.72; n=16)	20.19 (SD=7.68; n=16)	5.64***	1.41

\* < .05, \*\* < .01, \*\*\* < .001

### Youth Ratings

Paired samples t-tests conducted on the youth ratings indicated no statistically significant improvements in Problem Severity from intake to termination  $t(15) = 2.07$  (see Table 13).

Table 13. Paired Samples T-Tests for Problem Severity – Youth

	Mean Time 1	Mean Time 2	t	d
<b>Intake to Termination</b>	25.29 (SD=15.44; n=16)	17.94 (SD=10.67; n=16)	2.07	.52

\* < .05, \*\* < .01, \*\*\* < .001

### Caregiver Ratings

For caregivers, paired samples t-tests revealed significant improvements in Problem Severity from intake to termination  $t(14) = 2.38$ ,  $p < .05$  with a moderate effect size (see Table 14).

Table 14. Paired Samples T-Tests for Problem Severity – Caregiver

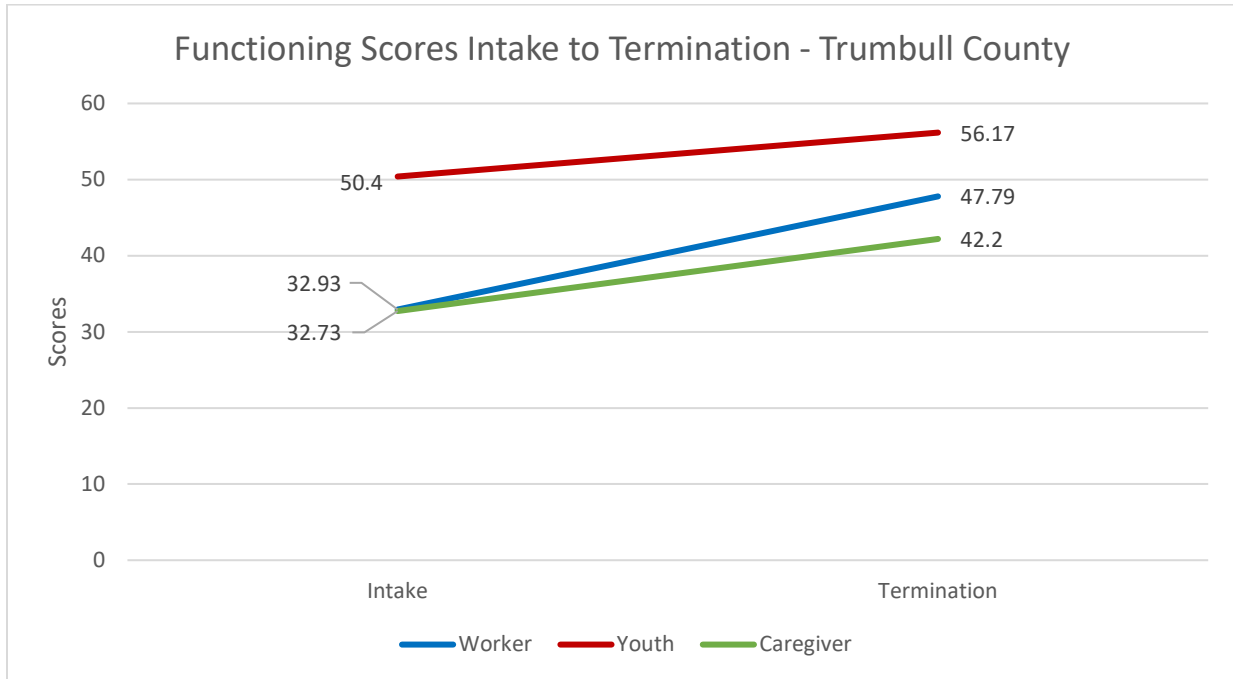
	Mean Time 1	Mean Time 2	t	d
<b>Intake to Termination</b>	34.44 (SD=13.19; n=15)	24.86 (SD=14.98; n=15)	2.38*	.61

\* < .05, \*\* < .01, \*\*\* < .001

## Functioning Scores

Overall means for the Functioning scale by rater between intake and termination for Trumbull County youth are presented in Figure 5.

Figure 5.



### Worker Ratings

For workers, paired samples t-tests revealed significant improvements in Functioning scores from intake to termination  $t(15) = -3.22$ ,  $p < .01$  with a large effect size (see Table 15).

Table 15. Paired Samples T-Tests for Functioning Scores – Worker

	Mean Time 1	Mean Time 2	t	d
<b>Intake to Termination</b>	34.25 (SD=11.58; n=16)	46.38 (SD=12.54; n=16)	-3.22**	.80

\* < .05, \*\* < .01, \*\*\* < .001

### Youth Ratings

Paired samples t-tests conducted on the youth ratings indicated no statistically significant improvements in Functioning scores from intake to termination  $t(15) = -.07$  (see Table 16).

Table 16. Paired Samples T-Tests for Functioning Scores – Youth

	Mean Time 1	Mean Time 2	t	d
<b>Intake to Termination</b>	54.69 (SD=13.68; n=16)	55.06 (SD=18.00; n=16)	-.07	.02

\* < .05, \*\* < .01, \*\*\* < .001

### Caregiver Ratings

For caregivers, paired samples t-tests revealed no significant improvements in Functioning scores from intake to termination  $t(15) = -.73$  (see Table 17).

Table 17. Paired Samples T-Tests for Functioning Scores – Caregiver

	Mean Time 1	Mean Time 2	t	d
<b>Intake to Termination</b>	38.81 (SD=15.56; n=16)	42.25 (SD=15.22; n=16)	-.73	.18

\* < .05, \*\* < .01, \*\*\* < .001

## Violence and Delinquency Questionnaire

The Violence and Delinquency Questionnaire (VDQ) is a self-report, 33-item Likert-style survey composed of three general domains: exposure to violence, violence perpetration, and peer delinquency. The VDQ is offered at intake and termination into the BHJJ program. At intake, each item prompts the youth to answer within the context of the past year. At termination, youth are directed to answer “since the last time you answered these questions”.

This section will be divided into three distinct parts that examine the prevalence of violence exposure as either a victim or witness, self-reported delinquent behavior from intake to termination, and delinquent behavior by peers from intake to termination. Table 18 provides the percentage of those who had experienced violence as either a victim or witness in the past year.

Table 18. Violence Exposure

	% Yes BHJJ Sample (n = 44)
In the last year, did someone threaten to hurt you when you thought they might really do it?	40.9%
In the last year, have you been hit or attacked because of your skin color, religion, or where your family comes from? Because of a physical problem you have? Or because someone said you were gay?	13.6%
In the last year, did a boyfriend or girlfriend or anyone you went on a date with slap or hit you?	9.1%
In the last year, did anyone steal anything from you and never give it back? Things like a backpack, money, watch, clothing, bike, stereo, or anything else?	54.5%
Sometimes people are attacked WITH sticks, rocks, knives, or other things that would hurt. In the last year, did anyone hit or attack you on purpose with an object or weapon? Somewhere like at home, at school, at a store, in a car, on the street, or anywhere else?	31.8%
In the last year, did anyone hit or attack you WITHOUT using an object or weapon?	43.2%
In the last year, did you get scared or feel really bad because kids were calling you names, saying mean things to you, or saying they didn't want you around?	40.9%
In the last year, did a grown-up touch your private parts when they shouldn't have or make you touch their private parts? Or did a grown-up force you to have sex?	0
Now think about other kids, like from school, a boyfriend or girlfriend, or even a brother or sister. In the last year, did another child or teen make you do sexual things?	4.5%
In the last year, did you SEE a parent get pushed, slapped, hit, punched, or beat up by another parent, or their boyfriend or girlfriend?	31.8%
In the last year, in real life, did you SEE anyone get attacked on purpose WITH a stick, rock, gun, knife, or other thing that would hurt? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else?	37.2%
In the last year, in real life, did you SEE anyone get attacked or hit on purpose WITHOUT using a stick, rock, gun, knife, or something that would hurt them?	46.5%
In the last year, was anyone close to you murdered, like a friend, neighbor, or someone in your family?	11.4%
In the last year, did you get scared or feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn't want you?	52.3%
Not including spanking on your bottom, did a grown-up in your life hit, beat, kick or physically hurt you in any way?	44.2%
When someone is neglected, it means that the grown-ups in their life didn't take care of them the way they should. They might not get them enough food, take them to the doctor when they are sick, or make sure they have a safe place to stay. In the last year, were you neglected?	11.4%

Due to low sample sizes, we are unable to present the comparisons between intake and termination for both self-reported and peer delinquency.

## Resilience

As part of the 2017 - 2019 evaluation, we added a new scale to measure several aspects of resilience. We define resilience as a set of factors both within the individual and external factors such as relationships with family, peers, and other adults that help to insulate youth from adversity (Dray et al., 2017). As shown in the previous section that showed data on victimization, a large proportion of youth enrolled in BHJJ have directly or indirectly experienced violence. The Resilience survey is a 16-item Likert scale survey that measures internal factors of resilience such as self-efficacy, self-awareness, and empathy, and external factors such as support from peers and family.

Figure 6 shows intake data on self-efficacy, self-awareness, and empathy. As the most frequent responses were “pretty much true” and “very much true”, we combined these responses. Generally, the majority of youth indicated high levels of endorsement for each one of these items except for “I can work out my problems” and “I can work with someone who has different opinions than mine”.

Figure 6.

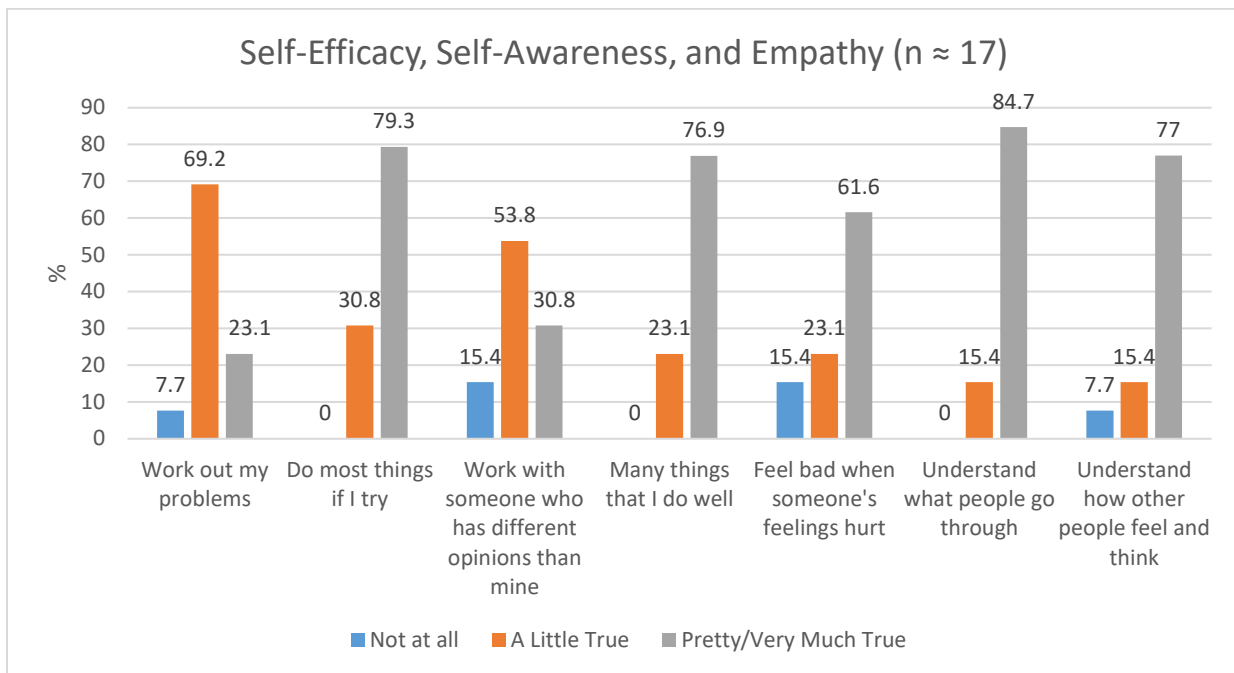


Figure 7 shows intake data on support from peers. Youth were asked whether they have a friend who really cares about them, talks with them about their problems, and helps them when they are having a hard time. The majority of youth identified that each of the statements were either pretty much or very much true.

Figure 7.

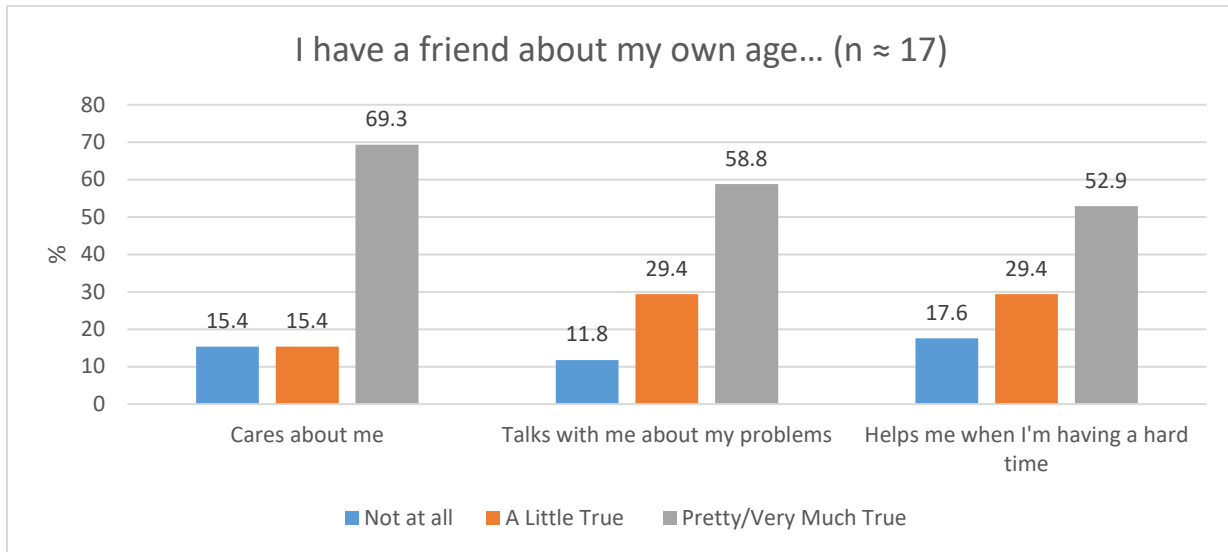
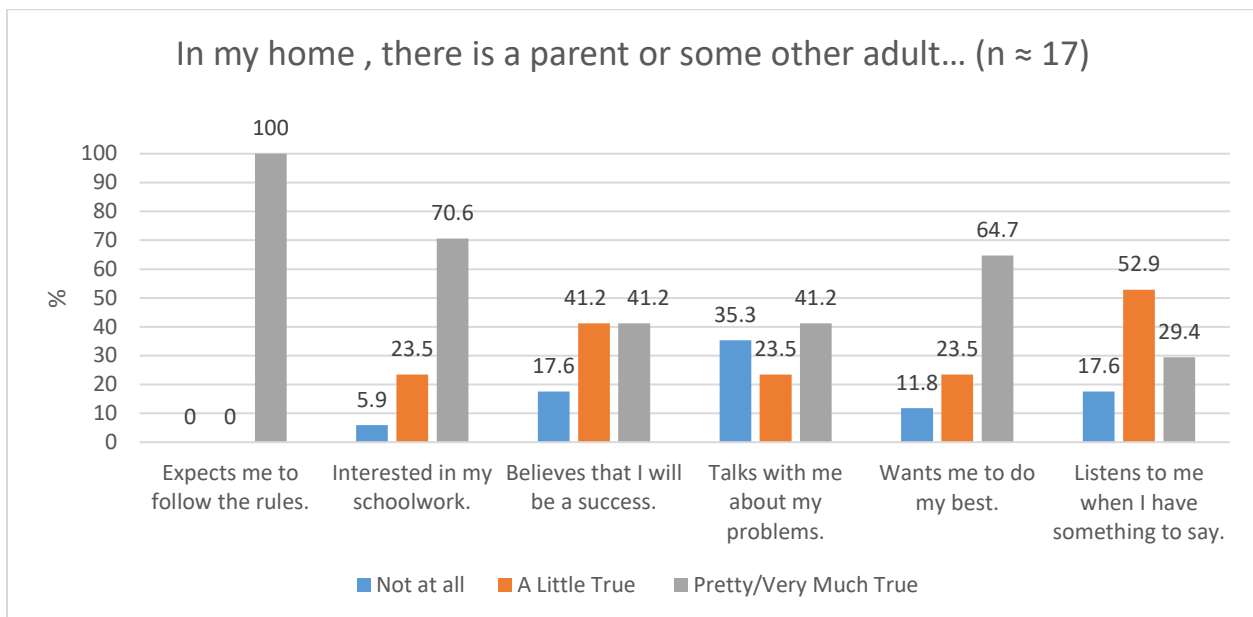


Figure 8 shows intake data on parental or support from other adults in their house. Less than half of the youth indicated that the items “believes that I will be a success”, “talks with me about my problems”, and “listens to me when I have something to say” were either pretty much or very much true.

Figure 8.



## TSCC

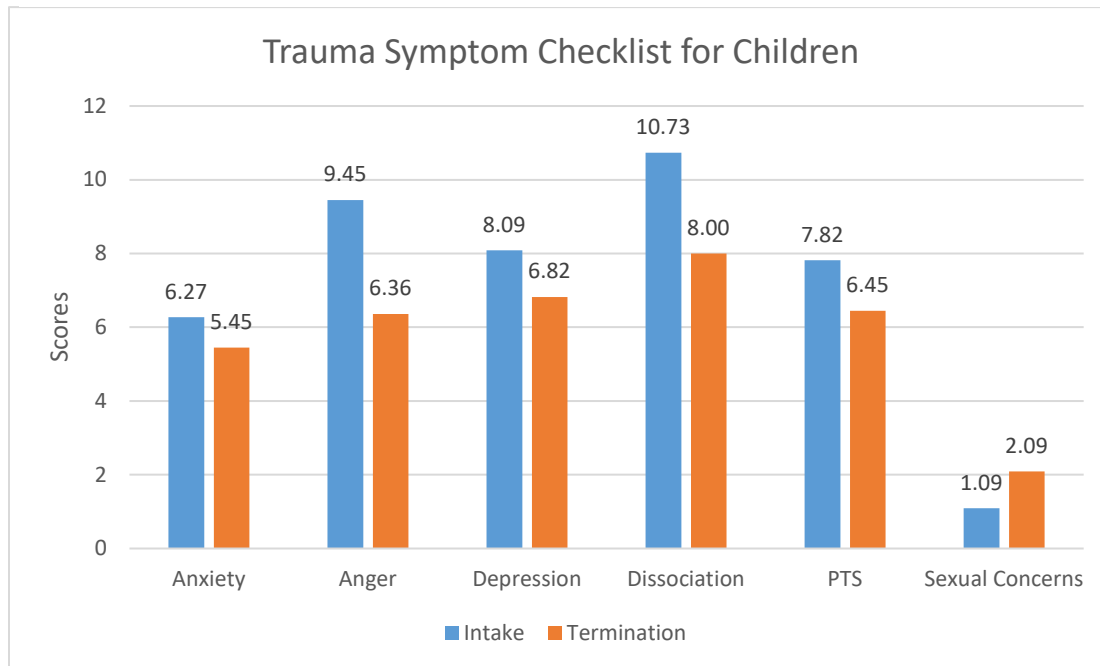
The TSCC was administered at intake and termination from BHJJ. Paired-samples t-tests were conducted to show whether means at intake and termination on each TSCC subscale differed significantly. We were unable to examine gender effects due to the low sample size of both males (n = 6) and females (n = 5). Paired samples t-tests revealed significant improvements in trauma symptoms for the Anger, Posttraumatic Stress, and Dissociation domain from intake to termination (see Table 19).

Table 19. TSCC Subscales from Intake to Termination among all Participants

	Intake	Termination	t	d
<b>Anxiety</b>	6.27 (SD = 4.22; n = 11)	5.45 (SD = 4.48; n = 11)	1.48	.45
<b>Depression</b>	8.09 (SD = 6.07; n = 11)	6.82 (SD = 4.90; n = 11)	1.13	.34
<b>Anger</b>	9.45 (SD = 5.45; n = 11)	6.36 (SD = 4.52; n = 11)	2.44*	.83
<b>Posttraumatic Stress</b>	7.82 (SD = 6.55; n = 11)	6.45 (SD = 5.72; n = 11)	1.90*	.58
<b>Dissociation</b>	10.73 (SD = 6.77; n = 11)	8.00 (SD = 5.59; n = 11)	2.12*	.64
<b>Sexual Concerns</b>	1.09 (SD = 1.81; n = 11)	2.09 (SD = 2.26; n = 11)	-.35	.10

\* < .05, \*\* < .01, \*\*\* < .001

Figure 9.



## Substance Use Survey

The Substance Use Survey was revised for this current evaluation covering the 2017-2019 period to combine and add substances that were not covered in the previous survey and to add general questions regarding youth’s perceptions of the ways in which alcohol and drug use has affected their physical health and social functioning. For example, the revised instrument includes opioids as its own category inclusive of heroin, oxycodone, Percocet, opium, and synthetic opioids which were previously represented across multiple categories. In this example, Percocets and Oxycodone were included in the previous instrument with other non-opioid pain killers. Given that there were several categories of substances where there was not an exact match from the previous instrument to the current one, we present data only for the most current evaluation period in this section.

Table 20 shows the proportion of youth in the BHJJ program who reported ever having used alcohol or drugs and the average age of first use in Trumbull County. Caffeine and alcohol were the two most commonly reported substances.

Table 20. Self-Reported Substance Use at Intake– Trumbull County

	% Ever Used	Age of First Use
<b>Alcohol</b>	41.2% (n = 7)	12.67 (SD = 2.42)
<b>Tobacco</b>	41.2% (n = 7)	10.50 (SD = 2.59)
<b>Cannabis</b>	35.3% (n = 6)	13.40 (SD = 1.52)
<b>Hallucinogens</b>	0.0% (n = 0)	
<b>Inhalants</b>	5.9% (n = 1)	
<b>Opioids</b>	5.9% (n = 1)	14.00 <sup>a</sup>
<b>Sedatives</b>	0.0% (n = 0)	
<b>Caffeine</b>	52.9% (n = 9)	8.63 (SD = 4.03)
<b>Stimulants</b>	5.9% (n = 1)	
<b>Over the counter medications</b>	0.0% (n = 0)	
<b>Other prescription drugs</b>	5.9% (n = 1)	
<b>Herbs/Flowers</b>	5.9% (n = 1)	

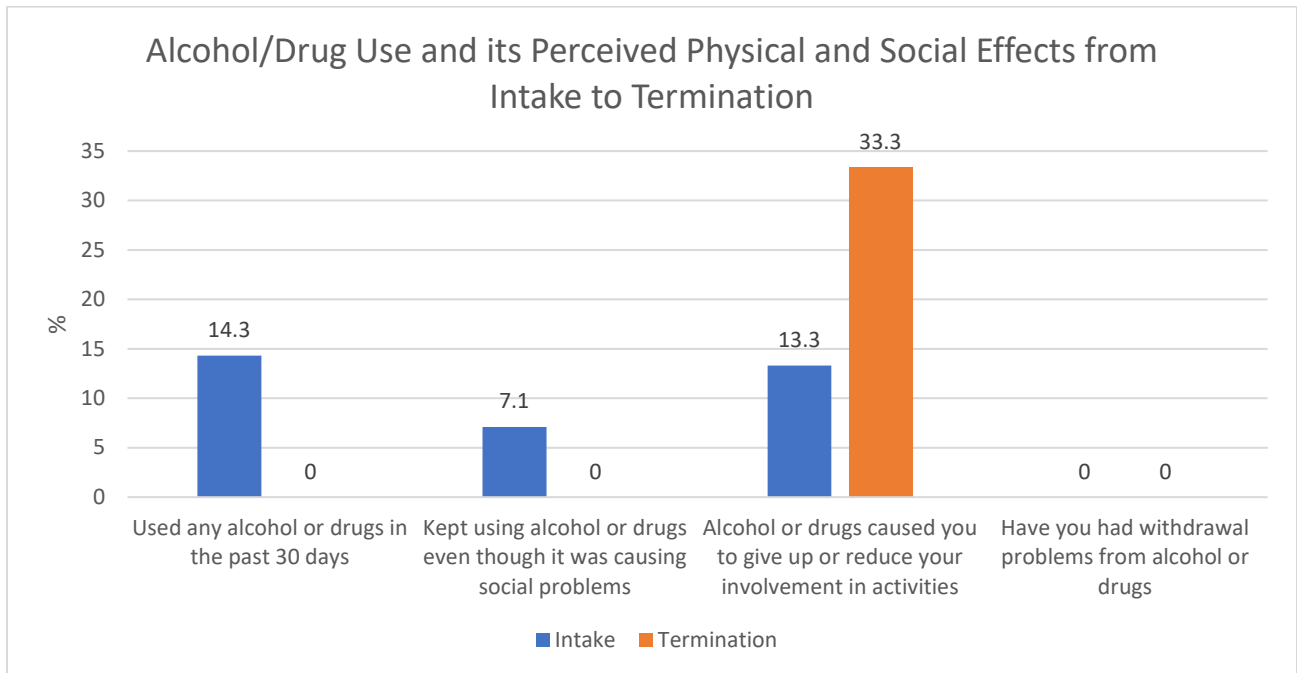
<sup>a</sup> No Standard Deviations are calculated.



In addition to questions pertaining to the use of specific substances, youth were asked questions around general alcohol/drug use and its perceived effects on physical health and social functioning. Due to a low number of valid responses, we examined raw proportions at intake and termination for each question. Rather than using only those who had responses at intake and at termination, we examined all valid responses which ranged between 14 and 15 at intake and there were 6 at termination.

The proportion of youth who indicated that they had used any alcohol or drugs in the past 30 days decreased from 14.3% at intake to 0.0% at termination (see Figure 10). From intake to termination, the proportion of youth who indicated that they had continued to use alcohol/drugs even though it was causing social problems, leading to fights, or getting you into trouble with other people at least sometimes decreased slightly while the proportion of youth who indicated that alcohol/drugs caused them to give up or reduce involvement in activities at work, school, home, and social events increased from intake to termination. No youth indicated any problems with withdrawal from alcohol or drugs at intake or at termination. Data should be interpreted with caution as a very small sample is represented here.

Figure 10.



## 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.

Between July 1, 2015 and June 30, 2019, there have been 23 youth terminated from the BHJJ program in Trumbull County. Ninety-one percent (91.3%, n = 21) of the youth terminated from the BHJJ program were identified as successful treatment completers. Four percent (4.3%, n = 1) were terminated from the program due to being AWOL. Table 21 presents all of the reasons for termination from BHJJ and displays reasons for termination for White and Black participants.

Table 21. Reasons for Termination from BHJJ

Termination Reason	All Youth Enrolled between July 2015 and June 2019	White Youth Enrolled between July 2015 and June 2019	Black Youth Enrolled between July 2015 and June 2019
<b>Successfully Completed Services</b>	91.3% (n = 21)	100% (n = 14)	66.7% (n = 4)
<b>Client Did Not Return/Rejected Services</b>	4.3% (n = 1)	0	16.7% (n = 1)
<b>Out of Home Placement</b>	0	0	0
<b>Client/Family Moved</b>	0	0	0
<b>Client Withdrawn</b>	0	0	0
<b>Client AWOL</b>	4.3% (n = 1)	0	16.7% (n = 1)
<b>Client Incarcerated</b>	0	0	0
<b>Other</b>	0	0	0

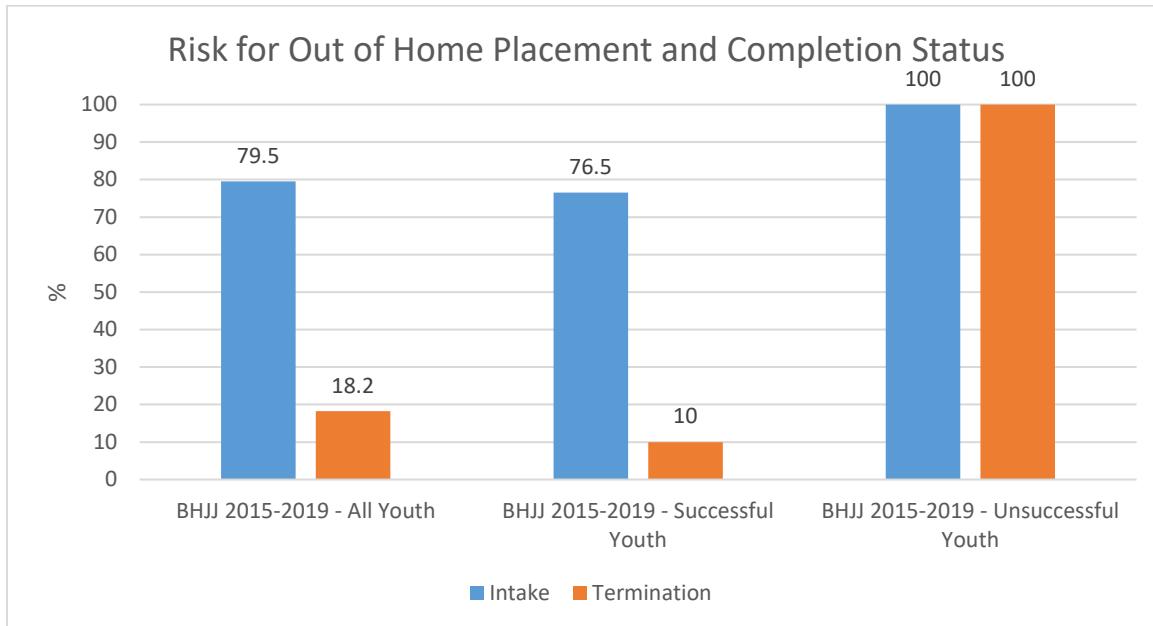
## Average Length of Stay

Since the start of BHJJ, the average length of stay (ALOS) in the program was 146.8 days. For youth identified as successful treatment completers, the ALOS was 146.5 days while for unsuccessful treatment completers, the ALOS was 153.0 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, 79.5% of the youth (n = 31) were at risk for out of home placement. At termination, 18.2% (n = 4) of youth were at risk for out of home placement (see Figure 11). Of those youth who successfully completed BHJJ treatment, 10.0% (n = 2) were at risk for out of home placement at termination while 100% (n = 2) of youth who completed unsuccessfully were at risk for out of home placement (see Figure 11).

Figure 11.



## 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 services through BHJJ. Workers reported that police contacts had been reduced for 73.9% (n = 17) of the youth and had stayed the same for 26.1% (n = 6) of the youth.

## YSSF

Upon completion of the BHJJ program, the caregiver was asked about their overall satisfaction with the services they received through the BHJJ program in Trumbull County as well as how services impacted their children and family. At termination from the BHJJ program, 76.9% (n = 20) of caregivers either strongly agreed or agreed that the BHJJ staff were sensitive to their cultural/ethnic background and 88.4% (n = 23) either strongly agreed or agreed that the location of the services was convenient (see Figure 12). Thirty-two percent (32.0%, n = 8) of caregivers reported that as a result of the services their child/family received, their child gets along better with family members and 40.0% (n = 10) reported their child is better able to do the things they want to do (see Figure 13).

Figure 12.

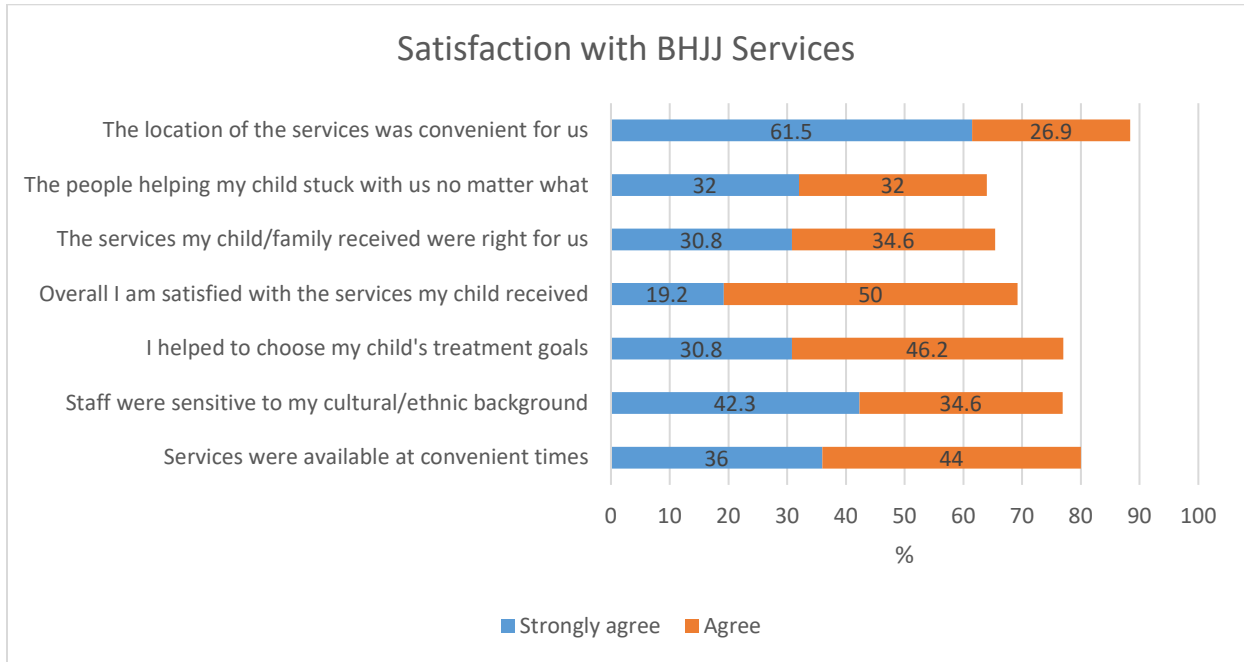
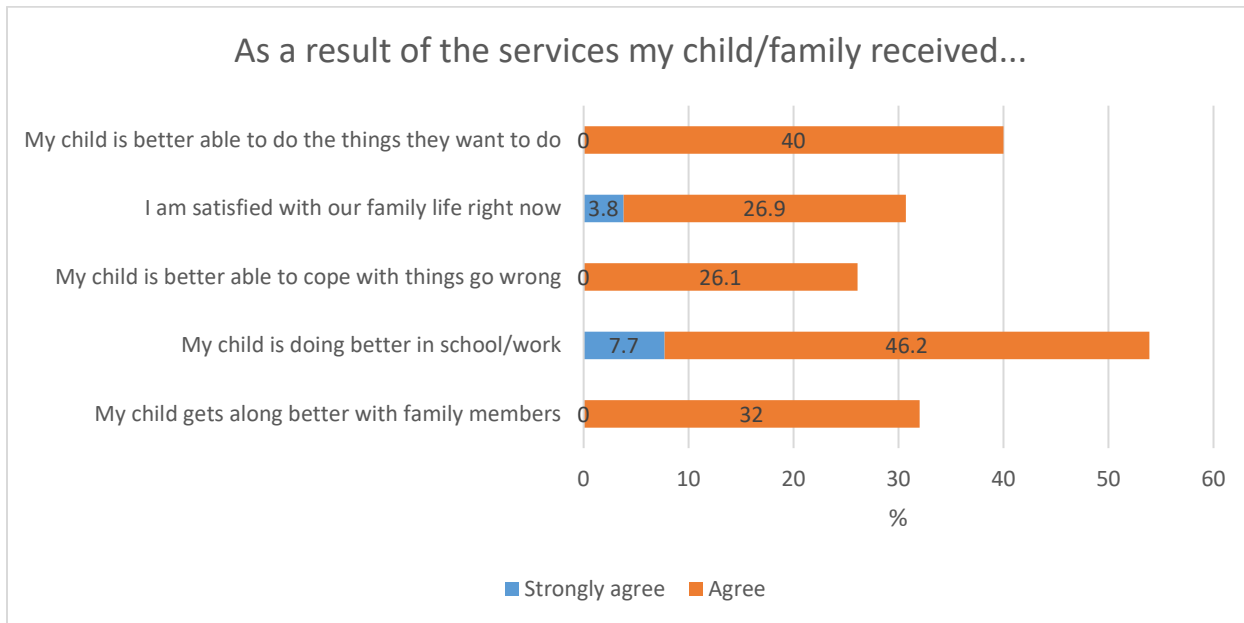


Figure 13.



## Recidivism (July 1, 2015 – June 30, 2019)

### Methodology

Court data were provided by the local juvenile courts in each BHJJ county, 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 misdemeanor and felony charges are presented in the following sections. Juvenile court history and recidivism information are presented at 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 (6, 12, and 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 six months after termination from BHJJ we chose to include only those youth who had been terminated from BHJJ for at least six months prior to the end of the data collection period, June 30, 2019. 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 six month after termination analyses, a youth had to have been 17.5 years old or younger at the time of termination and must have been terminated at least six months prior to the end of the data collection period. The same criteria were applied to the intervals following enrollment in BHJJ. When examining new charges occurring within 12 months after enrollment, youth must be 17 years old or younger at the time of enrollment and the enrollment date must be at least twelve months prior to the end of the data collection period for inclusion in the analysis. Due to a small number of youth who terminated unsuccessfully, we were not able to separate out these data by completion status. These data focus on youth who were enrolled between July 1, 2015 and June 30, 2019.

## Results

### Previous Juvenile Court Involvement

Overall, 58.3% (n = 28) of BHJJ youth in Trumbull county enrolled between July 1, 2015 and June 30, 2019 had a misdemeanor charge, 6.3% (n = 3) had a felony charge, and 79.2% (n = 38) had been adjudicated delinquent in the 12 months prior to enrollment (see Table 22).

Table 22. Charges Prior to Enrollment

	% of Youth with Misdemeanors	% of Youth with Felonies	% of Youth Adjudicated Delinquent
<b>6 months (n = 48)</b>	50.0% (n = 24)	4.2% (n = 2)	72.9% (n = 35)
<b>12 months (n = 48)</b>	58.3% (n = 28)	6.3% (n = 3)	79.2% (n = 38)
<b>18 months (n = 48)</b>	58.3% (n = 28)	6.3% (n = 3)	81.3% (n = 39)

### Recidivism after Enrollment

We defined recidivism after enrollment as receiving a new charge or adjudication at 6, 12, and/or 18 months after a youth's BHJJ enrollment date (see Table 23). In the 12 months after enrollment in BHJJ, 44.4% (n = 20) of participants were charged with at least one new misdemeanor, 4.4% (n = 2) were charged with at least one new felony, and 62.2% (n = 28) were adjudicated delinquent.

Table 23. Recidivism after BHJJ Enrollment

	% of Youth with Misdemeanors	% of Youth with Felonies	% of Youth Adjudicated Delinquent
<b>6 months (n = 47)</b>	29.8% (n = 14)	4.3% (n = 2)	51.1% (n = 24)
<b>12 months (n = 45)</b>	44.4% (n = 20)	4.4% (n = 2)	62.2% (n = 28)
<b>18 months (n = 40)</b>	47.5% (n = 19)	5.0% (n = 2)	65.0% (n = 26)

### Recidivism after BHJJ Termination

We defined recidivism after termination as receiving a new charge or adjudication in the 6, 12, and 18 months after a youth's BHJJ termination date (see Table 24). In the 12 months after termination from BHJJ, 38.1% (n = 8) of youth were charged with at least one new misdemeanor and 9.5% (n = 2) were charged with at least one new felony, and 52.4% (n = 11) were adjudicated delinquent.

Table 24. Recidivism after BHJJ Termination

	% of Youth with Misdemeanors	% of Youth with Felonies	% of Youth Adjudicated Delinquent
<b>6 months (n = 21)</b>	28.6% (n = 6)	4.8% (n = 1)	42.9% (n = 9)
<b>12 months (n = 21)</b>	38.1% (n = 8)	9.5% (n = 2)	52.4% (n = 11)
<b>18 months (n = 19)</b>	52.6% (n = 10)	10.5% (n = 2)	57.9% (n = 11)

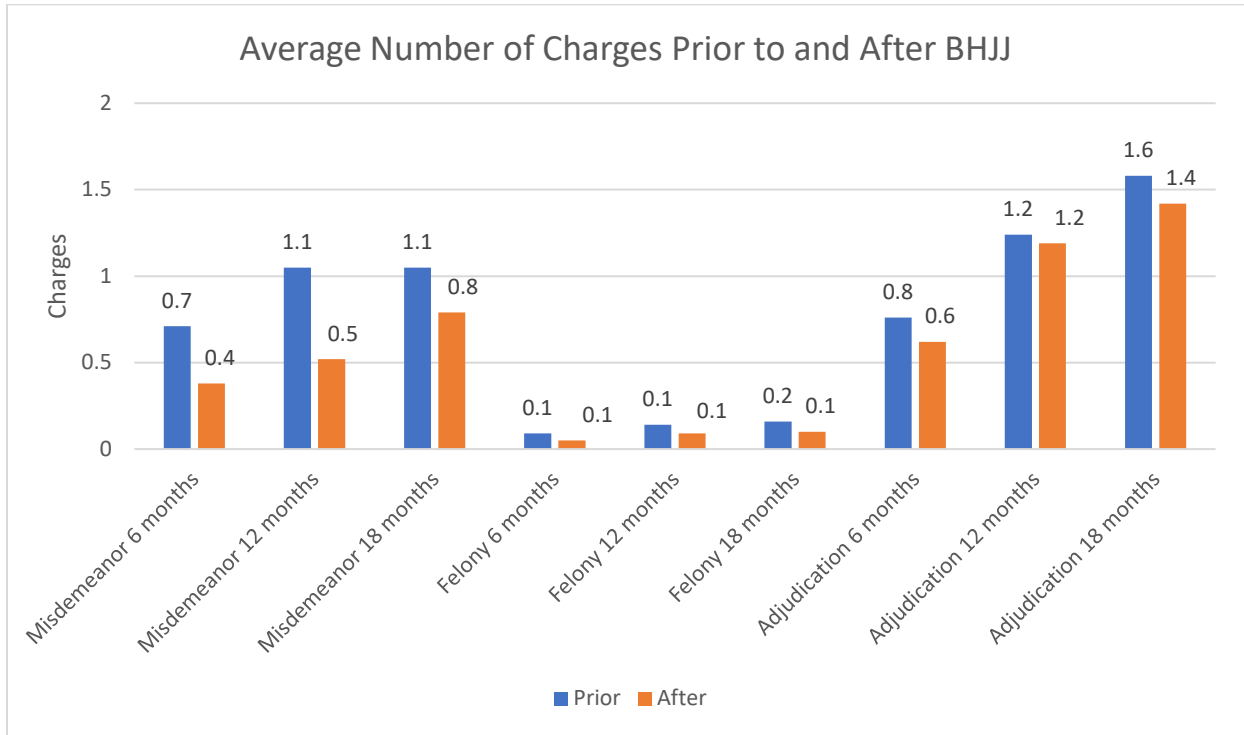
### ODYS Commitments

Among a total of 48 youth who enrolled since July 1, 2015, 2.1% (n = 1) were sent to an ODYS facility at any time following their enrollment in BHJJ, including after a youth's termination from BHJJ. **Conversely, 97.9% of youth participating in BHJJ were not admitted to an ODYS facility at any point after enrollment.**

### Average Numbers of Charges and Adjudications

In addition to whether a youth was charged or adjudicated delinquent, we examined whether there were differences in the average number of charges and adjudications in equivalent periods of time prior to enrollment and after termination. We conducted paired samples *t*-tests to examine whether there were statistically significant differences in the mean number of charges and adjudications at each time period prior to and after BHJJ participation. Figure 14 shows the average number of charges for youth who had data at both time periods. This restriction resulted in a sample of 21 youth at 6 months, 21 youth at 12 months, and 19 youth at 18 months. **Paired samples *t*-tests revealed statistically significant declines in the average number of misdemeanor charges at 12 months.** The average number of misdemeanor charges 12 months prior to BHJJ enrollment was 1.05 while the average number of misdemeanor charges 12 months after BHJJ termination was 0.52.

Figure 14.



## Success Stories

While the collection of empirical data is crucial to demonstrate program effectiveness and help secure additional funding, qualitative data can be an additional source of valuable information that can be obscured by averages, tables, and figures. Counties were asked to provide information on one or two memorable families who participated in the BHJJ program in the form of success stories.

The following testimonial is from the parents of an MST youth in Trumbull County that was referred for the following behaviors: Physical and Verbal aggression at home, Self-harming behaviors and Truancy.

At the start of treatment, the youth was very aggressive towards family members in the home. The youth would yell, cuss, and get in the parent’s face. The youth would frequently threaten family members, push and grab parents and brother, punch holes in the walls, and damaged several doors in the home. Youth presented with self-harming behaviors, such as cutting on arms, thighs and torso. The youth missed several days of school and refused to get out of bed to attend, which resulted in enrolling in summer school. This testimonial describes how the parents felt at the end of MST treatment.

It has been a long and challenging road for our family as we learn to adapt our behaviors to help our son, and each one of us reach positive healthy behavior goals that provide strong loving relationships as well as respect each of our individual emotional and psychological needs. I realize that the behaviors of one are directly connected to the reactions and relationships of others in the family and in order for a positive change to take place, all persons involved have to have a clear understanding of the goals and expectations.



“L” has made so many positive improvements in the past three months with his behaviors. Although some of the behaviors have not met our standards, there is now a clear set of expectations and rewards/losses that helps him choose which path to follow. I have faith that the system will continue to facilitate positive growth in “L”'s behaviors and I'm optimistic that he will begin to see that he is the author of his life story and he can make responsible rational decisions.

“L”'s physical outbursts are now very brief and do not involve destruction of property. “L” has been able to “walk away” at times, when in the past he would just continue to be in our space and at times would threaten us. Again, this is not totally removed from his behavior but I see a successful transition into proper coping behaviors.

The defiant behaviors that have seemingly always been part of “L”'s normal fight or flight behaviors are starting to become less frequent and quite abbreviated. I think the clarity of our behavior plan and the consistency with which my wife and I have been following the plan have been successful in redirecting some of these behaviors into positive decision-making instead of emotional reactions. This is one of “L”'s most rooted behaviors and I know he is always overthinking his action/consequence outcomes to the point where he has left himself nowhere to turn but to fight back. The clarity of our plan has improved this behavior and we may have to continually modify the plan as incidences decrease and turn to a more reward oriented vs. consequence oriented plan overall.

I am encouraged by our progress and my wife and I have been able to breathe a sigh of relief that there is hope for our family's future and the future of our son. He is a wonderful and hilarious boy with so many talents. I have to believe that he will put those talents to good use one day, maybe to help others with similar stories. I feel like we are back at the helm, where parents belong, and not at the mercy of fear and loss of control.

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