Livingston County Juvenile Court – Racial and Ethnic Disparities Data Collection Grant: Final Grant Evaluation Report

Title II Category: Racial and Ethnic Disparities

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Executive Summary

Altarum Institute was contracted by the Michigan Department of Health and Human Services (MDHHS) and the Michigan Committee on Juvenile Justice (MCJJ) to provide technical assistance and evaluation support to the Livingston County Juvenile Court (Court) as they implemented a Juvenile Justice and Delinquency Prevention Act Title II Grant Program. Their intervention, for which they contracted with Petersen Research Consultants, focused in on a racial and ethnic disparities court data-enhancement project, designed to identify and document the project's outputs, outcomes, and the lessons learned in the project's implementation. Beginning in spring of 2022, Altarum worked with Deborah Shaw, the Livingston County Juvenile Court Administrator, via monthly meetings and annual in-person site visits to support the grant team through the process of conducting their evaluation in alignment with their grant logic model. The logic model documented and operationally defined the program and evaluation goals, specific activities, timing, and proposed outcomes to demonstrate program performance and achievement of targets and outcomes, processes, successes, and lessons learned. The Altarum project manager coordinated grant progress with Deborah Shaw and provided oversight and management support throughout the project period as the Court worked with Petersen Research Consultants to collect and evaluate data. The following report presents the final report from the evaluation team's findings.

Project Overview

The project is designed to enhance real-time juvenile court data collection in Livingston County by transitioning to a centralized, electronic case-management system. In doing so, the Court aimed to improve data consistency, streamline data-management processes, and enhance assessment of racial and ethnic disparities throughout the juvenile court process with access to real-time analysis. The goal is to utilize this information to help the Court make improvements to juvenile programming in response to needs of juveniles referred to the Court.

Key Findings

- Although the project experienced many delays at onset, the Court was able to successfully move forward with the project activities once delays were resolved.
- An electronic case-management system was identified, implemented, and leveraged by Livingston County staff to improve data collection and analysis efforts by the Court overall.
- Findings from the contracted evaluator, Petersen Research Consultants, indicated that the integration of the new system went as expected and data was able to be leveraged for a final report. This system will be beneficial for the court to track data more effectively in the long-term.

An electronic case-management system was implemented to improve data collection and analysis efforts by the Court.

Program Description

Context

In recent years, the Livingston County Juvenile Court (Court) has engaged in several projects focused on compiling and analyzing case-level data to help inform court practices, including efforts to identify and address racial and ethnic disparities. While those projects provided the Court with valuable insight, they also revealed several systemic barriers to collecting complete and consistent data for all juveniles that had been referred to the Court. For instance, the Court previously used the computer-based Judicial Information System (JIS) as its judicial case-management system, while youth service-delivery and outcome data had been maintained in hard-copy probation files. In addition, evolving data-entry practices had resulted in inconsistent coding and, in some cases, inability to retrieve data for specific variables over large numbers of cases.

With this current project, the Court aimed to address these types of barriers by transitioning to a centralized, electronic case-management system. The new electronic system and the protocols developed with its implementation were intended to help to streamline data entry, improve data consistency, and provide greater access to real-time analysis. With access to more timely, accurate, and detailed case data, the Court will improve ability to identify and respond to any racial and ethnic disparities at key decision points throughout the juvenile court process.

The goal for this project was to make all juvenile court data in Livingston County consistent and easily accessible. By improving timely access to accurate data, the Court aimed to enhance its ability to monitor and analyze trends over time regarding the demographics of the juveniles referred to the Court, along with the interventions and services provided and outcomes for those juveniles. Such analysis will be useful for informing the Court's supervision and service options to best meet the needs of juveniles referred to the Court. Furthermore, the data enhancements will help the Court identify the presence of racial and ethnic disparities in juvenile court processes and outcomes, as well as help guide decisions on how best to address any disparities.

In addition to transitioning to an electronic case management system, the Court also moved forward with adopting a new juvenile justice risk and needs assessment, the Youth Level of Service/Case Management Inventory (YLS), and providing the necessary staff training to use the tool.

An evaluation of the new case management system as well as the use of the YLS tool was conducted to capture how the staff is adhering to the new protocols and processes as well as identify gaps and note changes that could improve implementation. An independent evaluator, Petersen Research Consultants (PRC), was contracted to conduct the evaluation.

Project Design

To improve consistency, streamline data-management processes, and provide the Court with the ability to generate real-time reports, the Court identified the need to transition to a centralized, electronic client-management system and purchased Youth Center from BizStream. In addition to purchasing the software, the Court purchased laptops or other forms of mobile technology to allow probation officers to access the system and enter data while in the field. The Court then moved forward with internal planning and preparation, including a process to engage staff in finalizing data definitions and identifying the content of various customizable fields and drop-down menus within the software. Staff also supported the transfer of information from previous paper files into the new electronic system, configuring the new system, developing quality assurance processes, and creating

policies and instructional materials.

The project focused on centralizing data sources and streamlining the case-management data-entry process. The data enhancements will help the Court identify the presence of racial and ethnic disparities in juvenile court processes and outcomes, as well as help guide decisions on how best to address any disparities with programming.

The specific activities carried out by the project team are listed below.

- Transition to a new electronic case-management system.
- Implement a new risk-assessment tool.
- Develop processes for meaningful data analysis.

The program logic model, showing the relationships between program inputs, activities, and expected outcomes is provided in Appendix A.

Summary of Evaluation

With the electronic system in place, data collection was standardized and maintained for the remainder of the grant period of performance. In addition to the implementation of the system, the Court contracted Petersen Research Consultants (PRC) to assist with implementation and analysis of the Youth Level of Service Case Management Inventory II (YLS-CMI II or YLS) for the purposes of improving the prediction of criminogenic risk for Livingston County court-involved youth.* The YLS is a 41-item measure that has been empirically proven to assess strengths, risks, and needs for court-involved youth and predict their likelihood of engaging in future crime-related behaviors. Livingston County juvenile court staff were trained in implementing the YLS and engaged in ongoing interrater reliability fidelity checks.

A preliminary report on initial juvenile demographics was presented in 2021 for the purposes of assessing implementation and a report was provided in 2022 to build on that and assess a more comprehensive risk profile. A final report was submitted and presented on March 30, 2023 to show the evaluation and data results from the full grant period.

> There is a relatively low risk profile for court-involved juveniles overall and Livingston County staff appear to be utilizing risk to determine program placement well.

Grantee Performance

Throughout the grant period, the Altarum team supported the ongoing maintenance of the project and grant requirements. The evaluation was conducted by an external contractor but oversight and coordination was provided regularly. The final report was developed, presented, and shared with the Altarum team at the end of the grant performance period. The grantee successfully implemented the electronic case management system for the Court and was able to provide detailed data for evaluation through those efforts. Data analyses and information from Petersen Research Consultants' final report is included in the Grantee Final Evaluation Report section, showing detailed impact of the electronic system that the Court was able to implement through this grant.

* Livingston County also utilizes the Child and Adolescent Functional Assessment Scale (CAFAS). Analyses on the CAFAS continue to show consistency with the YLS (with juveniles who are higher risk being positive correlated with higher CAFAS scores) and are not presented in detail in this report.

Challenges and Lessons Learned

Although the grant was awarded in October 2019, the County's contract-approval process delayed finalizing the contract with the Michigan Department of Health and Human Services until early January 2020. Furthermore, once started, several of the procurement processes described above took longer than anticipated. Then, in March 2020, the public health emergency created by the COVID-19 pandemic further delayed progress. In addition to the Livingston County Juvenile Court (Court) needed to shift its focus to adapting supervision and services amid a stay-at-home order, the pandemic also had a more direct impact on project tasks. As a result of the various delays, critical elements at the beginning of the project period, were delayed seven or eight months into the project.

Despite the slow startup and additional delays caused by the pandemic, the Court team was able to make adjustments and get the project back on track. Throughout the pandemic, the Court team continued to build and implement the electronic case management system and at the end of the grant period were able to produce a detailed data report on the elements that are key to the Court's overall goals to improve the quality and consistency of case-record data, demonstrated through the report itself.

Recommendations

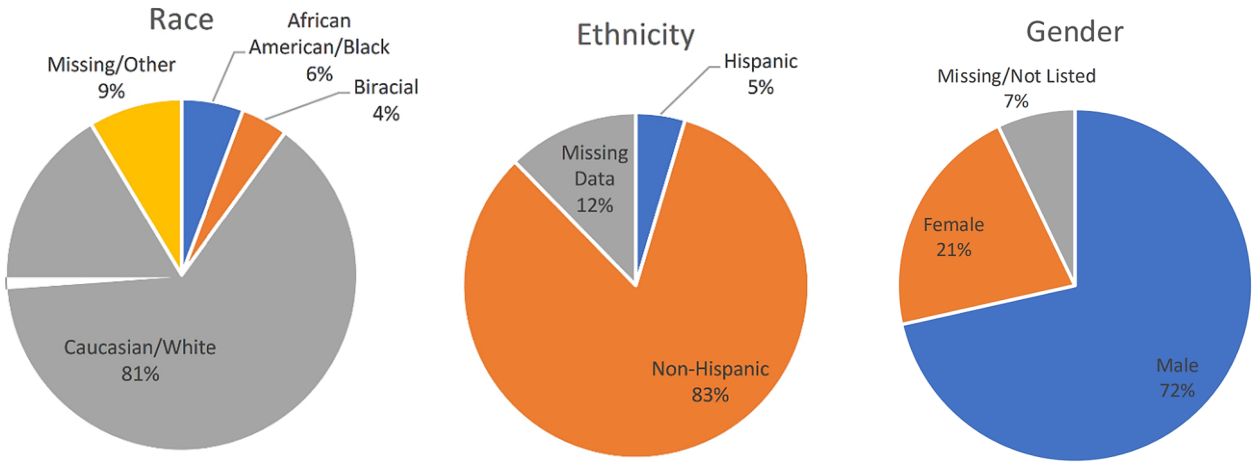
Many of the steps taken by the Livingston County Juvenile Court (Court) to transition to a new electronic data system, including the intensive training provided to the probation staff and regular team meetings to review case data and identify issues, supported the Court's overall goals of this grant. Documented data-management practices and training and guidance materials for staff will be key for sustainability of this work and for building capacity across the state. As the grant ends, it will be important for Livingston County to share their efforts with MDHHS to sustain their efforts, continue to grow capacity across the state, and share lessons learned with other court districts.

Grantee Final Evaluation Report

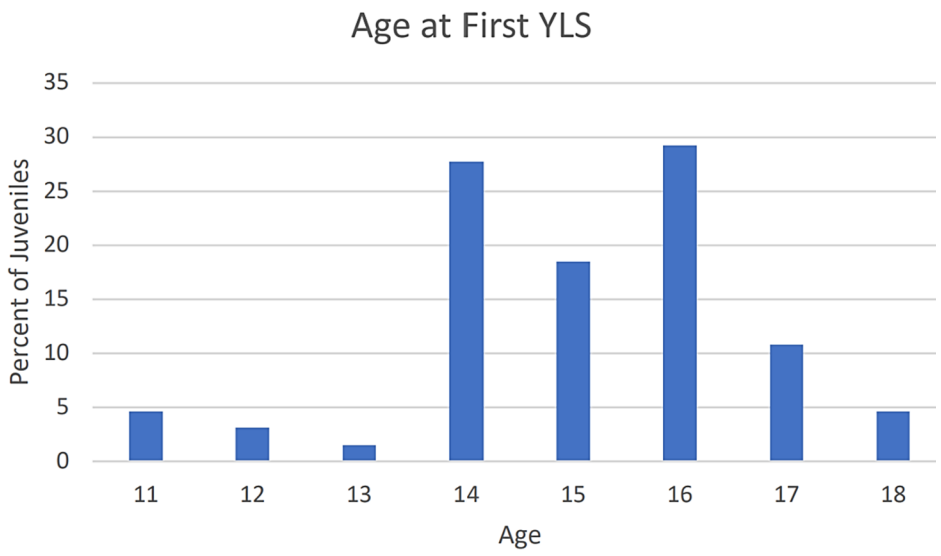
This section includes the key data findings generated from the Petersen Research Consultants evaluation team's analysis of data regarding the project's implementation and outcomes achieved during the grant. This report is cumulative in nature, including data from 321 YLS assessments completed for 276 unique juveniles with an initial YLS completed between September 2020 and November 2022.

Demographic Profile

The demographic profile for Livingston County court-involved juveniles stayed similar to previous analyses, with the majority of juveniles being Caucasian/White males, with an average age at first YLS of 15. The pie charts at below describe the race and ethnicity distribution for Livingston County court-involved juveniles. Over 80% of Livingston County court-involved juveniles identify as Non-Hispanic Caucasian/White. Given the relatively small court population, this results in a very small (N<20) population of juveniles who indicated they were African American/Black, Biracial, or another race. Missing data (across race, ethnicity, gender, grade level, etc.) improved from the first year of YLS implementation, and far fewer individuals entering the court in 2022 had missing demographic data than in prior years. Also, in line with previous analyses, 72% of Livingston County court-involved juveniles were reported as Male, compared to 21% Female (shown in the pie chart below).



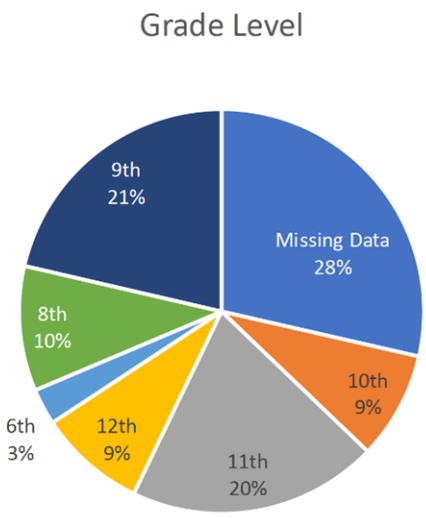
The chart below shows the percent of juveniles at each age when completing their first YLS assessment. Ages range from 11 to 18 with an average age of 15.



Data were also available to assess roughly where juveniles lived at the time of their first YLS (by zip code) and information on their school. The majority of Livingston County court-involved juveniles reside in the 48843 zip code, which includes the city of Howell. The next most common zip codes were 48855 (Northern Howell), 48169 (Pinckney) and 48836 (Fowlerville). This distribution roughly reflects the population distribution of Livingston County, though rates are a bit more disparate in the less populated zip codes, likely due to the small court sample size. The table shows the most common zip codes for Livingston County court-involved juveniles compared to the percent of the total county population that resides in that zip code.

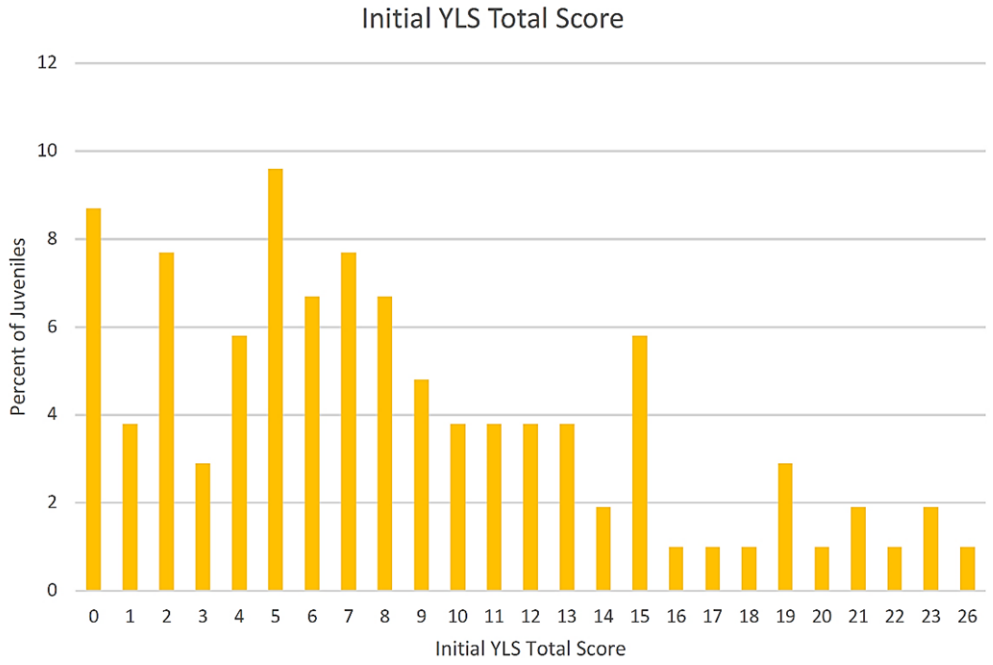
Zip Code	Percent of the Population	Percent of Court-Involved Juveniles
48114	11.1	1.5
48178	18.8	1.5
48189	7.2	1.5
48380	3.9	1.5
48137	2.4	3.1
48430	19.9	4.6
48353	3.5	6.2
48116	13.8	9.2
48836	7.6	10.8
48169	10.8	12.3
48855	8.2	12.3
48843	23.8	29.2

The most common schools attended by Livingston County court-involved juveniles aligned with home zip code locations. The most common schools were Howell High School (14%), Heartland High School (12%), Fowlerville High School (10%), and Pinckney Community High School (10%). Though grade level data weren't available for all students, the pie chart at right indicates that 9th (21%) and 11th (20%) grade students made up the bulk of the court-involved juvenile population. Twenty percent of court-involved students indicated they receive some sort of special education services.

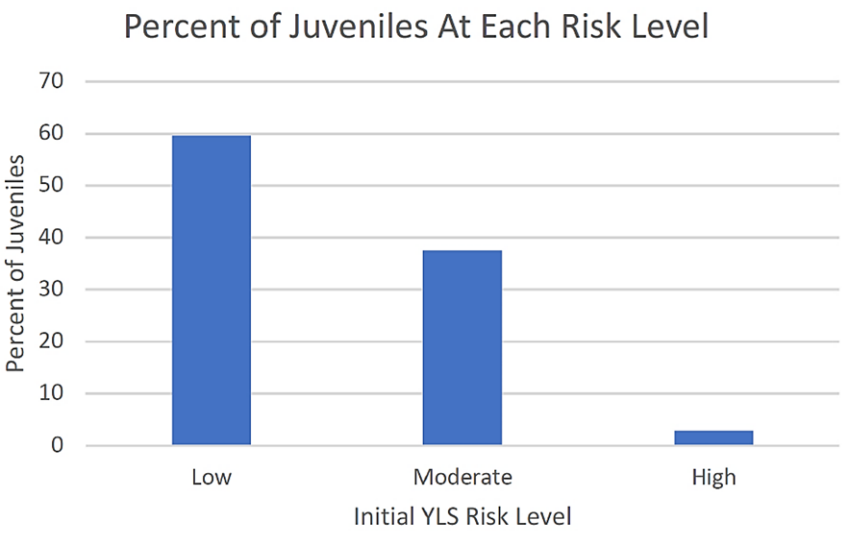


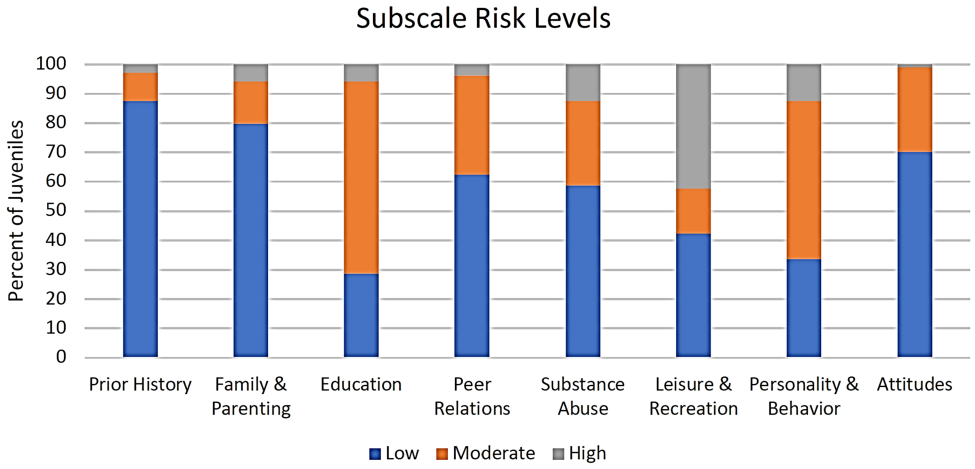
Criminogenic Risk Profile

YLS scores can range from 0 to 41, but Livingston County court-involved juveniles were lower risk overall, having initial YLS scores ranging from 0 to 26. The bar chart below indicates the percent of all Livingston County court-involved juveniles who scored at each total score value. The distribution of total initial YLS scores is similar to what was seen in previous Livingston County analyses. The average initial YLS score was 8.35, which is right at the low/moderate risk level cut off.



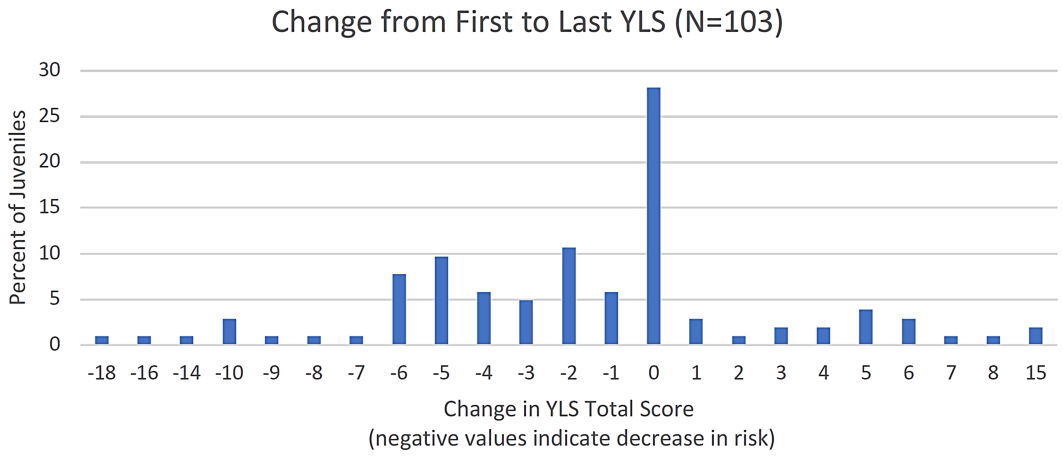
This low-risk skew can also be seen in overall risk levels (at left), with 59.6% of Livingston County court-involved juveniles scoring as low risk, 37.5% scoring as moderate risk, and just 2.5% scoring as high risk. This distribution is also similar to what was seen in prior Livingston County YLS analyses.





When assessing the eight criminogenic risk domains on the YLS, the highest areas of need/risk were Education, Personality & Behavior, Leisure & Recreation, and Substance Abuse. The chart above indicates the percent of juveniles who scored at each risk level for each subscale. This again reflects a relatively low risk court population overall.

As the YLS has now been implemented in Livingston County for over two years, many juveniles have multiple assessments. The number of YLS assessments ranged from 1 to 7, with 103 juveniles having two or more assessments. For juveniles with two or more assessments, we can assess if there are changes in total scores from their first assessment to their last. This is depicted on the bar chart below, where a negative value indicates a decrease in risk (YLS total score going down over time), and a positive score indicates a YLS increase (likely also tied to recidivism resulting in a new YLS). Changes in YLS scores ranged from a risk decrease of 18 points to a risk increase of 15 points. The average change in YLS total score was a decrease of 1.6 points. Over time and additional assessments, this risk decrease will likely grow, and further analyses will be feasible. The distribution of risk score changes in displayed in the chart below.

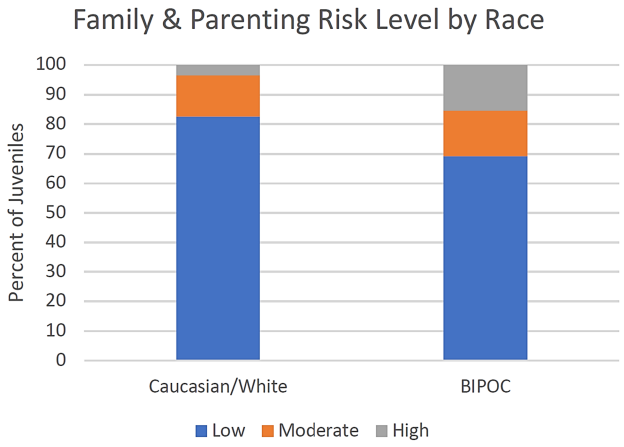


Recidivism and Predictive Validity

While still early in the risk assessment journey, we can begin assessing recidivism for Livingston County court-involved juveniles. Recidivism analyses typically include any new petition (in the juvenile system) or charge (in the adult system) that occurs in the two years following an initial YLS assessment. This two-year time frame is based on research that indicates juveniles who go on to recidivate typically do not abstain from criminal justice involvement for more than two years and then begin again, instead they typically engage in their first recidivism offense within two years of initial offense. Thus, these analyses should be treated as preliminary, as only one year of recidivism information is available for a small subset of juveniles. Initial recidivism analyses show an expectedly low recidivism rate (due to limited “time at risk” since initial YLS), with a one-year recidivism rate of 5.8%. Due to the low recidivism rate, the YLS does not reach statistically significant predictive validity currently for Livingston County. A receiver operating characteristic area under the curve statistic (ROC AUC) analysis was performed to assess the predictive validity of the YLS for Livingston County court-involved juveniles, resulting in an area under the curve of .583 for total score. This is promising for the two-year predictive validity of the assessment, despite failing to reach statistical significance at this time.

Disproportionality Analysis

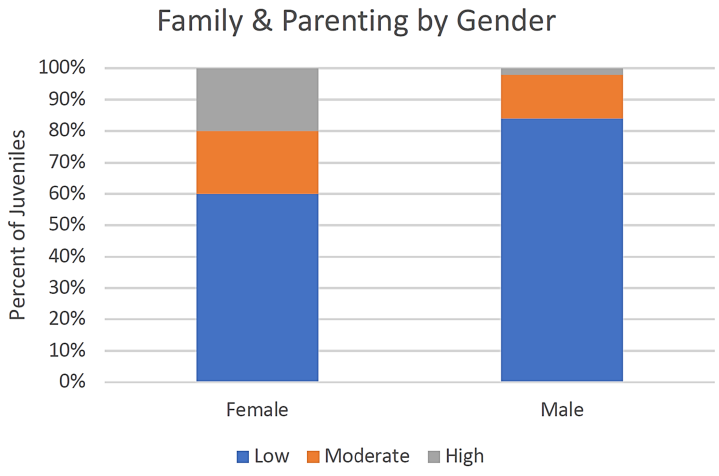
As with any disaggregation utilizing a small sample size and preliminary data, the following disproportionality analyses should be interpreted as preliminary in nature. Livingston County data can be disaggregated by both race and gender. There was not a statistically significant difference in risk score by age at first YLS, suggesting that age does not significantly contribute to variation in total risk score.



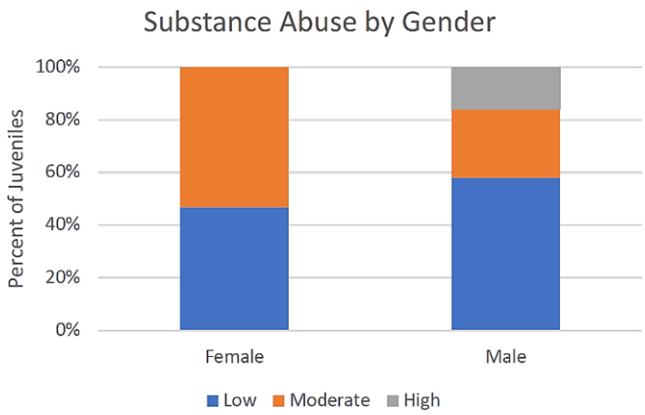
As the proportion of juveniles in each non-White racial group are quite small, further analyses were completed utilizing a binary race (White/Caucasian, BIPOC) grouping. There were statistically significant differences found between race groups on Family & Parenting subscale, but not on any other subscales, total score, risk levels, or YLS score change. The differences by race in the Family & Parenting subscale are shown in the chart at right, indicating a slightly higher risk for BIPOC juveniles than their Caucasian peers. Due to the small number of juveniles in this analysis and the short recidivism window, race differences were not able to be analyzed for recidivism.

When disaggregating by gender (reducing the data to include Male and Female responses only, due to sample size), statistically significant differences can be seen in Prior History, Family & Parenting, and Substance Abuse subscales. There were not significant differences for total score, risk level, change in YLS score, or any other subscales.

All female juveniles in the sample scored as low risk for Prior History on their initial YLS, resulting in the significant difference for that subscale. Comparatively, male juveniles in the sample scored 82% low risk, 14% moderate risk, and 4% high risk.



For the Family & Parenting subscale, Female juveniles displayed significantly higher risk than Males, as shown in the chart at left.

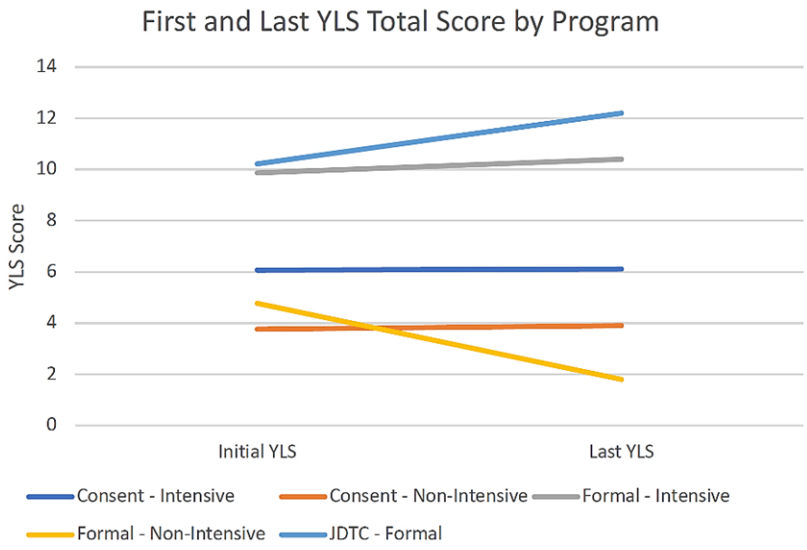


The opposite pattern can be seen in the Substance Abuse subscale, also displayed at left. Males displayed significantly higher risk, with 58% scoring as low risk, 26% as moderate, and 16% high risk. Females scored lower risk, with 47% scoring low risk, 53.3% scoring moderate, and no Female juveniles scoring high risk for substance abuse on their initial YLS.

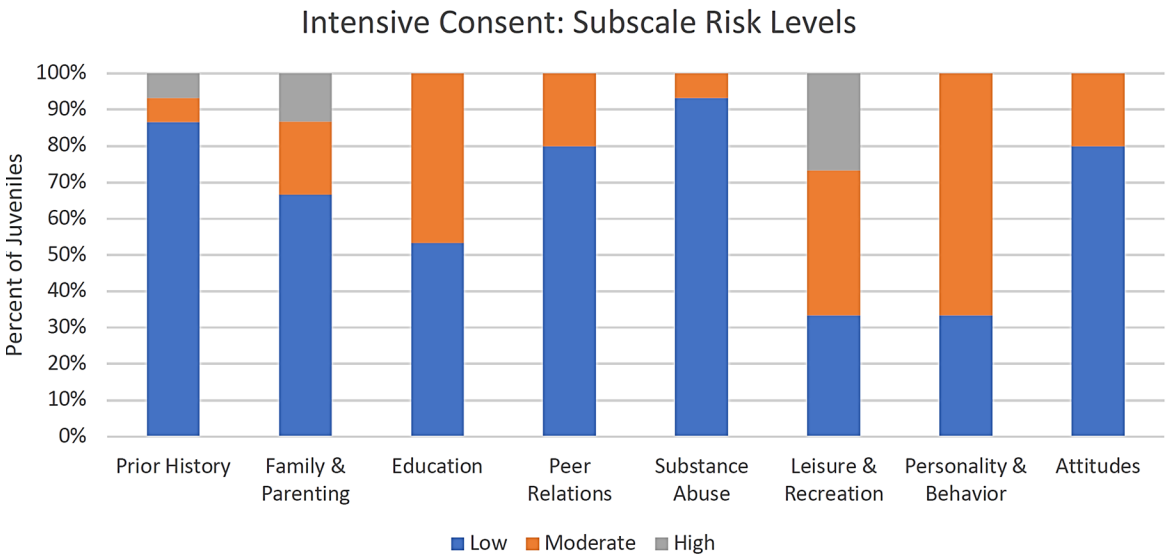
Program Placements

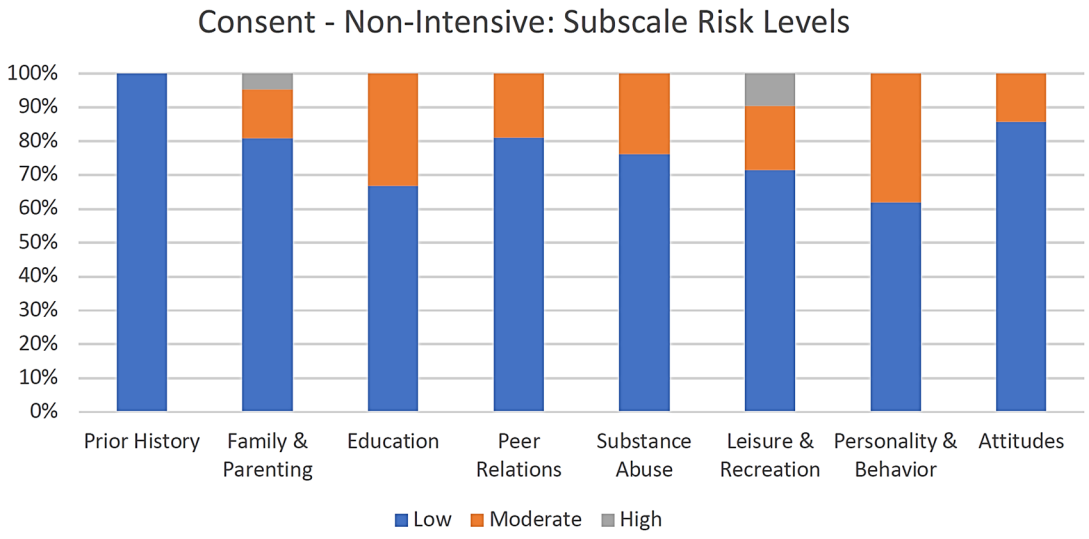
Data were also available to allow for a preliminary analysis of risk differences by program placement. Consent (intensive), consent (non-intensive), Formal (intensive), Formal (non-intensive), and JDTCFormal program placement categories were utilized for these analyses. PA150, Drug Court Watch, and other programs had sample sizes too small to be included in these analyses. There were significant differences between program placements for First and Last YLS Total Score, risk level, and nearly all subscales (Prior History, Peer Relations, Substance Abuse, Leisure & Recreation, Personality & Behavior, and Attitudes for initial YLS, Prior History, Peer Relations, Leisure & Recreation, Personality & Behavior, and Attitudes for last YLS). The included programs were not significantly different on race, gender, or YLS score change. These are positive findings, as demographic differences in program placement could indicate a bias in treatment while differences in risk should be seen for different programs.

As the chart below shows, there was a significant difference in YLS score (initial and last assessment) by program (seen in the varying heights of the lines), but not a significant difference in the change in YLS scores (seen in the slope of the lines). Juveniles in JDTC had significantly higher YLS scores than other programs, followed by Formal-Intensive programming. Consent-Intensive had average YLS scores of 6 compared to averages of 4 for Consent- Non-intensive. Non-intensive formal probation showed the greatest first-last YLS change, with an average first YLS score of 4.8 and an average last YLS score of 1.8. Lack of changes between initial and last YLS scores in other programs may be due to program length, sample size, and/or limited follow up time (for repeat assessments).

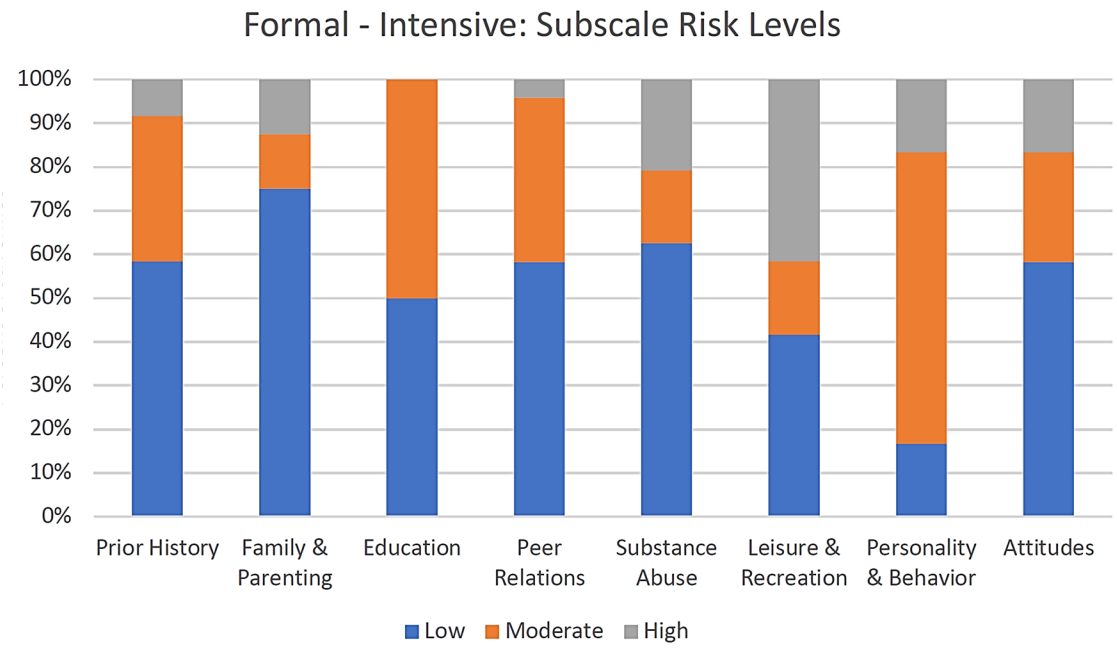


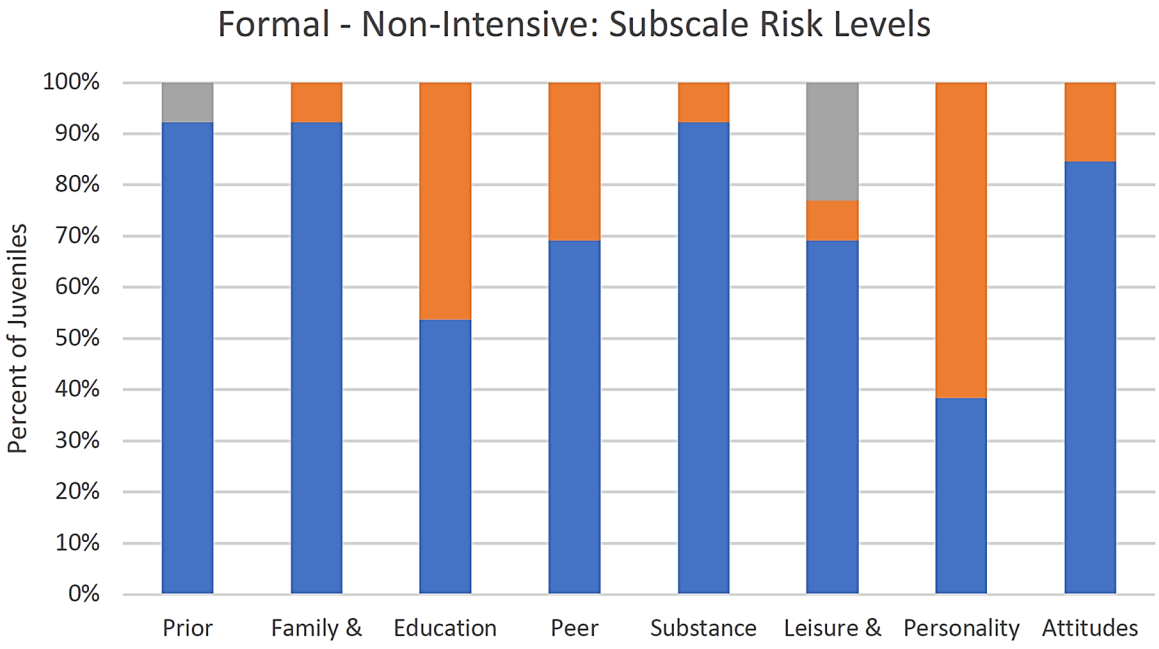
The initial YLS subscale risk levels for each program are presented below. Both intensive and non-intensive consent resulted in low-risk profiles across all subscales.



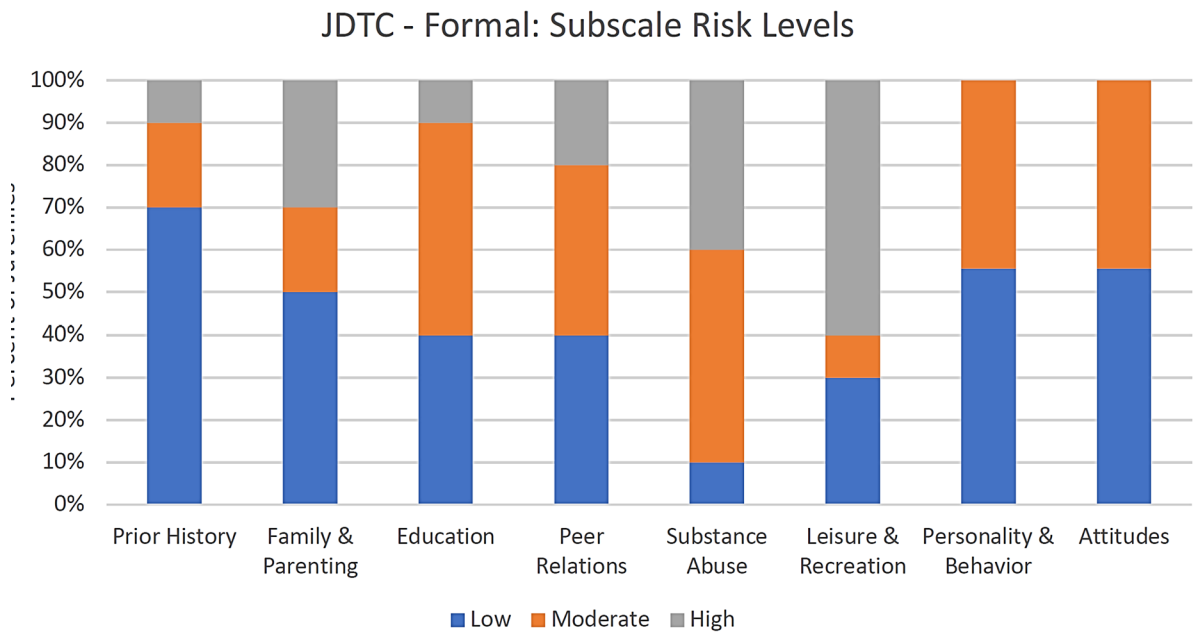


Formal probation, intensive and non-intensive are presented below. These programs include juveniles with a higher overall risk profile than Consent.





Lastly, JDTC included the highest risk juveniles, as displayed below.



As all program analyses have relatively small sample sizes (ranging from 9 to 24), these analyses should be treated as preliminary and interpreted with caution. Additional data will allow for more powerful analyses and inclusion of recidivism analyses by program.

Conclusion

The YLS appears to continue to be implemented with fidelity in Livingston County. There is a relatively low risk profile for court-involved juveniles overall and Livingston County staff appear to be utilizing risk to determine program placement well. Though the population is relatively homogeneous racially, statistically significant differences can be seen in the Family & Parenting subscale. These differences merit further investigation and additional data are collected, both to assess if the difference persists and to determine if that difference results in differential recidivism rates or predictive validity by subscale score. No changes to current data collection practices are recommended at this time.

Appendix A: Logic Model

Livingston County RED Program Logic Model

Inputs	Activities	Outputs	Short-Term Outcomes (To end of grant period)	Long-Term Outcomes (After grant period)

People/Partners
• 53rd Circuit Court – Family Division
  • Juvenile Court staff (Administration, probation, and support)
  • Court administration intern
• Independent Evaluator from local university
 	
Resources
• MDHHS grant 2019-2020
• Court data infrastructure (JIS)
• Electronic client management system
• Youth Level of Service (YLS) assessment tool
• Child and Adolescent Functioning Assessment Scale (CAFAS)
	Design and implement electronic client tracking system
	• Contract with a client tracking system vendor
	• Hire intern
	• Convene a project development team
	• Define and code key variables
	• Develop staff procedures and training tools
	• Purchase Chromebooks for mobile case documentation
	• Review and update system configuration
	
	Implement the YLS and CAFAS
	• Procure YLS tool
	• Train probation staff on use of YLS
	• Develop YLS and CAFAS procedures for evidenced-based decision-making
	• Integrate YLS and CAFAS into client tracking system
	
	Develop processes for meaningful data analysis
	• Contract with an independent evaluator
	• Document the extent by which staff are prepared and actively utilizing the client tracking system and objective assessment tools as intended
	• Monitor data entry to ensure accurate reporting.
	• Develop an evaluation plan that includes detailed research questions and analysis and reporting formats, including RED assessment, for project year two.
		1. Electronic client tracking system in place that is tailored to Livingston County Juvenile Court programs and practices
		2. Clear written procedures regarding data entry expectations that drive consistent, accessible, understandable data-collection and accountability practices
		3. Staff has the knowledge, tools, and resources necessary to shift from paper files to electronic case files in the client tracking system
		4. Staff is well trained, prepared, and confident in the application of the YLS
		5. Case decisions driven by the results of the YLS and CAFAS
		6. Policy and procedures for risk- and needs-assessment override adopted
		7. Court staff satisfied with the project design and implementation
		8. Data analysis and visualization tools that enable assessment of treatment and outcomes and comparisons for subsets of youth are operational
			1. The Court will have access to a sustainable, meaningful, and growing data set that enables the full assessment of where and how disparity occurs, points to areas of improvement, and evaluates the success of future improvements.
			
			2. The Court will have capacity for real-time analysis and reporting of data on arrests, diversions, pre-trial detentions, dispositions, and adult transfers, as well as the ability to follow individuals through the system to determine where disparate services and outcomes may exist.
				1. Reduced racial and ethnic disparities among juveniles formally processed by the Court.