Document Title:	**Assessing a Trauma-Informed Decision Protocol for Juvenile Justice, Final Technical Report**
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Document Number:	**310165**
Date Received:	**February 2025**
Award Number:	**2016-CV-BX-0002**

Final Technical Report

Assessing a Trauma-Informed Decision Protocol for Juvenile Justice

Funding Agency: Office of Juvenile Justice and Delinquency Prevention

Grant No.: 2016-CV-BX-0002

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Project Period: October 1, 2016 – September 30, 2020

ABSTRACT

The almost universal prevalence of trauma exposure amongst youth in the juvenile justice system has led to calls for innovative efforts to create trauma-informed juvenile justice systems. Experts advise that trauma-informed care environments more effectively responded to trauma disorders, help better respond to behaviors triggered by trauma, and led to more effective treatments for related disorders. The first step in responding to the trauma treatment needs of youth in the juvenile justice system is to systematically identify these needs as youth become involved with the system. The development of sound screening and assessment capacity, in tandem with effective decision-making protocols, is critical to effectively identify and ultimately respond to traumatic stress disorders among youth in contact with the juvenile justice system.

The overarching goal of this study was to advance the field by testing a replicable trauma-informed decision protocol (TIDP) consisting of trauma-informed screening and case planning based on the risk-needs-responsivity model of case planning. Working with juvenile justice partners in diversion, probation, and placement settings, this study (a) documented current juvenile justice practice for trauma screening, assessment, referral and care delivery in the research sites, (b) developed and implemented the TIDP with the research site partners, and (c) examined the effects of implementing the TIDP on trauma screening and case management practices.

Results indicate that use of the TIDP can support effective collaboration with other child serving systems as it provides a straightforward and transparent way for JPOs to consolidate the results of intake screening and risk/need assessment tools into a single form that will then drive subsequent follow-up and case planning decisions. A structural analysis of the TIDP level of concern ratings indicate a number of criminogenic needs that consistently emerged as being impacted by either traumatic events or trauma reactions (Personality Behavior, Attitudes/Orientation, and Family Circumstances). These associations appeared to be primarily impacted by emotional abuse/neglect and family violence exposure as well as a range of trauma reactions. Providing some preliminary evidence of the trauma-related LOC ratings as reflecting responsivity factors, both the total traumatic event LOC and total trauma reaction LOC ratio scores were significant predictors of JPO decisions to identify a youth as in need of further trauma assessment or treatment. Finally, a substantial change in the percentage of trauma-responsive case plans was found after integrating the TIDP into the intake process, suggesting a greater attention to trauma needs in the development of the case plans and improved access to services.

SUMMARY OF THE PROJECT

Each year in the United States, millions of children are exposed to violence in their homes, schools, and communities. Rates of exposure to violence among children in juvenile justice settings indicate a near universal experience of trauma exposure, leading to calls for innovative efforts to create trauma-informed juvenile justice systems. The overarching goal of this project was to develop and test the implementation of a Trauma-Informed Decision Protocol (TIDP) that integrates trauma screening and risk-needs assessment results into a replicable framework for juvenile justice case planning based on the risk-needs-responsivity (RNR) model.

Specific research questions that the Investigators set out to answer included:

- *How can juvenile justice systems more effectively collaborate with other child-serving systems (e.g., behavioral health, child welfare) in responding to the trauma-related needs of justice-involved youth?*
- *How does trauma-related needs, identified at screening, relate to criminogenic risk-needs and how do these associations relate to decisions regarding additional trauma services (assessment and/or treatment)?*
- *Does TIDP improve access to trauma-informed services (e.g., trauma assessment and intervention services)?*

The study utilized a quasi-experimental and pre-post comparison with each research site serving as their own control to determine whether implementation of the TIDP enhanced trauma-informed screening outcomes and linkages to treatment, relative to trauma screening implemented as usual (TSIAU), for youth at multiple crucial stages in justice programming: (1) pre-adjudication juvenile court intake/diversion, (2) post-adjudication juvenile probation supervision, and (3) secure detention (short-term and long-term). Descriptive analyses and group comparisons were the primary data analytic techniques utilized to address each research question utilizing data generated from either the TSIAU or TIDP samples comparing within and across samples. Key informant interviews and focus group transcripts, and de-identified youth case reports to the court were coded and an analysis performed to identify themes.

This study was reviewed and initially approved by the Policy Research Associates, Inc. Institutional Review Board on November 16, 2016 with subsequent annual reviews.

To accomplish the overarching goal and answer the research questions, seven study objectives were identified:

- Objective 1: Document trauma screening, assessment, referral and care delivery in participating research sites to establish the baseline and better understand the process by which community stakeholder groups collaborate to support a continuum of trauma-informed interventions necessary to address the needs of youth in contact with the juvenile justice system.
- Objective 2: Develop a case plan and service matrix protocol (i.e., TIDP) that assists juvenile justice practitioners to align trauma symptoms/ behavioral health (responsivity factors) alongside criminogenic needs during screening. Additional materials necessary to support pilot implementation included development of a training curriculum and fidelity measure instrument.

- Objective 3: Initiate adoption of the TIDP to guide (and strengthen) the treatment need and intervention match during the case planning process. Training and technical assistance were provided to all practitioners involved in the intake, screening, and case planning processes in each of the research sites.
- Objective 4: Collect lifetime, pre-intake data and 12 months of follow-up data on all youth in the study site sample. Sample A included 8 months of pre-TIDP implementation intakes and Sample B included 8 months of post-TIDP implementation intakes. Measures collected included results from risk-needs assessments, mental health screenings, and trauma screenings; juvenile justice history and current charge detail; case plans; and, for the post-implementation phase, completed TIDPs.
- Objective 5: Test whether an expert-supported decision protocol that incorporates RNR principles improves youth outcomes. The surrogate measure for testing this short-term was to examine whether use of the TIDP resulted in greater adherence to principles of effective, trauma-informed case planning compared to the pre-implementation period.
- Objective 6: Examine whether improvements in treatment matching for criminogenic and trauma-specific needs is associated with reductions in adverse outcomes. Consistent with the RNR model, we expected that successful reduction in adverse outcomes are achieved through a better needs-treatment match through the risk-needs assessment process when responsivity factors (such as, trauma reactions) are attended to.
- Objective 7: Develop guidelines and accompanying materials that will support dissemination of TIDP to other juvenile justice agencies across the country interested in replicating this work.

Creating effective trauma-informed care responses in juvenile justice agencies and with stakeholder organizations requires a significant commitment on the part of policymakers and administrators, as well as practical guidance on "how to" based on research and best practice. Implementation of trauma screening and decision protocols that support linkage to appropriate and effective treatment services and interventions are a critical step to developing trauma-informed juvenile justice systems. This study explored two primary areas necessary to effectively support the development of trauma-informed care environments: policy/procedure and workforce development.

Although many juvenile justice systems have implemented trauma screening, best practice recommendations and tools to support effective decision making in response to the results of trauma screening are lacking. While incorporating trauma-informed care into juvenile justice operations should not require an entire revamping of existing screening and response policies and procedures, amending existing policy and procedures to reflect these changes are important to institutionalize the approaches.

Staff need to be informed on trauma-informed care and best practices that are commensurate with their specific duties. The challenges to implementing trauma-informed care approaches and the specific training and support needs of juvenile justice staff around implementing effective strategies given differences in roles and responsibilities will differ along the juvenile justice continuum.

STUDY PARTNERS AND COLLABORATORS

This study was co-directed by Karli J. Keator, MPH – Director, National Center of Youth Opportunity and Justice (NCYOJ) at Policy Research Associates, Inc., and Keith R. Cruise, PhD,

MLS – Professor; Director of Clinical Training in the Department of Psychology at Fordham University, in collaboration with Julian D. Ford, PhD, ABPP – Professor of Psychiatry and Law at the University of Connecticut Health Center, and support from Anthony Fortuna – Graduate Student in the Clinical Psychology Doctoral Program at Fordham University. Additionally, the study was guided by a seven-person Advisory Committee that included: Christopher Branson, PhD –New York University School of Medicine; Susan Broderick, JD – National Juvenile Justice Prosecution Center, Georgetown University; Patricia K. Kerig, PhD – University of Utah; Monique Marrow, PhD – Youth Trauma and Justice Solutions; Jim St. Germain – Preparing Leaders of Tomorrow, Inc.; John Tuell – RFK National Resource Center for Juvenile Justice; and, Gina M. Vincent, PhD – National Youth Screening and Assessment Project.

Building on collaborations with juvenile justice sites in Georgia and Pennsylvania, the Investigators: (a) documented current juvenile justice practice for trauma screening, assessment, referral and care delivery in the research sites, (b) developed the TIDP for implementation within the sites, and (c) tested enhancement of current trauma screening practices and case management practices and outcomes after implementation of TIDP. Study sites represented critical intervention points at various points of the juvenile justice continuum including:

1) pre-adjudication juvenile court intake/diversion (1 urban county-Georgia)
2) post-adjudication juvenile probation supervision (2 rural counties-Pennsylvania)
3) secure detention (short-term and long-term) (3 short-term and 3 long-term facilities-Georgia)

Due to implementation challenges with the intake/diversion and secure detention research sites, the Investigators requested and were approved for a project extension and work plan modification to allow for the addition of an urban, post-adjudication juvenile probation site with a diverse youth population and a more complex community-based service system. The addition of this site in the third project year allowed for a richer analysis of process measures and served as a feasibility pilot given the relatively homogenous youth population and limited array of community-based services in the original post-adjudication juvenile probation supervision sites.

OUTCOMES

Activities and Accomplishments

The study activities and accomplishments are best described across the following phases: *Phase 1 – Process Evaluation and Planning*; *Phase 2 – Impact Evaluation*; and, *Phase 3 – Data Analysis and Dissemination of Results*.

Phase 1 – Process Evaluation and Planning

The primary activities during this phase included development of process evaluation assessments, site visits to all research sites to support development of a thorough understanding of current practices using key informant and focus group methodology in combination with a facilitated mapping of current practice from arrest to case plan and supervision, implementation of a self-assessment tool to measure systems level responses to trauma among youth, and development of the TIDP. These site-focused activities had the secondary benefit of preparing each agency for implementation of the TIDP by providing an opportunity for agencies to revisit current practices and key partnerships with community-based service providers, and supported development of a protocol that was informed by current practice.

The Advisory Committee was also convened for a one-day in person meeting on May 24, 2017. The agenda began with a brief overview of the research goals, participating sites, project timeline, and conceptual framework for the trauma-informed decision protocol. Each site coordinator then provided an overview of their agency's processes, following the flowcharts that were created after the site visits. Each site's current practices for intake, screening, and case planning were reviewed at this time. Cross-cutting themes from the initial site visits, as well as preliminary results from key informant interviews and focus groups, were discussed and the TIDP draft reviewed to specifically ascertain whether or not the TIDP draft captured the critical components of most risk assessments and trauma screenings. The Advisory Committee meeting concluded with a review of the available data across sites and the data analysis plan with the goal of obtaining recommendations to strengthen the research methodology.

Following the Advisory Committee meeting, the TIDP was finalized and supporting materials, including fidelity measurement instruments and a training curriculum for staff, were developed. The TIDP is a 9-step decision protocol that integrates trauma screening, mental health, and risk/needs assessment results into a replicable framework for juvenile justice case planning based on the Risk-Needs-Responsivity (RNR) model. There are three specific goals within the TIDP that are represented across the 9-steps: (1) ensure balanced identification and tracking of risk/needs assessment results, trauma screen results, and mental health screening results; (2) raise attention and awareness to the Responsivity Principle by asking juvenile justice professionals to specifically consider the impact of trauma and mental health as responsivity factors on criminogenic needs, and (3) increase the number of youth identified for follow-up trauma assessment or intervention and improving the specificity of case plans via trauma-responsive case plan objectives.

Phase 2 – Impact Evaluation

Once the TIDP and supporting materials were finalized, training on the TIDP was provided to each of the pilot sites. Training sessions were held in-person and included both supervisors and line level staff (with an open invitation to interested community providers). To support implementation site-specific TIDP rating guides were developed and disseminated to each site and monthly consultation calls were held for the first 4 months of implementation. The calls were used to track systems-level changes in the intake procedure and how the TIDP was being incorporated into the intake process. Specific intake cases were discussed to facilitate fidelity to coding the TIDP and assist those using the protocol with understanding how to best use the TIDP information to support case planning, supervision, and communication with treatment providers.

Site-specific data submission protocols were also developed and distributed to each pilot site in October 2017. Each data submission protocol included: a description of the data elements being collected, a protocol for securely transmitting the data, a timeline for data submission, and a description of the processes for receiving and verifying the data. Draft data collection sheets were similarly developed and distributed to sites that did not have established electronic means for collecting, extracting de-identified measures, and submitting required data elements.

All requested pre-implementation and pilot period data from the post-adjudication probation sites and the short-term and long-term secure placement sites were collected or extracted, transmitted to the Investigators, verified for completion, and a preliminary cleaning completed.

Given the support from the statewide oversight commission in Pennsylvania, challenges with pilot implementation in the pre-adjudication diversion and secure placement sites, and the limitations due to the post-adjudication probation pilot sites both being rural communities with a fairly homogenous population and very limited community-based service options, a project work plan modification was submitted and approved to allow for the inclusion of a third post-adjudication probation pilot site. This site, however, is a very large, urban probation setting with a complex array of community-based services and supports and a very diverse population. Due to the timeline of onboarding this site, the focus for analysis was examining feasibility of implementing the TIDP in this setting.

Phase 3 – Data Analysis and Dissemination of Results

The primary effort during the final phase was on collecting and cleaning the 12-month follow-up data data collected, conducting the analyses to respond to the research questions, disseminating results to both policy and research audiences, and preparing the data files for archiving. In addition, focus was given to disseminating information about the study and results at five conferences (see dissemination activities list under Artifacts), developing a series of research to practice briefs (see products developed list under Artifacts), and preparing a manuscript on the full study results for publication.

Results and Findings

Tables 1and 2 contain demographics and basic screening and assessment results for measures included in the TSIAU and TIDP samples for the juvenile probation sites in Pennsylvania.

Research Question 1: Data obtained from the two juvenile probation sites in Pennsylvania provided the Investigators with the data necessary to address the three broad research questions. To address Research Question 1 (*how can juvenile justice systems more effectively collaborate with other child-serving systems [e.g., behavioral health, child welfare] in responding to the trauma-related needs of justice-involved youth*) the Investigators analyzed fidelity to completion of key TIDP steps. Effective collaboration with other child-serving system is contingent on a high level of adherence to TIDP steps and generating a decision as to the need that a given youth is either in need of further trauma assessment or trauma treatment after consolidating and integrating results of a risk/needs assessment, trauma screening, mental health screen, and conducting the "level of concern" analysis specific to the TIDP.

Focusing on the intakes completed during the TIDP implementation phase (n = 51 Crawford, n = 42 Venango), fidelity ratings were calculated for TIDP Steps 1 through 5 that involved transferring specific results from other screening and risk/needs assessment tools completed as part of the intake process. This was accomplished by tracking specific assessment and screening results (e.g., YLS/CMI, MAYSI-2, UCLA PTSD Reaction Index for DSM-5, and ACES scores) and determining whether the results were correctly documented on TIDP forms (see Table 3).

Juvenile probation officers (JPOs) completing the TIDP showed a high level of fidelity in Step 1 accurately transposing the YLS/CMI overall risk level onto TIDP forms in both counties with only a small number of missing ratings. The small number of errors (5 total across counties) involved moving the risk level up (e.g. Moderate to High) from the YLS/CMI to the TIDP. However, this also reflects a pattern of professional overrides and was not unexpected.

Step 2 involved a professional decision regarding the Intensity of Supervision. This is not a specific rating transferred from the YLS/CMI but is a professional judgment by the JPO. However, per the RNR model, intensity of services ratings (low, moderate, and high) should track alongside the overall risk rating per the Risk Principle (i.e., a youth rated at low risk for future delinquent behavior should be rated as needing a low intensity of supervision. This was the exact pattern across counties. Frequency of TIDP intensity ratings (low, moderate, and high) demonstrated significant correspondence with YLS/CMI overall risk ratings in Crawford, x^2(N = 45) 42.24, $p < .01$, and Venango, x^2(N = 41) 12.09 $p < .01$.

Step 3 involved fidelity in listing YLS/CMI criminogenic needs rated as High or Moderate onto the TIDP. Overall correct ratings in each county were considered modest (58.8 and 62.9%) with a large number of criminogenic needs (41.2 and 37.1%) being omitted from the TIDP even though needs were coded as moderate or high on the YLS/CMI. While this result may appear concerning, it does reflect that probation officers were trained to utilize their discretion in the total number of needs to list on the TIDP. JPOs. Analyzing specific criminogenic needs, it was clear that Leisure/Recreation was a common domain rated as Moderate or High but was under-rated on the TIDP in both Crawford (20, 66.7%) and Venango (15, 88.2%) counties, which is not only consistent with YLS/CMI trainings in Pennsylvania but also the known empirical literature on the empirical utility of this criminogenic need. Eliminating this category would substantially improve fidelity ratings for this step.

Step 4 involved flagging specific traumatic event exposures on the TIDP as present when rated on either the ACES (Crawford) or the UCLA PTSD Reaction Index for DSM-5 (Venango). Both counties made few errors of over-inclusion (11 total) in identifying the traumatic events on the TIDP. The more common error was under-including traumatic event exposure on the TIDP with JPOs in Venango having a higher frequency of these errors (22, 20.7%) compared to JPOs in Crawford County. Similarly, when transferring trauma reactions results from the UCLA PTSD-RI to the TIDP, JPOs in Venango made 11 errors of under-inclusion with the most common error being failing to identify dissociative reactions (5, 55.6%) on the TIDP when rated as present on the UCLA. Eliminating these errors would have resulted in a much higher correct identification of trauma reactions on the TIDP. Venango county achieved a very high correct identification of mental health concerns correctly transferring MAYSI-2 caution and warning scores to the TIDP (93.0%). Crawford county produced much weaker results here (51.0%) with detailed analysis by each mental health domain revealed that one intake JPO failed to follow the training and only transferred MAYSI-2 warning scores instead of caution or warning scores onto the TIDP.

Step 5 involved calculating the number of times level of concern (LOC) ratings (low, moderate, high) were made on the TIDP based on the training. More specifically, JPOs were instructed to provide LOCs for any traumatic event, trauma rection, or mental health concern coded Yes on the TIDP. As noted in Table 2, JPOs adhered to the training with 100% LOC identification by JPOs in Crawford and 96% LOC identification by JPOs in Venango.

The TIDP form includes 4 additional steps that involve documenting other key decision points based on professional judgment that will aid in case planning and communication with other agencies. These steps are not included in Table 2 but basic descriptive results are summarized here by county. Step 6 involved JPOs documenting specific strengths that could be used in case planning. On average JPOS in Crawford included 1.73 strengths (SD = 1.4) on the TIDP while JPOs in Venango included 2.98 strengths (SD – 1.16). Steps 7 and 8 involved JPOS

making a determination based on the previous steps as to whether the youth being rated needed a further trauma assessment (Step 7) or trauma treatment (Step 8) to adequately address criminogenic needs. In Crawford 18 cases (39.1%) were rated as needing further trauma assessment and 9 cases (19.6%) were rated as needing trauma treatment. In Venango, 9 cases (21.4%) were rated as needing further trauma assessment and 12 cases (28.6%) were rated as needing trauma treatment. In both counties collapsing across these two decision steps, cases flagged for further trauma assessment or treatment had higher rates of traumatic event exposures, higher rates of trauma reactions, and a larger number of moderate and high LOCs on specific criminogenic needs including Peer Relations, Education/Employment, Substance Abuse, and Personality/Behavior. Finally, Step 9 involved JPOs generating alerts that could represent behavior problems that might arise during probation supervision given a youth's trauma history. On average, JPOs in Crawford identified 1.63 alerts (SD = 1.70) and JPOs in Venango identified an average of 1.31 (SD = 0.90) alerts based on the youth's history of traumatic event exposures and 1.26 alerts (SD = 0.99) based on the youth's history of trauma reactions.

Based on these fidelity markers, with the exception of Step 3 (where results were expected to be more variable based on YLS/CMI training in Pennsylvania and best practice), fidelity ratings were generally high (e.g., exceeding 80% correct identification) with some notable exceptions that were county specific. What this descriptive analysis reveals is that effective collaboration can with other child serving systems can be facilitated through the use of the TIDP as it provides a straightforward and transparent way for JPOs to consolidate the results of intake screening and risk/need assessment tools into a single form that will then drive subsequent follow-up and case planning decisions. The overall fidelity results indicate that the TIDP training was largely successful and supports that the TIDP can then be used to a future aid in communicating intake information within their own departments and across other child serving systems. Most importantly, utilizing the TIDP, JPOs flagged a substantial proportion of youth as needing further trauma assessment or trauma treatment. It is also clear that this TIDP decision point was used to flag youth for further services based on more substantial histories of traumatic event exposure and active trauma reactions and higher LOC ratings on key criminogenic needs. While descriptive in nature, these results indicate that when incorporated into the intake process the TIDP can be used to identify youth as in need of further services such that the TIDP can aide JPOs in communicating their concerns and decision-making to other child-serving systems.

Research Question 2: The second research question addressed how trauma-related needs, identified at screening, relate to criminogenic needs and how these associations relate to decisions regarding additional trauma services. The most focal way to address this question, given the overall goals of the project, was to analyze TIDP Step 5 Level of Concern (LOC) ratings in relation to criminogenic needs identified from the YLS/CMI and included on the TIDP. As a reminder, when completing TIDP Step 5, the intake JPO essentially answers the following question – *what is my level of concern (rated low, moderate, or high) that this youth's history of a traumatic event or trauma reaction is impacting their current criminogenic needs?* These LOC ratings are specific to the Responsivity Principle of the RNR framework.

The investigators calculated an LOC ratio score that reflects the average LOC rating (low = 1, moderate = 2, high = 3) per criminogenic need for traumatic events, trauma reactions, and mental health concerns identified on the TIDPs in both Crawford (Table 4) and Venango (Table 5). Higher LOC ratio scores reflect a stronger association between trauma-related needs and each

criminogenic need. The criminogenic needs rated as having the highest trauma-related LOC ratio scores across endorsed traumatic events was Personality/Behavior, Family Circumstances, and Attitudes/Orientation in Crawford County. Results from Venango county reflected some similarities with Attitudes/Orientation, Personality/Behavior and Substance Abuse showing the highest LOCs. Trauma-related LOC ratio scores were also calculated for trauma reactions in Venango County. In general, trauma-reactions produced higher LOC ratio scores than traumatic events with Attitudes/Orientation, Family Circumstances, and Substance Abuse resulting in the highest LOCs when examining LOCs specific to trauma reactions.

To examine how LOC ratings were related to decisions regarding additional trauma services, the investigators calculated a new set of LOC ratio scores reflecting the average LOC ratings per criminogenic need divided by the total number of criminogenic needs for traumatic events in Crawford and trauma reactions in Venango. In Crawford, the LOC ratio score reflective of the greatest average impact across criminogenic needs was history of emotional abuse/neglect (2.15) and family violence exposure (2.24). ROC analyses were conducted to examine the predictive utility of a total traumatic events LOC ratio score predicted TIDP Step 7 and 8 (identifying a youth as in need of either further trauma assessment or trauma treatment). Figure 1 plots the ROC curves for the total number of criminogenic needs on the TIDP, Total number of traumatic events, and the total traumatic events LOC ratio score. All TIDP indicators resulted in significant AUC values: total criminogenic needs AUC = .71, total traumatic events AUC = .85, and total traumatic events LOC ratio score AUC = .78. Next, to test the relative impact of the traumatic event LOC ratings, the investigators conducted a stepwise logistic regression entering the total criminogenic needs on step 1 and then the total traumatic event LOC ratio score on step 2. The final model was significant, $x2 = 6.36$, $p < .05$, Nagelkerke $R^2 = .51$ with the total traumatic event LOC ratio score being a significant predictor of the decision to refer youth for further trauma assessment or treatment. Adding this LOC score resulted in a significant increase in the amount of variance accounted for in the trauma services decision.

In Venango, LOC ratio scores were calculated for trauma reactions following a similar logic. In Venango, the LOC ratio score reflective of the greatest average impact across criminogenic needs was negative alteration in cognitions and mood (1.94), avoidance (1.93) and arousal/reactivity (1.91). ROC analyses were conducted to examine the predictive validity across indicators in predicting TIDP steps 7 and 8 (identifying a youth as in need of further trauma assessment or treatment). Figure 2 plots the ROC curves. Only the total trauma reactions LOC ratio score resulted in a significant AUC (.84). When entering this LOC ratio score in a stepwise logistic regression model alongside the total criminogenic need score, only the total trauma reaction LOC score was a significant predictor, $x2 = 10.63$, $p < .01$, Nagelkerke R2 = .54.

In summary, a structural analysis of the TIDP level of concern ratings indicate a number of criminogenic needs that consistently emerged as being impacted by either traumatic events or trauma reactions (Personality Behavior, Attitudes/Orientation, and Family Circumstances). These associations appeared to be primarily impacted by emotional abuse/neglect and family violence exposure as well as a range of trauma reactions. Providing some preliminary evidence of the trauma-related LOC ratings as reflecting responsivity factors, both the total traumatic event LOC and total trauma reaction LOC ratio scores were significant predictors of JPO decisions to identify a youth as in need of further trauma assessment or treatment. In particular, the LOC ratio score associated with trauma reactions was a better predictor of this decision than the total number of criminogenic needs.

Research Question 3: The third research question addressed whether the addition of the TIDP to the juvenile probation intake process improved access to trauma-informed services (e.g., trauma assessment or trauma-specific treatments). This analysis involved extracting and coding trauma service recommendations on case plans completed post-intake for each the TSIAU and TIDP samples within each county. In Crawford county, only 5 out of 42 cases plans developed for the TSIAU sample had a recommendation for trauma services representing a 12% recommendation rate. In the TIDP sample, 14 out of 37 case plans included a recommendation for trauma services representing a 38% recommendation rate. In Crawford county, integrating the TIDP into the intake process resulted in a 26% increase in the number of probation case plans that can be considered trauma-responsive (i.e., contained an action item specific to either trauma assessment or trauma-specific treatment services on the case plan).

In Venango county, only 2 out of 22 case plans developed for the TSIAU sample had a recommendation for trauma services representing an 9% recommendation rate. In the TIDP sample, 8 out of 40 case plans had a trauma service recommendation representing a 20% recommendation rate. After accounting for the different number of intakes across the two samples, integrating the TIDP into the intake process resulted in a 50% increase in the number of probation case plans that can be considered trauma-responsive (i.e., contained an action item specific to either trauma assessment or trauma-specific treatment services on the case plan).

It is important to note that actual service referrals were not tracked in either county. As such, the specific delineation of a trauma service case plan recommendation provided by the best indicator of access to trauma services as within each county the action items on case plans were utilized during the probation supervision process to guide service referrals. While descriptive in nature, the substantial change in percentage of trauma-responsive case plans after integrating the TIDP into the intake process provides strong evidence of greater attention to trauma needs in the development of the case plans and improved access to services.

Study Limitations

The most notable limitation of the study is replicability of findings to juvenile justice settings other than post-adjudication probation and beyond the borders of the one state that made up the final study sample. Although the initial study design and partnerships included a pre-adjudication diversion site and post-disposition short-term and long-term secure placements, and more than one state, due to significant challenges with the sites diversion and secure placement sites, both related and unrelated to implementing a trauma-informed decision protocol, the final results are limited to post-adjudication probation sites.

The pre-adjudication diversion site was dropped from the study because the process evaluation revealed that validated mental health and trauma screenings and risk assessments were not reliably used, which would limit access to necessary pre-implementation data measures. Additionally, agency leadership had concerns about formalizing their screening and risk assessment processes within a timeframe that would allow for ongoing participation in the study. The baseline assessment with this specific site and subsequent conversations with other pre-adjudication programs in other communities, suggest that pre-adjudication diversion settings are unlikely to be a best fit setting for the TIDP given the limited use of standardized screening and assessment processes, limited or no case planning requirements, and often no ongoing contact with youth and families.

Although the short-term and long-term placement sites were never formally dropped from the study, data collected from these sites are not included in the final results due to project delays and implementation challenges. First, there were delays within the state administrative processes in releasing implementation guidelines to each pilot facility. Although still well within an acceptable timeframe for the pilot period, the delay between staff training and releasing the guidelines may have contributed to the experience that resulted: a lack of buy-in from staff that was consistent across nearly all facilities participating in the pilot project. Additionally, there were considerable differences between administrative policy and practice related to the use, timing, and sharing results of risk assessment and screenings. Analysis of both baseline and pilot period data suggest a lack of adherence to policies coupled with disjointed processes. For example, during the pilot period less than 18 percent of all youth for whom there was an intake received a trauma screen and only half of those had a completed TIDP (54 percent). Therefore, the data collected do not in fact compose a reliable sample from which conclusions can be drawn.

A study limitation, by design as this was developed as a pilot project, is the ability to speak to the relationship between implementation of the TIDP and specific youth justice, behavioral health, and other wellness outcomes. This study intended to examine the relationship between implementation of a trauma-informed decision protocol and case planning practices. That is, did implementing the protocol improve juvenile justice practitioner's ability to integrate results from risk assessments and trauma screenings into the case planning process. The nature of the relationship between implementation of the TIDP and youth outcomes, moderated by appropriate case planning, will be examined in future research.

Based on process feedback from the post-adjudication probation pilot sites and preliminary outcome data, the statewide oversight commission in Pennsylvania identified an additional 10 counties across the state for a state-funded expansion of the TIDP pilot. This pilot expansion began in late 2018 and was expected to conclude in December 2021. However, this timeline was disrupted due to the pandemic with no new target data for conclusion set.

TABLES AND FIGURES

Table 1

Descriptive and Screening/Assessment Results by Sample for Crawford County

Variable	TSIAU n = 49 M(SD) or n(%)	TIDP n = 51 M(SD) or n(%)
Age	16.0 (1.5)	15.6 (1.8)
Gender		
Male	37 (75.5)	35 (68.6)
Female	12 (24.5)	16 (31.4)
Race		
White	42 (85.7)	44 (86.3)
Black	3 (6.1)	3 (5.9)
Multi-racial	4 (8.2)	4 (7.8)
YLS/CMI Total Score	9.6 (6.9)	11.1 (6.6)
ACES Total Score	1.9 (2.0)	2.3 (2.1)
MAYSI-2 Elevations		
A/D	6 (13.3)	6 (13.0)
A/I	19 (42.2)	23 (46.0)
D/A	16 (35.5)	11 (23.0)
SC	21 (46.6)	31 (55.4)
SI	12(26.7)	13 (26.0)
TD	12 (35.3)	13 (39.4)

Table 1

Descriptive and Screening/Assessment Results by Sample for Venango County

Variable	TSIAU n = 23 M(SD) or n(%)	TIDP n = 42 M(SD) or n(%)
Age	15.4 (1.7)	14.6 (2.6)
Gender		
Male	19 (82.6)	28 (66.7)
Female	4 (17.4)	14 (33.3)
Race		
White	23 (100)	35 (83.3)
Black	--	5 (11.9)
Multi-racial	--	2 (4.8)
YLS/CMI Total Score	9.9 (6.6)	5.5 (3.5)
UCLA PTSD-RI Total TE Count	4.1 (2.9)	3.0 (2.4)
MAYSI-2 Elevations		
A/D	4 (17.4)	6 (14.2)
A/I	15 (65.2)	18 (39.5)
D/A	10 (37.9)	11 (26.1)
SC	17 (73.9)	21 (50.0)
SI	8 (34.8)	9 (21.5)
TD	6 (46.2)	13 (44.8)

Table 2

Fidelity to TIDP Steps 1 through 5 in Crawford and Venango Counties

TIDP Step/County	Correctly Rated n (%)	Under-rated n (%)	Over-rated n (%)	Missing n (%)
Risk Level				
Crawford	38 (82.6)	1 (3.8)	4 (9.3)	3 (6.5)
Venango	34 (79.0)	1 (2.8)	1 (2.3)	5 (12.5)
Intensity of Supervision				
Crawford	N/A	N/A	N/A	N/A
Venango	N/A	N/A	N/A	N/A
Prioritized YLS/CMI Needs[a]				
Crawford	125 (58.8)	70 (41.2)	6 (3.1)	1 (0.3)
Venango	76 (62.9)	33 (37.1)	4 (1.8)	1 (0.3)
Traumatic Events[b]				
Crawford	140 (95.5)	6 (4.1)	3 (1.6)	1 (0.3)
Venango	92 (79.3)	22(20.7)	8 (3.9)	0 (0.0)
Trauma Reactions[c]				
Crawford	N/R	N/R	N/R	N/R
Venango	49 (76.1)	11 (20.0)	8 (5.4)	5 (2.4)
Mental Health[d]				
Crawford	41 (51.0)	47 (49.0)	0 (0.0)	0 (0.0)
Venango	72 (93.0)	6 (7.0)	4 (3.0)	0 (0.0)
Level of Concern Ratings				
Crawford	-- (100.0)	-- (0.0)	-- (0.0)	-- (0.0)
Venango	-- (96.0)	-- (4.0)	-- (0.0)	-- (0.0)

Note. Trauma reactions are not available for Crawford as the trauma screen (ACES) focused exclusively on traumatic event exposures
N/R = Not rated
N/A = Not applicable due to decision being based on professional judgment
[a] = totals and percentages across 8 criminogenic needs rated moderate or high
[b] = totals and percentages across 8 traumatic event exposures rated as Yes on either ACES or UCLA PTSD Reaction Index for DSM-5
[c] = totals and percentages across 5 trauma reaction criterion scores rated as Present on the UCLA-PTSD Reaction Index for DSM-5
[d] = totals and percentages across 6 mental health concerns rated as Caution or Warning scores on the MAYSI-2

Table 4

Level of Concern Ratio Scores – Crawford County

Criminogenic Need	TE LOC M (SD)	MH LOC M (SD)
Family Circumstances	1.82 (.51)	1.79 (.70)
Education/Employment	1.57 (.53)	2.04 (.59)
Peer Relations	1.25 (.30)	1.34 (.45)
Substance Abuse	1.72 (.53)	1.80 (.51)
Leisure/Recreation	1.41 (.48)	1.58 (.81)
Personality Behavior	1.95 (.44)	2.25 (.70)
Attitudes/Orientation	1.80 (.50)	1.71 (.75)

Table 5

Level of Concern Ratio Scores – Venango County

Criminogenic Need	TE LOC M (SD)	TR LOC M (SD)	MH LOC M (SD)
Family Circumstances	1.24 (.41)	2.00 (.00)	2.00 (.00)
Education/Employment	1.44 (.40)	1.81 (.63)	1.61 (.46)
Peer Relations	1.47 (.42)	1.64 (.43)	1.55 (.42)
Substance Abuse	1.74 (.50)	1.88 (.53)	1.77 (.43)
Leisure/Recreation	1.00 (.00)	1.00 (.00)	0.00 (.00)
Personality Behavior	1.72 (.31)	1.79 (.34)	1.82 (.31)
Attitudes/Orientation	2.00 (.00)	2.00 (.00)	2.00 (.00)

Figure 1

ROC Curves – Crawford County

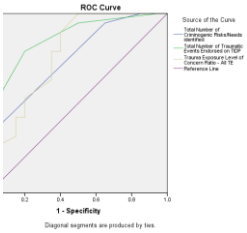
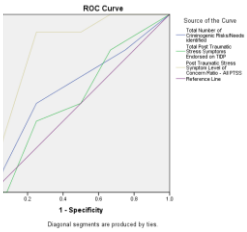


Figure 2

ROC Curves – Venango County



ARTIFACTS

Products Developed

- Cruise, K.R. (2017). *Trauma-informed Decision Protocol*. Delmar, NY: Policy Research Associates, Inc.
- Cruise, K.R., & Ford, J.D. (2017). *Trauma-informed Decision Protocol Rating Reference Guide.* Delmar, NY: Policy Research Associates, Inc.
- Cruise, K.R., Keator, K.J., & Ford, J.D. (2017). *Trauma-informed Decision Protocol Training Curriculum*. Delmar, NY: Policy Research Associates, Inc.
- Cruise, K.R. (2019, November 7). *Identifying effective trauma-informed services for delinquent youth* [Conference session]. 2019 James E. Anderson Pennsylvania Conference on Juvenile Justice, Harrisburg, PA, United States.
- Cruise, K.R., Keator, K.J., Ford, J.D., & Fortuna, A. (2019, November 14). *Field-based implementation of the Trauma-Informed Decision Protocol: Identifying justice-involved adolescents in need of trauma-based intervention* [Paper presentation]. International Society of Traumatic Stress Studies Annual Conference, Boston, MA, United States.
- Fortuna, A., Cruise, K.R., Keator, K.J., & Ford, J.D. (2020, March 6). *Field-based implementation of the Trauma-Informed Decision Protocol: Identifying justice-involved adolescents in need of trauma-based Intervention* [Paper presentation]. American Psychology-Law Society Conference, New Orleans, LA, United States.
- Cruise, K.R., Keator, K., Ford, J.D., & Fortuna, A. (2020, August 27). *Field-based implementation of the Trauma-Informed Decision Protocol: Identifying justice-involved adolescents in need of trauma-based intervention in Venango county* [Virtual presentation]. Venango County Juvenile Probation Office, virtual, United States.
- Cruise, K.R., Keator, K., Ford, J.D., & Fortuna, A. (2020, September 18). *Field-based implementation of the Trauma-Informed Decision Protocol: Identifying justice-involved adolescents in need of trauma-based intervention in Crawford county* [Virtual presentation]. Crawford County Juvenile Probation Office, virtual, United States.
- Cruise, K.R. (2020, October 27). *Benefits of trauma screening and a trauma-informed decision framework to guide case planning* [Conference session]. National Partnership for Juvenile Services, virtual conference, United States.
- Cruise, K.R., & Leamy, J. (2020, November 5). *A discussion on the initial implementation of the Pennsylvania Trauma Screening Expansion Project* [Conference Session]. 2020 James E. Anderson Pennsylvania Conference on Juvenile Justice, virtual, United States.
- Forthcoming: National Center for Youth Opportunity and Justice Research-to-Practice Brief Series (Series of 3)
    - *Trauma Among Youth in the Juvenile Justice System: Update on Critical Issues and Future Directions* (Working Title)
    - *Trauma Among Youth in the Juvenile Justice System: Identification and Intervention* (Working Title)
    - *Trauma Among Youth in the Juvenile Justice System: The Missing Link – Implementing a Trauma-Informed Decision Protocol*

Data Sets Generated

Georgia

- Demographics – Dataset for each facility include deidentified demographic and justice history detail for all youth included in the study.
- Detention Assessment Instrument (DAI) – Dataset for each facility includes total score and individual-level item detail for Georgia's Detention Assessment Instrument.
- Pre-Disposition Risk Assessment (PDRA) – Dataset for each facility includes overall risk score and item-level detail for the risk assessment instrument.
- Juvenile Need Assessment (JNA) – Dataset for each facility includes item-level detail for this instrument, which is completed post disposition and is a buildable, living document that supports a youth through all stages of supervision and reviewed every 90 days.
- Mental Health Screen – Dataset for each facility includes item-level detail for the state justice agencies required mental health screen.
- Trauma Screen – Dataset for each facility includes item-level detail from the Structured Trauma-Related Experiences and Symptoms Screener (STRESS).
- Trauma-Informed Decision Protocol (TIDP) – Dataset for each facility includes all information as reflected on the TIDP form.
- Service Plan – Dataset for each facility includes all service plan detail over time.

Pennsylvania

- Recidivism Risk Assessment – The Youth Level of Service/Case Management Inventory – 2nd Edition (YLS/CMI 2.0) datasets were generated for both counties. The YLS/CMI is an RNR-based tool, which includes adolescent overall recidivism risk level, as well as the level of need attached to each of the central eight need domains.
- Mental Health Screener – Massachusetts Youth Screening Inventory – 2nd Edition (MAYSI-2) datasets were generated for both counties, including item-level data and subscale scores for each mental health domain.
- Trauma Screener – Datasets were generated for the Adverse Child Experiences (ACEs) information (Crawford county) , and the University of California Posttraumatic Stress Disorder Index for DSM-5 (UCLA PTSD-RI) information (Venango county). The Crawford ACEs dataset includes item-level data for all adverse experiences, and a total ACEs score. The Venango UCLA PTSD-RI also includes item-level data for history of potentially traumatic experiences, as well as symptoms of Posttraumatic Stress Disorder as outlined in the DSM-5.
- Trauma-Informed Decision Protocol (TIDP) – Dataset for each county includes all information as reflected on the TIDP form.
- Offense History – Dataset for each county includes full offense history, with alleged and substantiated charges as identified by Pennsylvania penal codes.
- Out of home placement history – Dataset for each county includes all history of residential placements out of the home.
- Supervision history – Dataset for each county includes all history of being under probation supervision.
- Age at Earliest Contact with Legal system – Dataset for each county includes age at the time of earliest offense, out of home placement, and community supervision.

- 12-month post-intake recidivism data – Dataset for each county includes both alleged and substantiated offenses in the follow-up period, with charges identified by Pennsylvania penal codes.
- 12-month post-intake supervision data – Dataset for each county includes any instances of being under probation supervision in the follow-up period.
- 12-month post-intake out of home placements – Dataset for each county includes any residential placements in the follow-up period.

Dissemination Activities

- Cruise, K.R. (2019, November 7). *Identifying effective trauma-informed services for delinquent youth* [Conference session]. 2019 James E. Anderson Pennsylvania Conference on Juvenile Justice, Harrisburg, PA, United States.
- Cruise, K.R., Keator, K.J., Ford, J.D., & Fortuna, A. (2019, November 14). *Field-based implementation of the Trauma-Informed Decision Protocol: Identifying justice-involved adolescents in need of trauma-based intervention* [Paper presentation]. International Society of Traumatic Stress Studies Annual Conference, Boston, MA, United States.
- Fortuna, A., Cruise, K.R., Keator, K.J., & Ford, J.D. (2020, March 6). *Field-based implementation of the Trauma-Informed Decision Protocol: Identifying justice-involved adolescents in need of trauma-based Intervention* [Paper presentation]. American Psychology-Law Society Conference, New Orleans, LA, United States.
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- Cruise, K.R., Keator, K., Ford, J.D., & Fortuna, A. (2020, September 18). *Field-based implementation of the Trauma-Informed Decision Protocol: Identifying justice-involved adolescents in need of trauma-based intervention in Crawford county* [Virtual presentation]. Crawford County Juvenile Probation Office, virtual, United States.
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