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Author(s):	**Christopher Sullivan, Ph.D., Clare Strange, MSW, Carrie Sullivan, MA, Jamie Newsome, Ph.D., Melissa Lugo, MS, Derek Mueller, MS, Amber Petkus, MS, Bryan Holmes, MS, Holly Lonergan, MS, James McCafferty, Ph.D.**
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Final Technical Report

Multi-Method Study on Risk Assessment Implementation and Youth Outcomes in the Juvenile Justice System

Christopher Sullivan, PhD
Clare Strange, MSW
Carrie Sullivan, MA
Jamie Newsome, PhD
Melissa Lugo, MS
Derek Mueller, MS
Amber Petkus, MS
Bryan Holmes, MS
Holly Lonergan, MS
James McCafferty, PhD

University of Cincinnati
Center for Criminal Justice Research

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^Correspondence to christopher.sullivan@uc.edu

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Executive Summary

Multi-Method Study on Risk Assessment Implementation and Youth Outcomes in the Juvenile Justice System

Risk assessment research is extensive, but tends to be concentrated in certain areas, namely the relationship between risk and official records of recidivism. As several important questions warrant consideration to offer insight on the usage and impact of risk and needs assessment with justice-involved youths, this research project builds on existing studies but seeks to focus more extensively on implementation and usage. To help answer these outstanding questions, the Office of Juvenile Justice and Delinquency Prevention (OJJDP) funded the University of Cincinnati Center for Criminal Justice Research (CCJR) to complete a project entitled the Multi-Method Study on Risk Assessment Implementation and Youth Outcomes in the Juvenile Justice System. This study pursued four main objectives:

1. Describe and assess risk and needs assessment usage and implementation practices at different juvenile justice decision-points (i.e., intake/diversion, detention, disposition, residential intake, and reentry), using a multi-state sample of sites at different stages of adoption, to develop recommendations on best practices in training, monitoring, and usage.

2. Assess court and programming decision-making outcomes based on variation in risk and needs assessment usage and implementation practices across agencies and states.

3. Evaluate how the implementation of risk and needs assessments across multiple stages of the juvenile justice system impacts recidivism among juvenile offenders.

4. Evaluate justice-based and developmentally relevant youths' outcomes based on variation in assessment-based decisions that reflect the usage, monitoring, and implementation of standardized risk and needs assessments.

The project focuses on the implementation of one particular juvenile risk and needs assessment (JRNA), the Ohio Youth Assessment System (OYAS) (Latessa, Lovins, & Ostrowski, 2009; Lovins & Latessa, 2013), across different juvenile justice decision-points and at agencies at various stages in the implementation process, which permitted a more nuanced and specific set of

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analyses and subsequent recommendations. However, as they are based in broad and pervasive themes from the juvenile justice personnel views and agency practices, the results and recommendations also generalize to the state-, county-, or agency-wide adoption of other JRNAs.

The report presents a varied set of analyses using comprehensive sets of data in line with the research objectives described above. These include early sections devoted to explicating key themes from juvenile justice personnel interviews and web-based surveys. Later sections of the report present findings from the analysis of the comprehensive sample of case records and youths' follow-up interviews. In addition to the main analyses, the middle portion of the report contains overviews of several "usage" studies that help to illustrate important points in understanding risk and needs assessment "in action" in the juvenile justice system. Finally, the report reiterates some of the key findings of the research project and identifies important data limitations to set an interpretive context around the results. The study's concluding section then turns to a series of recommendations regarding JRNA training, usage, monitoring, and future evaluation and research based on the synthesis of key findings from the study.

Study Methods

The research team interviewed juvenile justice personnel at various agencies across the three states in various stages of the implementation process. In-person interviews (N = 217) were conducted with personnel from 22 juvenile justice agencies. The agencies were purposively selected so that we could assess how the full suite of OYAS tools was being implemented and ensure a mix of different types of juvenile agencies and staff with various experiences with and views of the OYAS. In the sites, we also purposively selected personnel who had experience directly related to the OYAS. For example, through planning its implementation, administering the assessment, using its results to make juvenile justice-related decisions, or training other staff on the assessment. Interviewees included court (n = 37); correctional/secure treatment (n = 44);

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probation (*n* = 105); parole (*n* = 14); and state-level (*n* = 17) personnel. An interview guide was developed in order to answer questions specific to implementation context, policies, and practices in each state. Additionally, the research team reviewed the policies and procedures documents for each of the three state-level administrative bodies in order to identify trends in these policies around assessment, and the facilitators and barriers to assessment implementation and use.

To capture data from a more generalizable sample, a web-based survey on assessment use and practices was distributed to a everyone in who was registered as an administrator of the OYAS in each of the three states and other juvenile justice personnel who interacted with the results of the assessment (e.g., judges, magistrates) who were not included in the interview sample. The web-based surveys were sent to an email list of juvenile justice personnel via Qualtrics. Names and emails were provided by state-level administrative bodies in each state. In total, 1,013 surveys were completed resulting in a 32.4% response rate. Survey respondents included staff from court (n = 102), correctional/secure treatment (*n* = 132), probation (*n* = 592), parole (*n* = 7), state-level (*n* = 8), and individuals whose agency setting could not be inferred from their job title due to the anonymous nature of the survey data (*n* = 157) or whose job title was missing (*n* = 15). Though job roles varied, all personnel in the survey sample administered the OYAS and/or used its results to inform their decisions. Respondents who administered the OYAS were randomly assigned a vignette to score, which served as a measure of reliability in scoring relative to the manual. To triangulate certain findings, some of the questions from the semi-structured interviews were also included on the web-based survey. Special care was taken to analyze these particular results comparatively across the samples.

To ensure adequate representation of youths at varying stages of the juvenile justice process, a large sample of youths was selected through stratified random sampling techniques. Youths who

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resided in State 1 or State 2 were eligible for selection if they were assessed in 2014 or 2015. Youths in State 3 were eligible if their assessments took place in 2013 through 2015 for juvenile corrections and 2016 or 2017 for juvenile court cases. The first stage of sampling involved selecting counties from which youth would be selected. Due to the large number of counties in State 1 and State 2, counties were stratified based on assessment usage and were randomly selected from each stratum to participate in the study. The number of counties in State 3 is limited relative to the other states and all counties were included. Youths within the selected counties were then stratified based on the type of assessment used. This process resulted in a sample of 6,222 youths being selected for the study.

A smaller subsample of youths was randomly selected from the larger sample to participate in follow-up interviews conducted by research staff over the telephone. Similar to the process used to select the larger sample of youths, cases were stratified based on the year and tool used to complete the assessment. Research staff undertook an intensive location and follow-up procedure that led to a sample of 131, which was 9 percent of the 1,402 cases for which states and local agencies provided contact information. The effective interview response rate was 20.4 percent when factoring in only those cases for which research staff had some contact with the youth or a parent (e.g., this does not include cases with inaccurate or outdated contact information).

Data and Measures

Juvenile Justice Personnel In-Person Interview Data. The interviews, which lasted roughly 30 to 60 minutes, were conducted using a 55-question semi-structured interview that allowed for elaboration from the interviewees. The questions touched on themes relevant to JRNA implementation literature, including: agency and staff characteristics; approach to youth assessment; the OYAS implementation process; and youth assessment practices. Following grounded theory (Corbin & Strauss, 2008), the research team analyzed the open-ended questions

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by assigning codes to words and phrases, and grouping them accordingly as patterns emerged. Codes were inductively assigned based on their latent content, which was done using qualitative data analysis software (QDA Miner). The quantitative analysis of the close-ended, standardized questions (i.e., rating scales, or "yes," "no," or "unsure" responses) was completed using SPSS.

Web-based Survey Data. The full survey contained 52 items, though the number of questions respondents were asked depended on their role in the agency and connection to the OYAS. The questions covered themes regarding personnel characteristics, assessment use and practices, and the implementation process. Those respondents who administered any of the OYAS tools were asked to score a randomly-assigned vignette. All analyses of the survey data (including some qualitative analysis of the open-ended responses) were completed using SPSS. These analyses followed the same general processes as the interview data.

Youth Case Records. Data for the youths selected for the comprehensive assessment sample consist of official records provided by agencies in each state. For youths in State 1 and State 2, the research team created an annotated spreadsheet with instructions that was shared with agencies through a secure File Transfer Protocol (FTP) up/download process. The spreadsheets contained identifying and case information about the youths to aid agency staff in selecting the appropriate cases for data extraction. Agencies were asked to complete the spreadsheets by adding the requested information. State 3 provided their information on a hard drive which was physically transferred to a research team member. In a few State 1 and State 2 jurisdictions, research staff were granted access to case record management systems in order to extract the requested data or were provided larger amounts of data that were downloaded from such systems from which the requested data were identified and extracted. For the smaller subsample of youths selected for the follow-up interviews, contact information was also requested. This was collected in the same

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manner just described. Once the requested data were received by the research team, they underwent an extensive cleaning process prior to being merged together for analysis.

Follow-Up Survey with Youths. Youths selected for follow-up interviews were contacted by phone by research staff and asked to participate in the study. Youths over 18-years of age provided verbal consent for participation. Parents (Guardians) were asked to provide verbal consent for those under 18-years old and these youths were also asked to provide verbal assent/consent to participate. Youths participated in a semi-structured interview consisting of 46 questions across eight content areas: education/employment; family, living arrangements, and neighborhood; peer associations; situational awareness; beliefs; substance use; contact with the criminal justice system and JRNA; and treatment services. Interviews typically took approximately 30 minutes to complete, and youths were sent a $15 gift card to a restaurant to compensate them for their time.

Analytic Procedures

By design, the study reported here is based on various sources and types of data. The juvenile justice personnel interviews and survey data were coded and analyzed with a mix of quantitative and iterative, qualitative methods. The analysis of the case record and youth interview data proceeded in varied fashion depending on the objective of the particular analysis. We utilize varying analytic methods to answer questions under each of the objectives relevant to those sets of data. Those analytic methods range from basic descriptive methods and bivariate tests to convey information about our samples and subsamples utilized in particular analyses to several types of multivariate analyses. Multivariate models were usually based on logistic regression given the nature of many study measures. These models allowed for estimation of key relationships while conditioning on other factors that could plausibly impact the inferences from those analyses. Measurement models and path/mediation models were also utilized in answering some questions.

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Summary of Key Findings

Juvenile Justice Personnel Interviews and Surveys. This portion of the study identified a solid foundation upon which juvenile justice agencies may build an effective and sustainable implementation process. We found that most personnel were satisfied with the OYAS and believe it benefits the agency and the youths that they work with. However, they perceive their own satisfaction to be higher than that of their peers, which may speak to organizational culture and the messaging around the OYAS. More generally speaking, personnel were in agreement that risk and needs assessments enhance fairness in the juvenile justice decision-making process. Personnel also perceived the OYAS to provide useful information regarding criminogenic needs, but not about non-criminogenic needs. In general, agencies used the assessment information that was gathered in important ways (e.g., establishing supervision levels), but did not optimize its use (e.g., examine aggregate OYAS data).

Validation was an important aspect to establishing buy-in among staff for the accuracy of the tool. While two out of the three states had the OYAS validated on their specific population, personnel saw numerous limitations of the OYAS that they perceived to lead to the need for overrides. Further, issues of validity and reliability were some of the most commonly cited limitations in the OYAS across each state. This perception on behalf of many personnel had implications for their buy-in for the tool and usage of its information. Most personnel indicated that they were told the reasons that their agency adopted the OYAS, but did not feel like specific steps were taken to establish buy-in. Training was cited as the main strategy for garnering buy-in among the staff. Additionally, formal quality assurance measures were decidedly absent. This may contribute to a lack of sustainability in the implementation process, as a lack of quality assurance processes reduces the quality of the information gathering process, and therefore also limits the usefulness of the information for juvenile justice decisions.

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Specific to the web-based surveys, OYAS administrators consistently provided more negative views than non- administrators of the assessment, its usefulness, and its impact on their jobs. Despite providing slightly more negative views of the OYAS than non-administrators, OYAS administrators still tended to express positive overall sentiments of the assessment and its impact on their agency and the youths they work with. The scoring of vignettes in the web-based survey found some concerns with the accuracy of OYAS scoring. Only half OYAS administrators (n = 228) scored their assigned vignette correctly (52.2%). This may feed directly into the high level of concern reported concerning reliability and validity of the OYAS.

Youths Case Records and Follow-Up Survey with Youths. In addition to implementing risk and needs assessments, the study also investigated how the information was used in ways that could impact the experiences youths have in the juvenile justice system. Modern assessments such as the OYAS are designed to inform decision-making, which is assumed to improve outcomes for youths. With regard to dispositions, the results indicated that when risk levels based on OYAS scores are used to match youths to dispositions the likelihood of the youths recidivating is impacted. For example, when state commitment relative to non-custodial sanctions is used with higher risk youths, a small negative effect on the likelihood of recidivism is observed. Other results illustrate complex relationships among risk, disposition/placement, and recidivism that are informative about the relationship between risk assessment and justice decisions.

In the analyses investigating the use of domain scores to match youths to appropriate treatment, the findings were generally inconsistent with what would be expected based on theory underlying JRNA. Overall, participation in various interventions was not associated with reductions in recidivism, or significantly increased the odds of youths having a new adjudication. When domain scores were examined in relation to the treatment youths received, scores in the

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Prosocial Skills domain were most consistently related to treatment decisions. In other words, higher scores on this criminogenic need area increased the odds that youths would receive a treatment intervention. There was little evidence to suggest that the relationships between criminogenic needs and recidivism are mediated through various treatment options, however.

Many of the self-reported outcomes for the youths were positive when looking at the various attitudinal scales measured during the follow-up interviews. Most of the 131 youths were in school or working at the follow-up point as well. These results did not vary much across the different initial OYAS risk level groups. Youths frequently received treatment during the juvenile justice process or follow-up period, and the moderate and higher risk groups tended to report greater involvement in treatment across most of the categories included in the interview protocol. Still, despite some positive results in self-reported attitudes, interviewees also reported a good deal of later contact with the juvenile and criminal justice system and many self-reported drug or alcohol use. There are some potentially useful interrelationships among the various self-report responses that are investigated in exploratory analyses.

Usage Studies. In addition to the central analyses, the breadth of the data allowed us to carry out six subsidies to deepen the understanding of more nuanced aspects of the juvenile justice process. Usage study 1 evidenced that individuals reporting more favorable views of the OYAS scored the web-based survey scoring vignettes more accurately than those with less favorable views of the OYAS. In usage study 2, assessment classifications varied significantly among sites in our sample of juvenile court jurisdictions and Non-White youths were significantly more likely to receive a higher risk classification than their White counterparts. Usage study 3 identified some item, domain, and overall risk score performance differences across race and ethnicity, suggesting the need for further consideration of invariance across those subgroups of youths. In usage study

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4, we discovered that while overrides are allowed by most agencies, only 3.4 percent of assessments were overridden, and almost always in the upward direction. Usage study 5 revealed that youths who were noted as having mental health or substance use needs were significantly more likely to receive treatment in these areas. Finally, in usage study 6, we determined that the optional strengths and barriers included on the OYAS tools were being used with some regularity and that these were noted at higher rates for higher risk youth and youth who progressed further into the system.

Discussion

The results of the current report help to further set the stage for the effective and sustainable implementation of JRNA. A set of recommendations based on these results are provided to identify some potentially effective strategies for moving forward. Despite the comprehensive and specific nature of these results and recommendations, there are still contextual elements to which those in charge of planning and carrying out the implementation must pay special attention, and adjust their strategies accordingly. Namely, state (and county) context matters for implementation. Those in leadership are advised to take heed of state and county initiatives that are in place and could help to 'embed' the assessment process and its information into what is already being carried out. To that end, risk and needs assessment implementation does not occur in a vacuum, and therefore there will always be a residual impact of prior initiatives on the general reception of the tool. These elements will differ between localities and should be considered prior to full implementation.

At this stage of their evolution, JRNA are often not implemented onto a "blank state" as personnel and agency administrators may already have other experiences with assessment tools and other research-to-practice initiatives. The steps taken prior to, during, and after the initial rollout of a risk and needs assessment will set the tone for its reception. Formal quality assurance practices will ensure fidelity to the assessment, as well as sustainability in its implementation over

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time. Overall, policies, training practices, automated systems functioning and integration, and assessment information usage practices will vary from agency to agency, and personnel perceptions of the assessment will be impacted uniquely by these conditions.

Aside from state and local context, personnel characteristics are also relevant to implementation. Personnel using risk and needs assessments work in many different agency settings, have unique job roles, varying degrees of tenure in the field, and varying current and past experience with risk and needs assessments. Staff in leadership positions are encouraged to examine these characteristics, and consider the ways in which this may impact their perceptions (e.g., Have the personnel bought-in? Have they ever used any assessments before? Do they believe that the assessment is accurate and its information useful? How will their daily work be impacted by the tool? Are they able to seamlessly use and share this information? Are the trainings tailored specifically to them?). All of these characteristics can impact their level of buy-in with the tool, as well as their propensity to use and share the assessment information effectively.

The fourth objective of the study involved evaluating justice-based and developmentally relevant youths' outcomes based on variation in assessment-based decisions that reflect the usage, monitoring, and implementation of standardized risk and needs assessments. The result from the juvenile justice record portion of the analysis suggested that risk level and juvenile court dispositions have an impact on youths' recidivism and these are generally in ways anticipated by prior research and the underlying logic of JRNA. For example, when state commitment was used appropriately, it had a slight negative effect on the likelihood of recidivism for higher risk youths. In other instances where there was less alignment of risk level and disposition there tended to be increased recidivism, suggesting that supervision and other placement decisions may likely to lead to less desirable outcomes in those instances. We also examined processes that are expected to

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occur around the domain level needs information from the OYAS (e.g., education and employment, substance use). JRNA processes should provide information that can be used to strategically match youths to treatment and services that address key needs, which in turn is intended to reduce recidivism. The results of the analysis generally suggest that matching criminogenic needs to treatment does not consistently occur in the juvenile justice systems that we studied as much as anticipated based on the underlying logic of JRNA. Case management and treatment matching is a key objective of contemporary risk and needs assessment, but these results suggest a need for more focus on this in future research and development of practice. It also requires further consideration of how risk and needs are balanced in processing and treating justice involved-youths. In general, this formal process-based modeling helps to better illustrate the manner in which different elements of measured risk and needs might impact eventual case outcomes.

Although limited some by data concerns, the follow up interviews identify some insightful relationships pertinent to how the juvenile justice process can utilize the assessment information collected early on to inform decisions that impact positive attitudes and other developmental outcomes later on—effectively breaking the relationship between risk and later poor outcomes. This is illustrated in part based on the procriminal attitudes example that was explored in order to illustrate some tentative relationships among JRNA, treatment, and different categories of youth outcomes. It is, however, that the assessment process is viewed as part of a series of sequential steps where intermediate outcomes, like change in values or prosocial efficacy, are measured and responded to strategically throughout.

Conclusion

The results of this study should help to build processes for improving the quality and use of JRNA. As a state or agency is rolling out new assessment practices, or looking to improve their

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current risk and needs assessment processes, they should consider key implementation and sustainability facilitators: careful planning that includes establishing support for the risk and needs assessment amongst a variety of stakeholders, creating realistic but detailed usage and implementation guidelines and policies and procedures, sharing information with all those who will be impacted by the use of the assessment, sufficient training and post-training support, and beneficial quality assurance practices that will help ensure the risk and needs assessment is completed correctly and used to its full potential.

The analysis of case record data across three states and dozens of agencies provide greater insight on the ways in which risk assessment information is used in practice. In some cases that use fit with the underlying logic of assessment practice (and existing research); however, in other instances the evidence that the tools were being used as intended was not as clear. The youth follow-up interview data help to reinforce the importance of focusing a portion of the discussion of JRNA on outcomes besides official recidivism. The questions asked on the interview serve both as endpoints for more developmental juvenile justice in themselves and as important leverage points in attaining positive justice-related goals (i.e., reductions in recidivism). Collectively, the findings from the study—both supportive and critical—offer some insight on how risk and needs assessment can be used as an engine to help generate better outcomes for youths and the juvenile justice agencies whom they encounter.

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Final Report Introduction and Overview

Juvenile justice system processing requires a series of discretionary decisions about youths who have become involved with juvenile courts and, subsequently, corrections agencies. Like the adult criminal justice system, juvenile courts and corrections have largely moved from reliance solely on unstructured, professional judgment to relying more on structured assessment processes—or a blend of the two (Shlonsky & Wagner, 2005)—as a precursor to making those decisions. Referring to juvenile probation systems, Wachter (2015) reports that more than two-thirds of U.S. states have now adopted standard statewide assessments and many others have regional or local assessment instruments. He goes on to mention that risk assessments are often "the foundation of evidence-based practices, enhancing efforts to treat offenders, reduce recidivism, and ultimately increase public safety." More broadly, proponents of the risk-needs-responsivity model suggest that effective treatment requires systematic assessment as a first step (Bonta, 2002). Presumably, this heightens the importance of assessment in the juvenile justice process as it can have cascading effects on a range of decisions by court and correctional personnel—and therefore on youth outcomes.

The implementation of juvenile risk and needs assessments (JRNA) and associated procedures and policies require increased attention to ensure that they are used effectively in practice. These tools frequently contribute to more systematic decision-making, but several dimensions of related policy and procedure require further examination and analysis to ensure that the processes adopted and implemented are effective, efficient, and fair when applied in the juvenile justice system. This is essential as a starting point as juvenile justice seeks to become more developmental in its approach to youths' sanctions and treatment (National Research Council, 2013; Scott & Steinberg, 2009; Sullivan, 2019).

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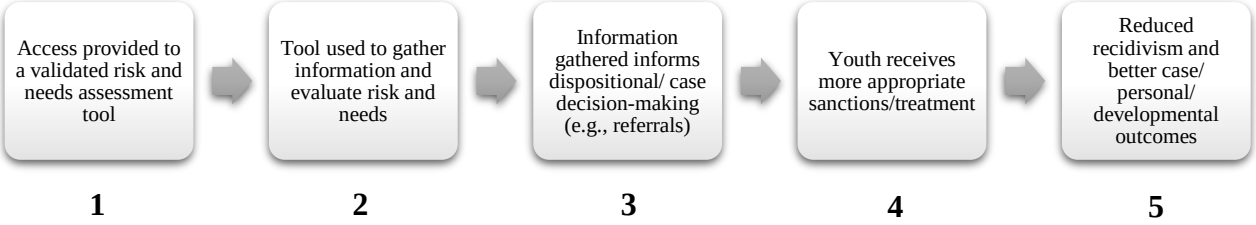
This research project builds on existing studies of JRNA, but seeks to focus more extensively on implementation and usage according to the logic of how the risk and needs assessment process is meant to work from an information-gathering and decision-making standpoint. That process assumes that practitioners (1) have access to a validated tool; (2) they accurately use this tool to gather youths' information; (3) subsequently use that information to make decisions about disposition and treatment; and, finally, (4) this process results in better juvenile justice and developmental outcomes (e.g., new referrals and placements and school and work engagement) (see Figure 1).

Figure. 1. Logic Model of Risk and Needs Assessment



This study examines these sequenced stages by collecting and analyzing data from juvenile justice personnel interviews and surveys, youths' records spanning various juvenile justice system involvement, and follow-up interviews with selected youths. Three states that have utilized the same risk and needs assessment tool, the Ohio Youth Assessment System (OYAS) (Latessa, Lovins, & Ostrowski, 2009; Lovins & Latessa, 2013): Arizona, Indiana, and Ohio were included.[1] Data were collected from four samples: (1) purposively-selected juvenile justice agencies (N = 22)[2] and personnel within them (N = 217); (2) a larger sample survey of individuals who conduct OYAS assessments or who use the information that results from the assessments (N = 1,013); (3)

[1] To protect the confidentiality of the states, counties, and sites that contributed to this research project, their names are henceforth de-identified.
[2] A previous publication (Vincent et al., 2018)stated that 23 agencies were included. During final coding checks, one individual was reassigned to a state agency affiliation as opposed to a distinct site. This did not materially affect findings presented in that research bulletin.

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a comprehensive sample of youths who had assessments conducted in selected sites between 2013 and 2017 (N = 6,222); and (4) a subsample of 131 youths who participated in detailed follow-up interviews. We then carried out various analyses to answer questions pertinent to the adoption, implementation, usage, and outcomes of JRNA.

Brief Background for Project

The Evolution of Risk and Needs Assessment. The development of risk assessments can be viewed as spanning four generations (Bonta, 1996). First generation risk assessments are clinical in nature and rely on the professional judgment of counselors and case managers to determine the offender's dangerousness, supervision level, and treatment needs (Van Voorhis & Salisbury, 2013). Attempting to reduce some of the subjectivity surrounding first generation assessments, second generation assessments are based on empirical research but are limited as they focus predominately on criminal history items. While these historical factors are predictive of recidivism, they are static (i.e. cannot be changed), which does not correspond well with intervention efforts aimed at addressing delinquent behavior (Gendreau, Little, & Goggin, 1996). Incorporating both static and dynamic (i.e., factors that can be targeted for change) factors, third generation assessments include youths' risk factors and needs. Following the logic described above, modern fourth-generation risk and needs assessments continue to examine youths' risk and needs, while also identifying responsivity factors and incorporating case management strategies to better inform intervention efforts (Andrews, Bonta, & Wormith, 2006).

The Status of JRNA. With this evolution, a variety of risk and needs assessments can now be tapped to systematically gather information on youths. Many of these assessments have been the subject of predictive validity evaluations that support their use. Validated assessments include the Youth Level of Service/Case Management Inventory—YLS/CMI (e.g., Flores & Travis, 2004), the Structured Assessment of Violence Risk in Youth—SAVRY (e.g., Childs et al., 2013), the

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Youth Assessment and Screening Instrument—YASI (e.g., Orbis Partners, 2007), and the Positive Achievement Change Tool—PACT (e.g., Barnoski, 2004). Additionally, some states and local jurisdictions have developed their own empirically-based risk and needs assessments. Examples of these tools include the Ohio Youth Assessment System—OYAS (e.g., Lovins & Latessa, 2013) and the North Carolina Assessment of Risk—NCAR (e.g., Schwalbe, Frasier, & Day, 2007).

Many of these risk tools rely—at least in part—on the "Central Eight" risk factors established by Andrews and Bonta (2010). These factors comprise juvenile justice history, personality attributes, antisocial peers, antisocial attitudes, family relationships, employment and education, and substance use. The vast majority of research in this area indicates that using measures derived from the Central Eight will improve risk prediction and facilitate effective intervention. For example, Flores and Travis' (2004) comprehensive review of the YLS/CMI found that the Central Eight were significantly related to recidivism when measured at various points in the juvenile justice system (e.g., probation, detention, and institutional commitment). Similar results were reported in other YLS/CMI studies (e.g., McGrath & Thompson, 2012), as well as research on the OYAS (Latessa et al., 2009).

In addition to the individual studies supporting the predictive validity of particular risk and needs instruments, recent meta-analyses have confirmed their value as well (e.g., Olver, Stockdale, & Wormith, 2009; Schwalbe, 2007). For example, Schwalbe's (2007) meta-analysis reviewed 42 studies that examined the predictive validity of 28 risk assessments. His findings suggested that the majority of the tools used by juvenile justice agencies were predictive of recidivism. Specifically, the overall effect size for juvenile risk assessments (r = .25) was moderate and similar to effect sizes estimated by meta-analyses of adult risk assessments (e.g., Gendreau et al., 1996).

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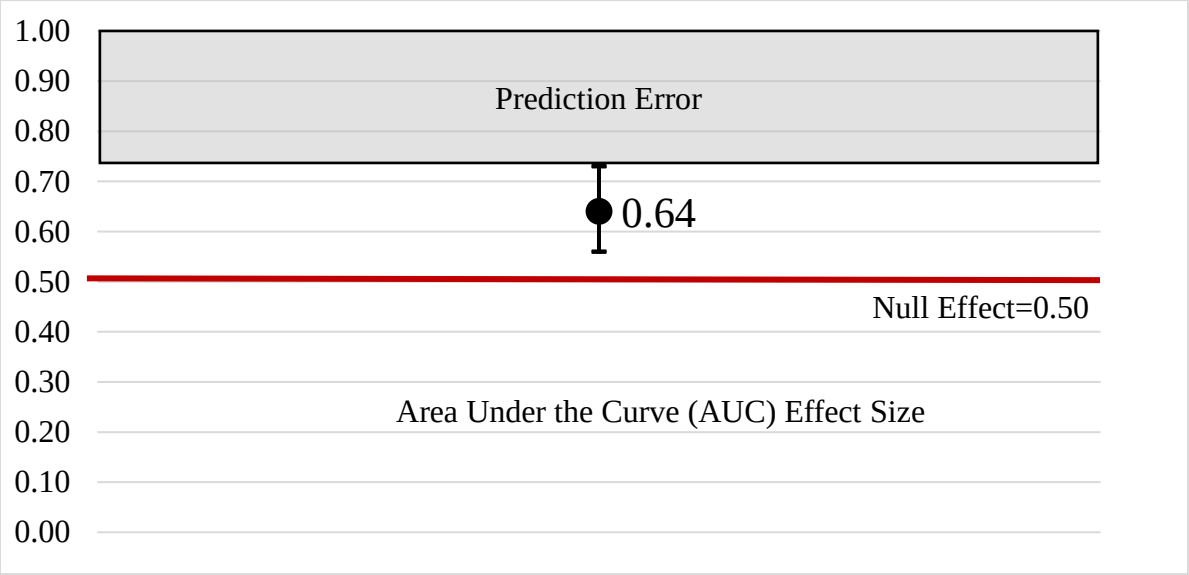
Variability in Findings. This recent work demonstrates that (1) risk assessment has evolved considerably in recent decades and (2) a variety of instruments may be useful in informing juvenile justice case decisions. Still, studies have found differences in the strength of predictive validity across *different* risk assessment tools, as well as variability across studies with the *same* instrument (e.g., Rossegger et al., 2013). As a bottom line, Schwalbe (2007) reported an "Area Under the Curve" statistic of 0.64 in his meta-analysis of predictive validity studies (see Figure 2). This suggests that validated tools predict youths' recidivism significantly better than chance (0.50), but the 0.36 proportion of missed predictions nevertheless shows that there is room for improvement in JRNA practice.

Figure 2. Summary of Average Effect and Variability in Juvenile Risk Assessments



Adapted from data in Schwalbe, C. (2007). Risk assessment for juvenile justice: A meta-analysis. *Law and Human Behavior, 31,* 449-462.

There are several possible reasons for these findings. For instance, the variation might be due to the stage of the assessment and agency involved (e.g., intake, probation agency, residential facility), the resources available to the agency conducting the assessment, the type of youths served within that agency (e.g., females vs. males, whites vs. ethnic minorities) (Andrews et al., 2011), and if the assessment is being conducted correctly. Given the variation observed across individual

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cases, agencies, juvenile justice personnel, and states, the question of "which risk and needs assessment tool is the most accurate and effective at predicting recidivism?" is not as important as "how do implementation processes and usage impact the effectiveness of risk and needs assessment in juvenile justice decision-making?"

The Importance of Implementation. Various challenges in moving research to practice have become more apparent as the juvenile and criminal justice systems have become increasingly evidence-based. Berman and Fox (2010) have compared evidence-based reforms in justice settings to new start-up businesses, which have limited probability of success. Amassing relevant research evidence is only one part of the process of effectively introducing policy to the field. And, given the challenges in even reaching that point, it surprisingly may be the easier part of the evidence-to-implementation process (Fixsen, Blase, Metz, & Van Dyke, 2009; 2013; Laub, 2016). To avoid problems in introducing such practices and stagnation following initiation, this "other half" of the process must be considered carefully in assessing any juvenile justice practice. Going a step further, while implementation in the juvenile justice system inherently brings unique obstacles (Sullivan, 2019), risk and needs assessment and their usage is perhaps more challenging still as it does not merely necessitate instituting a program or policy, but rather requires shifts in information-gathering and decision-making among personnel in the juvenile justice system. Thus, introduction of these tools must overcome natural inclinations in human judgment and decision-making (see, e.g., Bell, Raiffa, & Tversky, 1988; Tversky & Kahneman, 1974) and the study and monitoring of this implementation process is even more important than is typically the case.

The concept of *implementation* in risk and needs assessment refers to a variety of activities. These include staff training, the perceived value of the assessment by staff members and agencies, usage practices, and quality assurance processes (Vincent, Guy, & Grisso, 2012). Shortcomings of

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implementing risk and needs assessments in practice have been linked to reduced predictive validity estimates (e. g., Flores, Lowenkamp, Holsinger, & Latessa, 2006), as well as inappropriate decision-making in case management (e.g., Vincent et al., 2012). In a study of the predictive validity of the LSI-R, Flores and his colleagues (2006) reported that the predictive validity of the assessment tool was significantly associated with the fidelity of implementation in correctional agencies. That is, agencies with strong risk and needs assessment implementation processes in place (e.g., proper staff training) had better predictive validity.

Moreover, Vincent et al. (2012) found that simply training staff on the value of risk and needs assessments did not guarantee appropriate case management decision-making. Rather, establishing agency policies regarding the use of assessments in case planning was needed. This necessitates a holistic view of both the assessment tool and decision-making process that depends on it (see also, Vincent et al., 2018). Vincent and colleagues (2012) further indicated that when juvenile probation offices properly implemented risk and needs assessment, it led to a reduction in secure placement rates and use of intensive community supervision, which allowed for better resource allocation throughout the system. This early implementation research reflects the growing understanding that developing scientific knowledge, as is the case with validated risk and needs assessment, is only one half of moving research to practice to improve individual case outcomes (Fixsen et al., 2009).

Researchers have emphasized the need to more formally consider questions of implementation in the context of risk and needs assessment (e.g., Luong & Wormith, 2011; Seave, 2011; Flores et al., 2006). Given the upstream role that risk and needs assessment and classification plays in informing later aspects of effective interventions, it is essential that this gap in the research be filled, as without proper implementation, agencies "will not be able to take full advantage of

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evidence-based practices" (Seave, 2011, p. 140), which will limit possible gains in reducing youths' recidivism and promoting positive developmental outcomes. A growing body of research in other fields offers analysis and insight on the implementation process that should be useful to juvenile justice. Still there are unique features of juvenile justice processes and decisions—especially in risk and needs assessment—that warrant focused attention to improve practice and youths' outcomes.

Description of the Ohio Youth Assessment System (OYAS)

The OYAS (Latessa, Lovins, & Ostrowski, 2009; Lovins & Latessa, 2013) was developed based on the principles of effective intervention, and follows the risk, need, and responsivity (RNR) model of offender treatment (Andrews et al., 1990). It was developed by the University of Cincinnati Corrections Institute (UCCI) in conjunction with Ohio's Department of Youth Services.[3] The state requested a tool that could be used by all juvenile justice actors across the state and benefit both the youths and the state as a whole. It is unique in that it is designed to appropriately measure criminogenic risk and needs at five stages of the juvenile justice system: (1) diversion, (2) detention, (3) disposition, (4) residential, and (5) reentry. The following offers a brief description of each tool:

- ***Diversion Tool:*** The Diversion Tool is designed to assist juvenile courts in identifying youths who can be safely diverted from further formal processing in the juvenile justice system. This tool consists of 6 items and can be completed from a file review or face-to-face interview in approximately 10 minutes.

- ***Detention Tool:*** The Detention Tool is used with youths being considered for secure detention. It allows for low risk youths to remain in the community prior to court hearings. This instrument consists of 6 items and is completed through a brief face-to-face interview, which takes approximately 10 minutes.

[3] Two initial members of the research team were involved in the development and implementation of the OYAS tools, but neither contributed to the writing and analysis of the final report, its conclusions, or its recommendations. Further, the research staff for this study were not responsible for the training and implementation policies that were the central focus of this research.

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- ***Disposition Screener:*** A short six item Disposition Screener is used to quickly identify low risk youths post-adjudication. The instrument is designed to be administered through structured interview and file review. If a youth is low risk on the screener, no further assessment is needed. If a youth is moderate/high on the screener then a full Disposition Tool is recommended.

- ***Disposition Tool:*** For those youths adjudicated by the court, the Disposition Tool assesses their risk to reoffend, identifies important criminogenic needs, as well as barriers to treatment, and provides insight for case planning. It covers seven domains: criminal history, family, education/employment, prosocial skills, substance abuse/mental health/personality, peers, and antisocial attitudes.

- ***Residential Tool:*** The Residential Tool affords residential programs the ability to accurately assess the youths' level of risk and corresponding criminogenic needs. Similar to the Disposition Tool, the Residential Tool includes seven domain areas.

- ***Reentry Tool:*** The Reentry Tool reassesses youths after an extended stay in a residential program. It is based on the same domains as the Disposition and Residential Tools but is scored based on the youths' progress in programming. The Reentry Tool is used in conjunction with post-release supervision and treatment to ensure successful transition into the community.

Information needed to score each of the tools comes from the same sources. For the shorter tools (i.e., Diversion, Detention, Disposition Screener), not all elements are required): case information and juvenile justice history records, a youth self-report form, a youth interview, and collateral information sources as needed (e.g., talking with parents, teachers, or treatment providers). Once the information is collected, the tool is scored by consulting a standardized manual. The total number of points is then linked to a risk level (low, moderate, and high), which is calculated differently for males versus females. For the longer tools (i.e., Disposition, Residential and Reentry), scores and levels for each of the domains are also calculated. Tools can be completed electronically or using paper copies and hand scoring.

This system of assessment tools is comprehensive in scope and adapts to the various needs of the youths and staff responsible for decision-making, supervision, and intervention at the various stages of the juvenile justice system. Studies of the predictive validity of the OYAS have

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been encouraging. For example, several studies (e.g., Labreque & Schweitzer, 2013; Lovins & Latessa, 2013; McCafferty, 2016; McCafferty, 2013) have confirmed that using different tools at each point in the juvenile justice system can provide a more accurate and comprehensive understanding of risk and needs levels for individual youth and that assessment results can be used to facilitate more effective decision-making on the part of juvenile justice officials.

UCCI provides training in the OYAS and was responsible for training staff in the three states included in this study. A two-day in-person training with certification is required prior to being able to administer any of the OYAS tools. The two-day training includes information on the following: the principles of effective correctional intervention, actuarial assessment, the content and use of the OYAS, interviewing techniques, and hands-on practice opportunities. Specifically, trainees practice scoring the OYAS by watching multiple videos of interviews and completing individual and group scoring before reviewing scoring with the trainers. After these practice opportunities, certification includes a written and video test which involves scoring an OYAS tool based on a video of an OYAS interview. Passing these two tests requires scoring the video within three points of the "true score" (+/-) according to the OYAS scoring guide (which is available to the trainees at the time of the test), *and* scoring no more than five items incorrectly. It is important to note that all five tools are included in the two-day training, and once certified, staff are able to conduct all five tools.

In order to build internal capacity, a five-day training of trainers (ToT) is also available. These trainings permit individuals to train additional personnel at their own agencies in administering the OYAS. In order to qualify for the ToT, staff are required to have administered at least 15 to 20 assessments prior to the ToT. The first three days are spent with the UCCI trainers practicing and delivering the training material. The last two days are reserved for the ToT

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participants to deliver the OYAS training to new users. After the ToT is completed, and newly trained trainers are classified as either a lead trainer, a co-trainer, or not certified as trainer. Certification and ToT trainings were provided to the three states in this study.

Objectives and Research Questions

Risk and needs assessment research is extensive, but tends to be concentrated in certain areas, namely the relationship between risk and official records of recidivism. Nevertheless, several important questions warrant consideration to offer insight on the usage and impact of risk and needs assessment with justice-involved youths. Given the background and existing literature, this study pursued four main objectives:

1. Describe and assess risk and needs assessment usage and implementation practices at different juvenile justice decision-points (i.e., intake/diversion, detention, disposition, residential intake, and reentry), using a multi-state sample of sites at different stages of adoption, to develop recommendations on best practices in training, monitoring, and usage.

2. Assess court and programming decision-making outcomes based on variation in risk and needs assessment usage and implementation practices across agencies and states.

3. Evaluate how the implementation of risk and needs assessments across multiple stages of the juvenile justice system impacts recidivism among juvenile offenders.

4. Evaluate justice-based and developmentally relevant youths' outcomes based on variation in assessment-based decisions that reflect the usage, monitoring, and implementation of standardized risk and needs assessments.

To meet these objectives, we carried out a comprehensive, multisite study of agencies implementing the same assessment system, the OYAS, to consider agency implementation in practice and its impact on juvenile justice decisions and youths' outcomes.[4]

[4] For simplicity, we refer to the Ohio Youth Assessment System as the OYAS in the course of the report, but the secondary adopter states refer to the OYAS with their own state label.

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Overview of Research Design and Data Collection

The study comprised four separate streams of related, but distinct, data. Each of the key study components and analytic plans are described in the report where appropriate, but Figure 3 provides an overview and this section briefly describes the multi-method research plan that was used to meet the four research objectives.

We collected survey and interview data from relevant sites and personnel to *describe and assess the implementation practices each state has adopted.* In conjunction with the juvenile justice personnel data collection, we reviewed policies and procedures for implementing the OYAS to further characterize and contextualize implementation processes at multiple decision points across the three states and agencies within them. We then sampled and analyzed case records across juvenile justice decision points (e.g., diversion, disposition, reentry) and agencies (e.g., court, corrections) to link implementation and case and agency-level outcomes. This helped us to *examine how variation in implementation practices affects system-based outcomes*. Recidivism records were collected for large, stratified samples of cases in each state (N = 6,222) to *examine case outcomes relative to the variation and nature of implementation at the agency level*. The effective analytic sample sizes for case disposition and treatment matching modeling were approximately *n=4805* and *n=3584* records, respectively, due to measure availability (e.g., available recidivism data, collection of treatment information, knowledge of case disposition and outcome) and matching within records (e.g., linking assessment to disposition and recidivism records). Finally, we *evaluated developmentally-relevant youths' outcomes based on variation in system-level decisions and implementation processes*. A random subsample of cases that were assessed with an OYAS tool was drawn and those youths were then interviewed to obtain more extensive self-report, case outcome, and treatment receipt data (N = 131).

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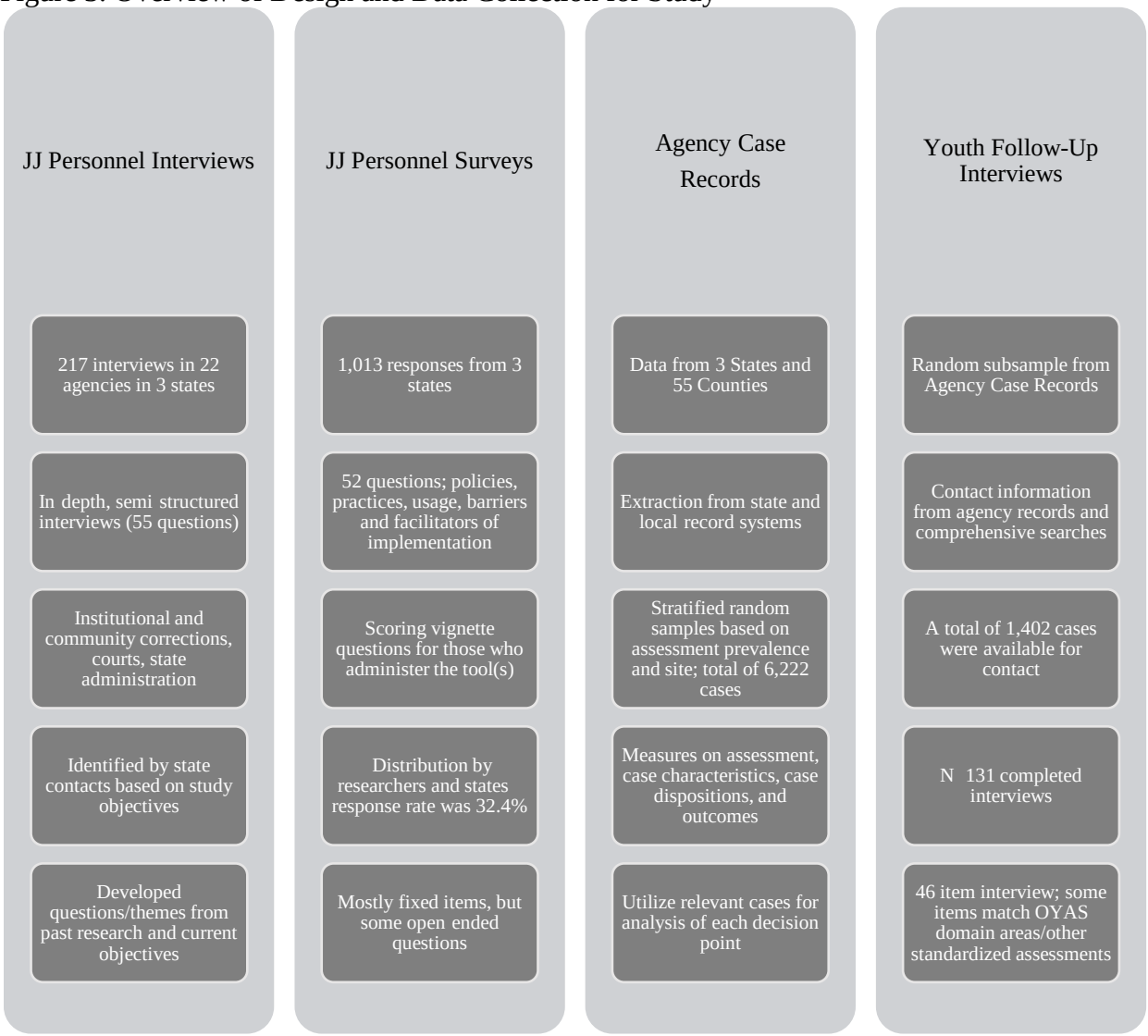
Figure 3. Overview of Design and Data Collection for Study



Overview of Report Sections and Usage Studies

This report is divided into three main substantive sections where we identify the specific methods used and results of relevant analyses for the different research objectives. Section I focuses primarily on implementation of OYAS in the three states and local agencies within those states (Objective #1) and therefore draws heavily on practitioner views based on data from juvenile justice personnel interviews and surveys. It then covers themes about interviewees' and respondents' perceptions of the OYAS and risk and needs assessment more generally, usage of the

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results of the risk and needs assessment process, views of the implementation process, and identification of facilitators or barriers in implementation and sustainability. Additionally, this section includes a usage study of the relationship between personnel support for the OYAS, and the integrity of the risk and needs assessment process.

Section II of the report focuses on multiple analyses that tap into different aspects of risk and needs assessment usage—from basic questions such as whether risk scores and levels are related to case outcomes, to the degree to which the full potential of the process is being reached in making treatment decisions. This section predominately examines case record data, but will integrate juvenile justice personnel perspectives to contextualize and extend key findings where appropriate. The second section also includes a series of substudies (i.e., usage studies) that compare the usage of risk and needs assessment across sites to the objectives that the agencies (and researchers) had in mind when first promoting the use of structured risk and needs assessment (Objective #2).

The third and fourth research objectives are covered in Section III of the report, which generally pertains to "outcomes" of the risk and needs assessment process via the decisions that are made by juvenile justice officials (Objective #3 and Objective #4). The final piece, Section IV, the summary and conclusions section, takes stock of the various findings pertinent to the research objectives. After identifying some limitations to help contextualize the findings, we present and discuss the key lessons learned from the study—focusing especially on recommendations for federal, state, and local agencies interested in improving the efficiency and effectiveness of juvenile justice decision-making and youths' outcomes.

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Section I. Implementation of Juvenile Risk and Needs Assessment: Views from Juvenile Justice Personnel

As highlighted above, implementation research in JRNA is somewhat limited in its amount and scope at this point. Consequently, documenting the perspectives of those in the field is a main objective in establishing a sense of how to best move risk and needs assessment tools and processes to practice. This is likewise beneficial in identifying facilitators or challenges in implementation. This section seeks to cover themes about personnel perceptions of the OYAS and risk and needs assessment more generally, usage of the results of the risk and needs assessment process, views of the implementation process, and identification of facilitators or barriers in implementation and sustainability. Subsequently, a substudy entitled "Support for the OYAS and Integrity in the Juvenile Risk and Needs Assessment Process" explicitly examines the relationship of personnel attitudes regarding the OYAS, and the accuracy with which they score the tool.

To describe and assess the implementation practices each state has adopted regarding the OYAS, the research team systematically collected survey and interview data from relevant sites and personnel. In addition, data on policies and procedures for implementing the OYAS was reviewed to characterize implementation processes at multiple decision points. All subsequent data and analyses in this section of the report are specific to the juvenile justice personnel interview and web-based survey portions of this study.

Development of the Interview Guide

The research team developed the semi-structured guide specifically to help answer the research questions in the proposal. Generally speaking, the goal of the juvenile justice personnel interviews was to gather information so that we could describe and assess OYAS implementation and usage practices in the three states. The goal includes identifying trends in agency policies and practices around assessment, facilitators to assessment implementation and use, and barriers to

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assessment implementation and use. These measures were created based on the general objectives of risk and needs assessment (e.g., increase consistency, facilitate assigning risk levels, resource management), the training processes involved with the assessment system used by the three states, and with prior implementation research (see, e.g., Aarons, Hurlburt, & Horwitz, 2011; Fixsen et al., 2009; Meyers, Durlak, & Wandersman, 2012).

While the interview guide was geared to fit the objectives for this study, we also consulted known sources. Some interview (and web-based survey) items and scales were modified from three sources. First, the *Survey for Probation and Parole Officers* (Hubbard, Travis, & Latessa, 2001) was used to help establish how the OYAS was being used. Second, the *Community Organizational Assessment Tool* (COAT) was used to inform themes about the planning and implementation process around JRNA (Pratt & Hernandez, 2003). Third, the *National Criminal Justice Treatment Practices Survey* (NCJTPS) (Taxman, Young, Wiersema, Rhodes, & Mitchell, 2007) helped to identify aspects of the agencies and their climate conducive to implementation and sustainability. In combination, this knowledge was used to identify and refine concepts relevant to risk and needs assessment implementation. The interview guide was drafted during team meetings and then reviewed independently by each research staff member. Research team meetings then included using the drafted guide to practice the interview for timing and flow, and to ensure that the main questions sufficiently captured needed information. Finally, the interview was piloted at the first two site visits in State 1. Feedback from the interview teams was collected and then the interview guide was finalized.

The interview guide contained 55 questions and was divided into several main areas: agency and staff characteristics (14 questions;); agency approach to assessment (12 questions;); the OYAS implementation process (10 questions;); and assessment practices (19 questions). The

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questions were predominantly open-ended (e.g., "please describe your involvement with the OYAS"). Some questions were likert scale items (e.g., "on a scale of 1 to 5, with 1 meaning completely disagree and 5 meaning completely agree, please rate your agreement with the following statement"). Further, some questions were asked to elicit a "yes," "no," or "other" set response (e.g., every meeting, occasionally, seldom, never); however, interviewers probed every response for details. For example, one question, "Are staff formally trained on the OYAS?" was followed by "Please describe the process." As a result, almost all of the items required coding for emergent themes. The full interview guide can be found in Appendix A.

Semi-Structured Interview Methods and Site Visit Process

The research team worked with state agency personnel in each of the three states to determine the specific sites to visit. This was completed in a series of meetings and communications with each state, either in-person, over the phone, via email, or a combination thereof. The research team worked with the state agency personnel to ensure variation in the site selection process. First, in each state, we requested a mix of different types of agencies so we could see how the full suite of OYAS tools was being implemented and also to understand the potential varying experiences of those at different stages of the process and those at different types of juvenile justice agencies. In each state, we ensured that the state level agencies/actors were included as they frequently were involved in setting policy and championed adoption and implementation. We also ensured that there was at least one residential institution and one parole location in each state. The remaining sites were reserved for county-level agencies that included the juvenile court, probation, and in some cases, detention or secure treatment centers. Second, we selected a mix of sites concerning the use, experience, and support of the tool and assessment process. We specifically worked with the state agency personnel to include both early and late adopters in the sample. Third, we ensured that we captured sites in each state that are considered

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urban, suburban, and rural, which also ensured variety in the size of the site (i.e., the number of staff employed, as well as the number of youths served by a given agency). After each site was identified, the state agency personnel linked the research team to a main point of contact at the site. Once the connection was made, a phone call was scheduled to explain the study and facilitate participation. All of the sites that were identified agreed to participate in the study.[5]

During the call, the research team asked the contact to describe the site, the staff, and the use of the OYAS in the organization. During this call and subsequent calls and emails, staff were purposely selected for interviews. Staff that conducted the assessments, used the assessment results to make decisions, or used the OYAS information in their daily work were prioritized for interviews. In smaller sites, all staff that fell into this category were interviewed. In larger sites, however, we relied on the contact to identify staff to interview. In these instances, the research team asked the site to ensure sufficient participation in different ways. To illustrate, for positions that were unique or specific to the OYAS, we made sure to interview those individuals. For staff titles that had multiple positions, we worked with the site contact to interview a representative cross section of staff members who had the same job title. For example, if there were six units in probation department, we interviewed a mix of managers, supervisors, and line staff across the units. In courts with multiple juvenile judges and magistrates, we interviewed at least one from each category. In treatment programs that had multiple clinicians, we interviewed approximately half of them. Through this process, we ensured that staff in different roles and with varying exposure to the assessment were interviewed—so as to gather responses from the spectrum of experiences and routine exposure to the assessment. The variety of site staff that were interviewed

[5] This is likely due in part to the purposive nature of the sampling strategy as well the guidance of state-level officials with respect to which sites may be best for the study. Consequently, there may be some selection artifacts in the participating sites. Still, the sites required varying degrees of negotiation, including questions-and-response from the research team, before final permission was granted.

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can be seen in Table 1.1. Interviews with relevant juvenile justice personnel were semi-structured and consisted of questions about a series of topics discussed in a conversational fashion (Patton, 2001). Depending upon the role of the staff being interviewed, interviews lasted 30 minutes to 120 hours, with the majority of interviews falling within the 45 to 60 minute range.

Site Visits. In addition to the one-on-one, in-person interviews, reviews of relevant documents and policies were conducted during the on-site visits by research staff who had training in these forms of data collection. Site visits ranged from one to three days in length. The size of the teams varied from two to five research staff. Table 1.1 outlines the characteristics of the interview sample, including the state where interviews were conducted, the agency name and type (e.g., court, probation, detention, state), number of interviews conducted at a given site, and the types of staff that were interviewed. The state and site names have been given pseudonyms (e.g., State 1, State 2, State, 3, Site A, Site B, Site AA, Site BB, Site AAA, Site BBB) to protect the confidentiality of states, agencies, and personnel interviewed.

Table 1.1. Interview Sample Description: Agency Types, Number of Interviews, and Staff Titles

State	Site	Agency Type	Number of Interviews	Types of Staff Interviewed
State 1 (*n* = 71)	Site A	State	4	Deputy Director of Facility Operations and Programs Director of Parole Quality Improvement Administrator Management Analyst
	Site B	Community Correctional Facility	4	Director Clinical Coordinator Residential Care Staff/Training Coordinator Residential Care Supervisor
	Site C	Court Probation Detention Family Resource Center	23	Judges/Magistrates Defense Attorneys and Prosecutors Chief Probation Officer Court Intake Officers/Supervisors Placement Coordinator Special Programs Administrator Probation Officers/Supervisors Case Managers/Supervisors Aftercare Reentry Specialist Detention Officers/Supervisors

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Table 1.1. Interview Sample Description: Agency Types, Number of Interviews, and Staff Titles

State	Site	Agency Type	Number of Interviews	Types of Staff Interviewed
				Mental Health Social Worker
	Site D	Court Probation Detention Intervention Center Residential Treatment Center	14	Magistrate Probation Officers/Supervisors Grant Coordinator/Planner Clinical Intake Coordinator Case Manager Treatment Coordinator Assessment Specialists Mentoring Coordinator Family Specialists
	Site E	Parole Residential Treatment Center	8	Regional Administrator Regional Director Probation Officers/Supervisors Operations Manager
	Site F	Court Probation	9	Judge/Magistrate Court Director Juvenile Probation Director Intake and Assessment Officers Probation Officers Diversion Officers
	Site G	Institution	9	Superintendent Deputy Superintendent of Programs Psychology Assistants/Supervisors Social Workers/Supervisor Unit Manager Youth Specialist
State 2 (*n* = 45)	Site AA	Institution	5	Program Director Psychiatric Social Service Specialists Intake Specialists
	Site BB	Intake Facility	4	Program Director Psychiatric Social Service Specialists Intake Specialists
	Site CC	State	4	Executive Director Program Director Reintegration Specialists (i.e. parole officers)
	Site DD	Court Probation Detention Reporting Center	14	Judge Magistrate Chief PO/Superintendent Assistant Chief PO Probation Officers/Supervisors
	Site EE	State	4	Executive Director Deputy Director Staff Attorney OYAS Trainer

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Table 1.1. Interview Sample Description: Agency Types, Number of Interviews, and Staff Titles

State	Site	Agency Type	Number of Interviews	Types of Staff Interviewed
	Site FF	Court Probation Treatment	8	Deputy Chief Probation Officer Intake Supervisor Surveillance Officer Probation Officers/Supervisors Youth Services Executive Director Program Coordinator Clinical Director Clinical Case Manager
	Site GG	Court Community Corrections	6	Judge Director of Court Services Juvenile Services Coordinator Probation Officers/Supervisors Administrative Assistant
State 3 (*n* = 101)	Site AAA	State	2	Juvenile Automation Manager Operations and Budget Manager
	Site BBB	State	3	Community Corrections Bureau Administrator Parole Administrator Research, Development, and Planning Administrator
	Site CCC	Parole	5	Parole Supervisor Parole Officers Family Services Coordinator
	Site DDD	Intake Facility	5	Reentry Chief Administrator Youth Program Officers Treatment Psychologist Assessment and Classification Coordinator
	Site EEE	Court Probation Detention	12	Judge Chief Probation Officer Treatment Coordinator Detention Services Director Detention Officers Lead Deputy Probation Officer Probation Officers/Supervisors Intake Probation Officer Diversion Officer
	Site FFF	Court Probation Detention	18	Director Division Director Probation Officers/Supervisors Intake Officer Pre-Disposition Report Writer Family Court Coordinator Director of Youth Justice Center Judge

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Table 1.1. Interview Sample Description: Agency Types, Number of Interviews, and Staff Titles

State	Site	Agency Type	Number of Interviews	Types of Staff Interviewed
	Site GGG	Court Probation Detention	13	Judge Director Probation Officers/Supervisors Diversion Officer
	Site HHH	Court Probation Detention	43	Chief Probation Officer Research and Planning Director Management Analyst Staff Development Officer Probation Officers/Supervisors Treatment Officers Surveillance Officers Diversion Officers Judges/Commissioners Defense Attorneys and Prosecutors Public Advocate

Semi-Structured Interview Notes and Analytic Process. As shown in Table 1.1, between June 23, 2015 and September 15, 2016 the University of Cincinnati research team met with 22 different agencies and conducted a total of 217 semi-structured interviews throughout State 1, State 2, and State 3. These data, along with state and agency documents (e.g. supervision standards, risk and needs assessment policies at the local and state level, OYAS-specific practice manuals), were analyzed in order to identify trends in agency policies and practices around assessment, facilitators to assessment implementation and use, and barriers to assessment implementation and use. The analysis took place in four phases, beginning with interviewing. The three subsequent phases analyzed data and reported findings at the site level, the state level, and overall with the last phase being represented by the current report. Those phases are summarized in Figure 1.1.

During phase one of the analysis, research staff recorded detailed notes on interview responses (tape-recording was not used). Interviews were given an ID number, scanned, transcribed, and aggregated into one Excel document on a secure server for further review. Transcription occurred as soon after the interviewing process as possible. This generally occurred within eight weeks or sooner—depending on the number of interviews associated with a particular

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site visit. The original interviewer was asked to resolve any discrepancies during the transcription process. The Excel file was then uploaded into QDA Miner 5 software for qualitative analysis. Following a grounded theory approach (Corbin & Strauss, 2008), the research team reviewed every open-ended question response individually and assigned codes to words and phrases and grouped them accordingly as patterns emerged. Codes were created inductively and assigned based on the meaning of the text, rather than on the frequency of characters/words (i.e., latent content). Lastly, the interviews were also uploaded into SPSS for quantitative analysis of the close-ended, standardized questions (i.e., rating scales, or "yes", "no", or "unsure" responses).

In phase two, staff grouped data into site-level reports, paying particular attention to trends or common features that generally define assessment policies, practices, and use, as well as those that are markers of implementation facilitators, barriers, or current or previous processes. Representative quotes and data clusters were used to illustrate and contextualize the key themes within this report and in subsequent reports. Grouping data facilitated some basic quantification of trends across and within sites (e.g., a certain percentage of interviewees made reference to a particular "limitation" or "strength" of the OYAS). These site-level reports were independently reviewed by all of the staff who conducted personnel interviews at the site. Staff feedback from independent review was collected and integrated into the site-level reports. The key themes in these reports provided structure for the descriptive analysis framework for subsequent reports. This process also identified relevant themes and observations for further interrogation in later analyses.

In phase three, themes identified across site-level reports were conceptualized into state-level reports, illustrated by representative quotes and data clusters. State-level reports were independently reviewed by four to five staff members, those of whom had participated in the initial

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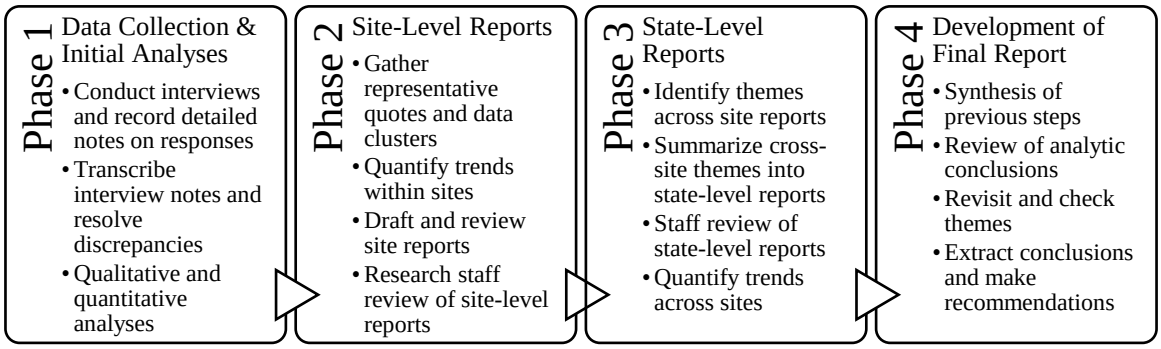
data collection phase and/or had reviewed the site-level reports. Staff feedback was collected and integrated into state-level reports.

In the fourth and final phase of the qualitative data analysis process, the findings from each state-level report were compared and summarized here. This section of the final report discusses the overall findings in order to address the three research objectives within the context of the larger research project. Those sections of each report were also independently reviewed by the same staff members, those of whom had participated in the initial data collection phase and/or had reviewed the site- and state-level reports, and their feedback was integrated into this report. This included revisiting key themes to double check consistency and examples before they were used to reach conclusions about perceptions of risk and needs assessment use and implementation, obstacles to use and implementation, and facilitators of use and implementation. These, coupled with the results of the web-based survey (discussed below), led to a majority of the recommendations developed later in the report. A summary of the phases of the analytic process for the interview data is provided in Figure 1.1 below.

Figure 1.1. Phases of the Analytic Process for the Interview Data



Juvenile Justice Personnel Web-Based Surveys

In order to capture information about the use of the OYAS from a larger, more generalizable sample, a web-based survey on assessment use and practices was distributed to staff who were not included in the interview sample. The sample for the web-based survey contained

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individuals who administer the assessment and/or use the assessment results to inform decisions regarding case disposition and treatment. The lists of individuals were generated by the state agencies in each of the three states and came from two primary sources: those individuals who were trained to conduct the OYAS assessments and those who were asked to use the information generated from the assessments. The sampling frame for the web-based survey included a variety of juvenile justice personnel (e.g., judges, supervisors, probation officers, case managers, treatment staff) across different types of agencies (e.g., secure detention or treatment facilities, probation and parole agencies, community-based service providers, and court-based settings).[6]

The web-based survey contained items regarding assessment policies, practices, and usage that may serve as facilitators or barriers to implementation. There was a total of 52 items on the survey, but the number of questions answered depended on the respondent's role in the agency and connection to the OYAS. Skip patterns were programmed into the survey to streamline items that did not apply to a respondent. For example, those who indicated that they personally administer the assessments were asked to complete more items than those who indicated they do not administer the assessments. There were four sections of the survey, which included 1) general questions concerning assessment use and practices, 2) implementing the OYAS, 3) applying the assessment information (1 randomly assigned scoring vignette), and 4) staff demographic information. The complete survey can be found in Appendix B.

The third section of survey, labeled "Applying the Assessment," asked staff who indicated that they administer the assessment to complete one of three randomly-allocated vignettes. These were scoring vignettes based on the *Juvenile Justice History* (2 items), *Peers and Social Support Network* (6 items), and *Pro-Social Skills* (3 items) assessment domains from the Disposition Tool

[6] Judges and magistrates were not sent the survey and as such did not participate in the web-based survey in State 3. However, judges and magistrates did participate in State 2 and State 1.

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(see Appendix B for a list of the vignettes). A vignette was selected using the randomization function in Qualtrics. If a respondent answered "Yes" to the item, "Do you administer any of the assessment instruments?," one of the three vignettes was presented to the respondent, with all three vignettes having an equal chance of being selected. In each vignette, respondents were asked to read a hypothetical case and score out the vignette. A link to the scoring guide was provided in the survey and the scoring items relevant to the vignette were listed. These assigned vignettes were identical to some of those used in OYAS training procedures.

The survey was administered through Qualtrics, a well-established online survey development platform. Survey distribution varied: sometimes the state agency sent out an email with the anonymous survey links and sometimes University of Cincinnati research staff distributed the anonymous survey links through the Qualtrics system. Respondents included individuals who were certified in the OYAS, OYAS trainers, and relevant stakeholders. Those individuals who were interviewed during the site visits were not asked to participate in survey. After the release of the survey, a first reminder was sent out two weeks later. A second and final reminder was sent out four weeks after the survey release date that identified the closing date for the survey as six weeks after the survey release. Out of a total of 3,125 possible participants, 1,013 juvenile justice personnel completed the survey, resulting in a 32.4% response rate.[7]

These data were downloaded directly from the Qualtrics platform into SPSS (V.23) for analysis. In contrast to the interview data analysis, all closed *and* open-ended questions for the survey data were analyzed in SPSS due to the sheer size of the sample (N = 1,013). However, the same inductive coding process using grounded theory (Corbin & Strauss, 2008) was used to

[7] During the survey administration, the streamlined judges and magistrates web-based survey was inadvertently sent to a quarter of the State 2 OYAS administrator sample. Therefore, potentially 47 individuals in State 2 who administer the OYAS received that link, and therefore answered fewer questions and were not prompted to score a vignette.

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analyze the open-ended questions of interest. For this reason, the results for some of the open-ended questions are displayed somewhat uniquely across the interview and survey samples.

Interview and Web-Based Survey Overlap. Throughout this section, key findings from the interviews and web-based surveys are presented. While most of the items on the interviews and surveys are unique, 14 questions overlap. These questions targeted agency-level information on usage practices (e.g., override practices), quality assurance processes, and respondent attitudes toward and experiences with the OYAS and its automated system. Where the questions overlap, we explore similarities and differences in responses between the interview and web-based survey samples. In the following section, interview and survey sample personnel job characteristics are listed and discussed in brief to set the context for the subsequent results sections. Information pertinent to state context for the implementation of the OYAS is also presented in the following section. The overlapping questions are listed explicitly, and their results are compared between the interview and survey samples in the "Integrated Analysis" section of this report, which also includes a thorough consideration of the implications for these results within and across the samples.

Descriptive Statistics and State-Specific Characteristics

The juvenile justice personnel had varying degrees of professional experience, and worked in a number of unique juvenile court, correctional, and administrative settings. They varied in their job tasks and titles, both within and between the larger state context. These characteristics, along with the differences in assessment implementation across agencies and states, likely impacted their usage and perceptions of risk and needs assessments generally, and more specifically, the OYAS. The following sections describe the agency settings in which the personnel in the interview and web-based survey samples worked, their job classifications and titles, tenure in the field, as well as their familiarity with the OYAS. Together, these observations inform the analysis by providing

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the context in which the personnel interacted with the OYAS, and therefore establishes the baseline conditions in which the OYAS has been implemented in the three states.

Agency Setting. The juvenile justice personnel agency settings, displayed in Table 1.2, fell into one of six categories: court, probation, parole, correctional/secure treatment facility, state, or "other." While the first four categories are somewhat intuitive, the fifth category, "state," indicates a statewide administrative agency, often responsible for selecting the OYAS as a risk and needs assessment tool and planning its broader implementation. Categories were designated based on the setting of the agency where an interviewee was employed or as indicated by the respondent.[8]

The interview sample has its own unique distribution of agency settings. Notably, about half (48.4%) of the interviewees worked in a probation setting. This fits with the court records data that are presented subsequently in the larger report which contain a high prevalence of Disposition Tool assessments, as well as a pattern seen more generally in terms of where JRNA tend to be conducted (Wachter, 2015). Therefore, results from the interview sample reflect the responses given by probation personnel more so than court, parole, correctional/secure treatment facility, or state personnel. With the next most common agency setting being correctional/secure treatment facilities (at 20.3%), the vast majority of interviewees worked in settings responsible for processing delinquency cases and making disposition and placement decisions, supervision and custody, case planning, and delivery of direct services. State-level interviewees were among the least common job settings, at 8.3 percent. As these individuals played a role in the selection of the OYAS and the planning/oversight of its statewide implementation, they offered a unique perspective that has been drawn out for emphasis periodically throughout the results. However,

[8] In the interest of anonymity, agency-specific information was not collected for the web-based survey sample. Therefore, their agency settings were approximated according to their job title, as well as any other information provided in the survey responses (e.g., for someone with a Probation Officer job title, it was assumed that they worked in a probation agency setting).

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this perspective also suggests a somewhat "removed" position from frontline implementation of the OYAS, which some interviewees have suggested is an impediment to their assisting agencies in troubleshooting.

The distribution of agency settings for the interviewees changes slightly when analyzing the data by state (Table 1.2). State 2 had the lowest parole agency representation.[9] State 3 had about three times the number of probation interviewees than State 1, and about 20 percent more than State 2. This is a function of the fact that one agency in State 3 was the largest county across all of the states to be included in the interview site selection. State 1 had a higher proportion of correctional/secure treatment facility interviewees than State 2 or State 3, at about 31 percent. This was due to the fact that two different types of state institutions were selected as interview sites in State 1. While about one-quarter of State 1 interviewees worked in a court setting, only 8.9 percent of State 2 interviewees were in a court setting—due to county agencies being referred to as juvenile justice and community corrections agencies. These unique distributions at the state level undoubtedly influenced the interviewees' responses, which will be discussed as applicable throughout.

The web-based survey sample has its own distribution of agency settings, which, like the interview data, largely fall in line with trends regarding where JRNA tends to occur. Probation was the most common job setting (59.3% of the sample), and "other" was the second most common (15.7%). The "other" job setting category had an inflated frequency due to the nature of the data. Since the research team did not know the name of an agency a respondent was from,[10] respondents were given pre-set job titles to choose from, as well as an "other" option. When "other" was

[9] In State 2, only one individual from parole was interviewed, as the OYAS is conducted on each youth prior to their release from a residential facility and youths do not typically remain on parole long enough for a reassessment.

[10]This was a further layer of protection to ensure confidentiality to participants.

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selected, the research team determined the job setting from the provided job titles. However, some responses were not specific enough to estimate the setting. When analyzing the survey sample by state, probation remained the most common setting for all three states, though State 3 had a higher proportion of probation-based personnel than State 2 or State 1 (76%, 69.2%, and 40.4%, respectively). Combining the interview and survey samples, probation was the most common job setting, and the perceptions of the OYAS from personnel in this setting are more represented than those from court, state, parole, correctional/secure treatment, or "other" settings. However, this overrepresentation is to be expected since probation officers are likely the most common job type to administer the assessment in juvenile justice systems.

Job Title. Interviewees were asked to provide their job title and basic duties, which resulted in a long and varied list. The research team used an inductive coding process to collapse the interviewee-provided job titles into those seen in Table 1.2. Because of this inductive process, the job titles for the interview and survey samples differed in their categorization and specificity. For example, all job titles in the interview sample containing "Director" that were not explicitly related to treatment, probation, parole, or detention were combined into the "Non-Treatment Director/Executive Director" category (4.1% of the sample). In addition, all job titles containing "Administrator" (e.g., Regional Administrator, Special Programs Administrator, Quality Improvement Administrator) were collapsed into the "Administrator" category (6% of the sample). For clarity, this category captured those in an "administrative" role, and does not represent those interviewees who administer the OYAS as part of their job duties. That information was captured subsequently under "Proximity to the OYAS", and is explored more thoroughly in the "Web-Based Survey Results" section. Moving forward, all references to "administrative" staff refer to their

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general role within the agency, and not to whether they administer the OYAS. Personnel who administered the OYAS are referred to as "OYAS administrators."

Though the regular duties of the personnel within each job title likely differed to a degree, the main function of their role was captured by the category. In the event that an interviewee's given job title was unclear, the research team looked to the description of their daily duties before making a final designation. Table 1.2 shows that the highest proportion of interviewees were Probation Officers (35.9% of the sample) or Probation Supervisors (11.1% of the sample). In addition, there was a notable proportion of Non-Supervisory Treatment Staff (13.8% of the sample). When analyzing job titles in the interview sample by state, State 1 had a larger proportion of Administrators (8.5%), parole representatives (including Officers and Supervisors, 5.6%), and Non-Supervisory Treatment Staff (22.5%), and a smaller proportion of Probation Officers (18.3%) than the other two states. State 2 had the largest proportion of Chief Probation Officers (8.8%), Probation Supervisors (13.3%), and Judges/Magistrates/Attorneys. Lastly, State 3 had the largest proportion of Probation Officers (45.5%).

Unlike the interview sample, the web-based survey respondents were provided eleven options from which they were able to select their job title: State-Level Administrator, Judge/Magistrate, Supervisor, Intake Officer/Intake Staff, Unit Manager, Parole Officer, Detention Officer, Case Manager, Court Administrator, Probation Officer, and Other. Those who selected "Other" were prompted to manually list their job title, and these job titles were examined closely to determine their fit in one of the pre-designated categories. As shown in Table 1.2, Probation Officer was the most common job title (60.2% of the full sample), followed by Supervisor (General) at 13.8%. This category captured anyone who worked in a supervisor capacity, and was different than the supervisor categories developed within the interview data, which had more

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detail. In Table 1.2, a dash (-) represents a job title that did not apply to that sample. For example, as survey respondents did not have the option to specify which type of supervisor they were (e.g., probation, parole, detention), these rows contain a dash (-) in the survey columns. This is different from cells that contain a value of zero, which indicates that a given job title was absent from the sample. This demarcation applies to all of the fields in Table 1.2.

When analyzing the survey sample job titles by state, Probation Officer remained the most common in all three states. The State 3 subsample had the highest proportion of Probation Officers when compared to the State 2 and State 1 (72.7%, 72%, and 42.9% of the sample, respectively). The Supervisor (General) job title was also common, but did not exceed 16 percent in any of the three state samples. Unlike in the interview data, "Other" was a common job title in the survey data, as survey respondents often elected to manually insert their job title, rather than choose from a pre-designated list. Some examples of "Other" job titles included: Research Analyst, IT Representative, Program Manager, and Compliance Coordinator.

Job Classification. The juvenile justice personnel held positions in various locations, and within each location, unique job classifications. In this context, the variable "job classification" differs from "job title" in that it represents the function, or "type" of day-to-day role the personnel fulfilled in their agency. For the interviews, these classifications were derived inductively by extracting job duties from the interviewee-provided job titles and descriptions. These job duties were then organized into broad groups that represent interviewees with similar job roles across agencies. For the surveys, the pre-designated job titles were collapsed into job classification categories. However, as these job titles did not lend themselves to designating frontline staff, we created a proxy measure to represent this category of job classification. All respondents who indicated that they a) carried a caseload, and/or b) administered the OYAS were grouped into the

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"frontline" staff classification in the survey sample. The final job classification categories for both the interviews and surveys included administrator/director, judge/magistrate/attorney, frontline staff, supervisor/manager, and other.[11] As relevant throughout the report, the data were analyzed according to job classification. This was done in order to draw out important, meaningful distinctions in the results, which helped to give context, as well as inform the recommendations. For example, in the interview results, the overall level of satisfaction with the OYAS was analyzed by the frontline job classification with the hypothesis that frontline staff, having more proximity to the OYAS, would express stronger feelings of satisfaction or dissatisfaction with the OYAS.

First, the administrator/director classification included those who were likely the most removed from the day-to-day work with youths. These were the people at the state, county, and agency level who made such "big-picture" decisions as adopting a risk and needs assessment, who may have created and enforced its policies and procedures, coordinated training and quality improvement efforts, or tracked assessment data. As illustrated in Table 1.2, the State 1 interview and survey samples had a larger portion of administrators/directors than State 2 or State 3 (about 12% of the full State 1 sample). Therefore, responses from the State 1 reflected the values and opinions of this group more than those in the other two states. The administrator/director job classification was one of the less common job classifications within the survey data due to a difference in sampling strategy (5.7% of the sample). Whereas the interview sample was purposive in nature (i.e., the interviews targeted more of the "champions" of the OYAS, often including administrators and those in leadership positions at the county and state level), the survey sample was meant to capture more of the variation within the juvenile justice personnel population. This

[11] Only one interviewee was classified in the "other" job classification. This individual was a [non-officer] probation staff member who conducted data entry for OYAS assessments and reported this information to the state office. Therefore, this job title could not be accurately coded into any of the existing categories. There was, however, a higher proportion of "other" job classifications in the survey sample due to the anonymous nature of the data.

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difference in sampling strategy between the interviews and surveys is noted where relevant.

The next classification, judge/magistrate/attorney, had more direct exposure to the youths than those personnel in the administrator/director classification. While these were not the individuals tasked with administering the OYAS, they likely came into daily contact with youths (in a court setting), and may have informed some of their decision-making according to risk and/or need level as determined by the OYAS. As seen in Table 1.2, judges/magistrates/attorneys made up nearly 10 percent of the interview sample, and were distributed relatively evenly across the three states (9.9% in State 1, 9.9% in State 3, and 8.9% in State 2). This group made up less of the survey sample, at about 5.7 percent. This was due in part to the fact that judges and magistrates did not participate in the survey in State 3.

The frontline staff classification was assigned to those whose main job function was to work directly with youths in service provision, whether through treatment or supervision. Many of these individuals carried a caseload, and/or administered the OYAS, though it is important to note that frontline staff did not *necessarily* administer the OYAS. Even so, they were typically aware of the OYAS results (e.g., risk level and perhaps criminogenic and non-criminogenic needs), and were tasked with using this information in various ways, such as managing their caseloads by creating care plans or making referrals based on the OYAS results. This distinction is important because these personnel have likely had the most intimate experience with the OYAS, making them more keenly aware of the micro-level strengths or limitations of risk and needs assessment than personnel in other job classifications. In the same vein, these personnel may also have had less awareness of the "big picture" strengths, limitations, and usage of a risk and needs assessment.

In the interview data, the State 3 subsample had the largest portion of frontline personnel, at 61.4 percent. About half of the State 1 and State 2 interview samples were frontline staff. In the

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survey data, the proportion of frontline staff was much higher (roughly 72%). State 2 had the highest portion of frontline personnel, though it was comparable to State 3 (78.3% and 77.1% of the samples, respectively). As "frontline" was the most common job classification in both the interview and survey samples, it is important to note that their values, experiences, and opinions are the most represented throughout the report.

The last classification was supervisor/manager. These interviewees were the "middle-managers" of the sample, and also tasked with supervising a team of frontline staff. They were also often the staff that had the most familiarity with the OYAS policies and procedures, and some of these supervisors/managers served as OYAS trainers. As such, these personnel had a close understanding of the role of administrators/directors, as well as the frontline staff they supervised. In addition, they worked closely with youths and performed some of the same tasks as frontline staff. In the interview sample, one in five were supervisors/managers, though State 2 and State 1 had a larger proportion than State 3 (24.4%, 22.5%, and 17.8%, respectively). This was the second most common job classification next to line staff. In the survey sample, supervisors/managers made up about 10 percent of the sample and were distributed relatively evenly across the three states.

Proximity to the OYAS. Several items on the interview guide and web-based survey gauged personnel familiarity with and proximity to the OYAS.[12] The research team generally defined proximity in terms of staff members' degree of assessment usage in routine practice. For example, some personnel (e.g., judges/magistrates) may have seen the scores from the assessment during disposition procedures, but perhaps have not engaged with it like a probation officer who was responsible for conducting case investigations or who personally administered the OYAS.

[12] See Q39 under Youth Assessment Practices, and Q36 under Implementing the OYAS in Appendix A.

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Similarly, some personnel used the automated system even if they did not personally administer the OYAS, sometimes in a supervisory capacity or for training purposes. Some of these individuals may have received OYAS information and used it in case planning or the provision of services.

Table 1.2 shows that, while a small proportion of the interview sample were OYAS trainers or coordinators for their respective agencies (4.1% of the sample), a larger portion administered one or more of the tools as a part of their daily job function (54.4% of the sample). About 61 percent used the online automated system to track OYAS information, including merging information from previous assessments, setting case plan goals, and generating youths' progress reports. This automated system is meant to be the information management component of the OYAS system where results are recorded and stored, and both individual and group/agency-level reports are generated from this system. Personnel perceptions of the strengths, limitations, and overall implementation of the automated system is discussed separately in these results.

State 1 had a higher proportion of interviewees who personally administered the OYAS (60.6% of the sample), compared to about 55 percent for State 3 and 42 percent for State 2. Whereas all three states had a similar proportion of OYAS trainers or coordinators, there was more variation in whether interviewees used the automated OYAS system. State 1 had a lower portion of interviewees who used the automated system, at about 64 percent. By contrast, between 78 to 82 percent of State 3 and State 2 interviewees used the automated OYAS system.

The survey sample had a slightly different distribution of proximity relative to the OYAS from the interview sample, as evidenced in Table 1.2. Approximately two-thirds of the survey sample administered the OYAS and/or used its automated system. State 2 had a higher proportion of OYAS administrators (83.7% of the sample), compared to 67.4 percent in State 3, and 72.6 percent in State 1. Consequently, State 2 also had a higher proportion of personnel who used the

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automated system (84% of the sample). These results suggest that State 2 survey respondents, due to their close proximity to the OYAS, may be more intimately familiar with its processes, and its strengths and limitations than State 3 or State 1 survey respondents.

Data were not collected on whether the survey respondents were OYAS trainers or coordinators and this information could not be estimated. Similarly, survey respondents did not have the option of responding "unsure" to survey items or prompts from interviews (as did the interview sample); therefore, any uncertainty may have manifested in skipping the question, thus reducing response rates for certain items.

Job Tenure. In Table 1.2, job tenure represents the number of years the personnel estimated that they have worked in their current agency/facility. This did not necessarily represent their time in the field of juvenile justice, which may have exceeded the time in their current agency/facility. Therefore, job tenure in this context represents a conservative estimate of the interviewees' and respondents' time spent working in the juvenile justice field.

Job tenure for the interview sample ranged from one year to 42 years, (mean [$\bar{x}$]= 13.3, standard deviation [*sd*] = 8.25). The standard deviation value suggests that there was a moderate amount of variation in job tenure, and that the majority (about 70%) of the sample worked at their agencies between five and 21 years. State 1 (N = 71) interviewees' job tenure ranged from one to 38 years ($\bar{x}$ = 11.2, *sd* = 8.7), State 2 (N = 45) interviewees' job tenure ranged from one to 42 years ($\bar{x}$ = 12.7, *sd* = 8.3), and State 3 (N = 99) interviewees' job tenure ranged from one to 30 years ($\bar{x}$ = 15.0, *sd* = 7.6). A one-way analysis of variance (ANOVA) revealed that State 3 interviewees had a significantly longer average job tenure than State 1 or State 2, also with less variation (F = 4.747, df = 2, $p < .05$).

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Job tenure for the survey sample ranged from zero (i.e., in the field for less than one year)[13] to 40 years ($\bar{x}$ = 13.9 years, *sd* = 8.5). Differences in average job tenure between the interview and survey samples was non-significant. The State 1 survey subsample job tenure ranged from zero to 40 years, with the highest average job tenure of the three states ($\bar{x}$ = 14.2, *sd* = 8.8). The State 2 survey subsample job tenure ranged from zero to 40 years, and had the lowest average job tenure, with the highest amount of variation in responses ($\bar{x}$ = 13.3, *sd* = 9.2). Lastly, the State 3 survey subsample job tenure ranged from zero to 34 years, and had a mean that fell in between State 1 and State 2 ($\bar{x}$ = 14.0, *sd* = 7.0). These differences in average job tenure between the states in the survey sample were non-significant. However, it is accurate to suggest that on average, State 1 respondents worked at their agencies/facilities for longer than State 2 or State 3 respondents. This length of experience may have impacted their perceptions of the OYAS and of risk and needs assessments in general, having potentially been employed in the juvenile justice field prior to the wide adoption and application of risk and needs assessments. Personnel with longer job tenure may also have been exposed to a wider array of risk and needs assessment tools and implementation experiences over the years. These conclusions could potentially be applied to any personnel who have worked in an agency/facility for an extended period of time.

Table 1.2 contains the descriptive statistics for agency setting, job title, job classification, proximity to the OYAS, and job tenure for the interview and survey samples in each state. Note that the sample size decreased with questions that did not apply to some personnel. For example, if an interviewee or survey respondent indicated that they did not administer the OYAS or use its information, then the research team may not have asked if they use the OYAS automated system (an item which has a lower response rate than the others).

[13] Personnel with little on the job experience were most likely not selected for the interviews, which is why none of the interviewees reported less than one year of job tenure.

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Table 1.2. Descriptive Statistics for Juvenile Justice Personnel Sample Job Characteristics

	In-Person Interviews			Web-Based Surveys		
Variable	**State 1**	**State 2**	**State 3**	**State 1**	**State 2**	**State 3**
Agency Setting	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Court	18 (25.4)	4 (8.9)	15 (14.9)	73 (18.0)	28 (8.7)	1 (0.4)
Probation	17 (23.9)	21 (46.7)	67 (66.3)	164 (40.4)	222 (69.2)	206 (76.0)
Parole	8 (11.3)	1 (2.2)	5 (5.0)	5 (1.2)	2 (0.6)	0 (0.0)
Correctional/Secure Treatment	22 (31.0)	13 (28.9)	9 (8.9)	85 (20.9)	30 (9.3)	17 (6.3)
State	6 (8.5)	6 (13.3)	5 (5.0)	5 (1.2)	2 (0.6)	1 (0.4)
Other	0 (0.0)	0 (0.0)	0 (0.0)	74 (18.2)	37 (11.5)	46 (17.0)
Total	71 (100.0)	45 (100.0)	101 (100.0)	406 (100.0)	321 (100.0)	271 (100.0)
Job Title	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Administrator	6 (8.5)	2 (4.4)	5 (5.0)	43 (10.6)	5 (1.6)	2 (0.8)
Attorney	1 (1.4)	1 (2.2)	4 (4.0)	-	-	-
Judge/Magistrate/ Commissioner	6 (8.5)	4 (8.8)	5 (5.0)	25 (6.1)	25 (8.0)	0 (0.0)
Parole Officer	4 (5.6)	1 (2.2)	5 (5.0)	4 (1.0)	2 (0.6)	0 (0.0)
Parole Supervisor	2 (2.8)	0 (0.0)	0 (0.0)	-	-	-
Parole Director	2 (2.8)	0 (0.0.)	0 (0.0)	-	-	-
Probation Officer	13 (18.3)	18 (40.0)	46 (45.5)	175 (42.9)	224 (72.0)	197 (72.7)
Probation Supervisor	8 (11.3)	6 (13.3)	10 (9.9)	5 (1.2)	3 (1.0)	5 (1.8)
Chief Probation Officer	2 (2.8)	4 (8.8)	2 (2.0)	-	-	-
Detention/Facility Officer	2 (2.8)	0 (0.0)	2 (2.0)	4 (1.0)	3 (1.0)	3 (1.1)
Detention/Facility Supervisor	3 (4.2)	0 (0.0)	0 (0.0)	-	-	-

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Table 1.2. Descriptive Statistics for Juvenile Justice Personnel Sample Job Characteristics

	In-Person Interviews			Web-Based Surveys		
Variable	**State 1**	**State 2**	**State 3**	**State 1**	**State 2**	**State 3**
Detention/Facility Director	1 (1.4)	0 (0.0)	3 (3.0)	-	-	-
Non-Supervisory Treatment Staff	16 (22.5)	2 (4.4)	12 (11.9)	16 (3.9)	12 (3.9)	1 (0.4)
Treatment Supervisor/Director	4 (5.6)	2 (4.4)	4 (4.0)	-	-	-
Non-Treatment Director	1 (1.4)	4 (8.8)	3 (3.0)	-	-	-
Supervisor (General)	-	-	-	63 (15.4)	36 (11.6)	38 (14.0)
Other	0 (0.0)	1 (2.2)	0 (0.0)	73 (17.9)	1 (0.3)	25 (9.2)
Total	71 (100.0)	45 (100.0)	101 (100.0)	408 (100.0)	311 (100.0)	271 (100.0)
Job Classification	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Administrator/ Director	13 (18.3)	6 (13.3)	11 (10.9)	43 (11.1)	5 (2.0)	2 (0.8)
Judge/Magistrate/ Attorney	7 (9.9)	4 (8.9)	10 (9.9)	25 (6.4)	25 (10.0)	0 (0.0)
Frontline Staff	35 (49.3)	23 (51.1)	62 (61.4)	249 (64.2)	195 (78.3)	182 (77.1)
Supervisor/Manager	16 (22.5)	11 (24.4)	18 (17.8)	28 (7.2)	23 (9.2)	35 (14.8)
Other	0 (0.0)	1 (2.2)	0 (0.0)	43 (11.1)	1 (0.4)	17 (7.2)
Total	71 (100.0)	45 (100.0)	101 (100.0)	388 (100.0)	249 (100.0)	236 (100.0)
Proximity to the OYAS	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Administers OYAS						
Yes	43 (60.6)	19 (42.2)	56 (55.4)	249 (72.6)	195 (83.7)	182 (67.4)
No	28 (39.4)	26 (57.8)	45 (44.6)	94 (27.4)	38 (16.3)	88 (32.6)
Unsure	0 (0.0)	0 (0.0)	0 (0.0)	-	-	-
Total	71 (100.0)	22 (100.0)	101 (100.0)	343 (100.0)	233 (100.0)	270 (100.0)
OYAS Coordinator/Trainer						

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Table 1.2. Descriptive Statistics for Juvenile Justice Personnel Sample Job Characteristics

	In-Person Interviews			Web-Based Surveys		
Variable	**State 1**	**State 2**	**State 3**	**State 1**	**State 2**	**State 3**
Yes	3 (4.2)	2 (4.4)	4 (4.0)	-	-	-
No	68 (95.8)	43 (95.6)	97 (96.0)	-	-	-
Unsure	0 (0.0)	0 (0.0)	0 (0.0)	-	-	-
Total	71 (100.0)	45 (100.0)	101 (100.0)	-	-	-
Uses Automated System						
Yes	42 (63.6)	29 (78.4)	63 (81.8)	163 (68.8)	142 (84.0)	148 (77.5)
No	23 (34.8)	8 (21.6)	14 (18.2)	74 (31.2)	27 (16.0)	43 (22.5)
Unsure	1 (1.5)	0 (0.0)	0 (0.0)	-	-	-
Total	66 (100.0)	37 (100.0)	77 (100.0)	237 (100.0)	169 (100.0)	191 (100.0)
Job Tenure (years)	$\bar{x}$ sd	$\bar{x}$ sd	$\bar{x}$ sd	$\bar{x}$ sd	$\bar{x}$ sd	$\bar{x}$ sd
	11.2 8.7	12.7 8.3	15.0 7.6	14.2 8.8	13.3 9.2	14.0 7.0

Due to missing data, totals are less than the reported sample size.

In summary, the interview and survey sample job characteristics (e.g., agency setting, job title and classification, job tenure, and proximity to the OYAS) inform the results presented in this section. In the interview sample, nearly three-quarters worked in a probation setting or secure facility, while state-level administrators represented the lowest proportion of interviewees. Probation Officer and Probation Officer Supervisor were the two most common job titles among the interview sample, though there was also a high proportion of non-supervisory treatment staff. The frontline job classification (i.e., those personnel whose main job function put them in daily contact with the youths in an assessment, supervisory, case management, or treatment roles) were the most common. Nearly two-thirds of the interview sample administered the OYAS, and about

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three-quarters used its automated system. The average tenure of the interview sample was 13.3 years. All of these job characteristics varied between the states within the interview sample, and the implications of this variation are discussed where relevant throughout the report.

Job characteristics also had a unique distribution across the web-based survey sample, and across the three states within that sample. The survey sample represented the general population of juvenile justice practitioners, whereas the interview sample was purposive, and therefore contained more people considered to be the "champions" of the OYAS (i.e., state-, county-, and agency-level administration and leadership, as well as OYAS trainers and coordinators). Less definitive conclusions can be made from some of the job-specific variables (e.g., job setting and job classification) within the anonymous survey data than the in-person interview data, as these were approximations based solely on the job titles provided. However, in general, it is clear that the majority of the survey sample respondents were based in a probation setting, and performed the duties of "frontline" staff, such as administering the OYAS and using its automated system.

Subsample size for the states and across the interviews and surveys varies both within and across the results tables throughout the report. These varying sample sizes are most often due to one of two factors: 1) the personnel did not have a response to a given question and indicated that they did not know, or chose not to answer; or 2) due to some personnel characteristic (e.g., job tenure, job classification, job setting), a given question did not apply to them. For example, if survey respondents indicated that they did not administer the OYAS, they would not be asked which specific OYAS tools they were trained to administer. Or, for example, if interviewees did not work at an agency until after the OYAS was implemented, they may have chosen not to answer questions about the specific OYAS implementation processes at their agency.

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State Context for Implementation and Usage

Timeline for OYAS Implementation. While the sample characteristics provided some context for the results that follow, the state and agency-level factors should also be kept in mind in interpreting the key findings. State 1, State 2, and State 3 were in unique stages of implementing a statewide risk and needs assessment (see timelines in Figure 1.2), which gives further context to the results presented in the current report. These differences are evidenced by various state and county initiatives, validation processes, the existing service frameworks at the time of OYAS implementation (including various automated systems or previous risk and needs assessments), and the personnel responses. State 1 was unique from State 2 and State 3 in that it was the only state with a decentralized juvenile justice system, with each of its counties functioning independently from the state-level administrative body. As such, unlike the State 2 and State 3 central administrative office, the State 1 central administrative office did not have authority over whether State 1 courts used the OYAS.

In terms of state- and county-wide initiatives, all three states were similar in two ways. One, they all participated in certification and ToT training with UCCI. Two, they all had participated in the Annie E. Casey Foundation's Juvenile Detention Alternatives Initiative (JDAI) at some point around the implementation period. JDAI is an integrative effort focusing on the reallocation of public resources from incarcerating youths toward investment in youths, families, and communities. It also placed a premium on risk and needs assessment as a conduit to making better decisions about detaining youths (Steinhart, 2006). The processes and goals of JDAI were the most focal to State 2 personnel, as the initiative started in State 2 in 2006, and continued to spread through the counties through 2016. While State 3 was also a JDAI state replication site, most of the county processes were completed in 2014, prior to our data collection period.

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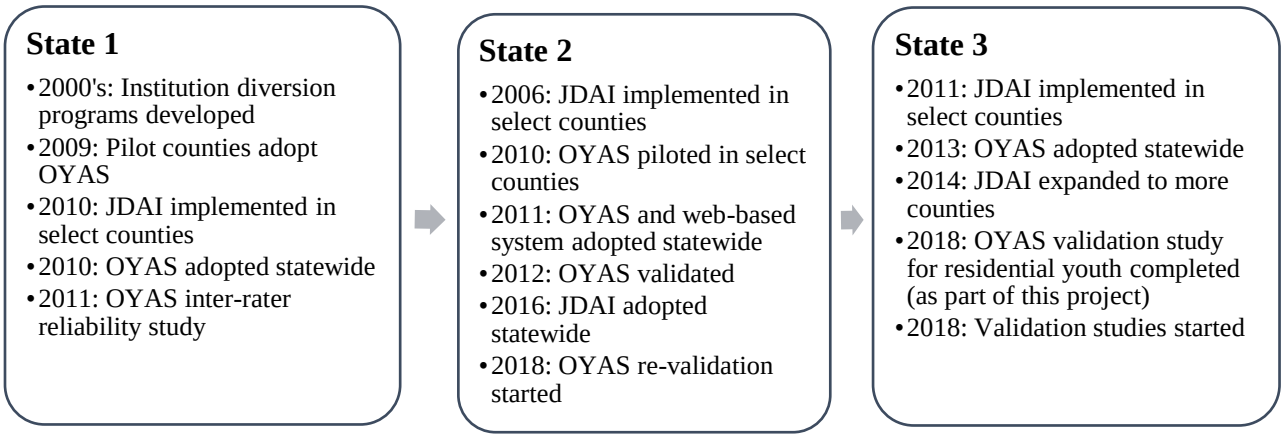
Relatedly, while eight counties in State 1 participated in JDAI, they were not considered a state replication site, and the last county expansion took place in 2013.

State 1 had an additional statewide initiative that has impacted the implementation and usage of the OYAS. State 1 created a program that functioned to divert youths from incarceration, and filtered these funds instead into evidence-based programs in the community. This program was connected to risk and needs assessment as youths' placement in state facilities depended upon OYAS risk level, with more intensive interventions being reserved for high risk youth. As a result, there has been a significant reduction in incarceration rates for youths in State 1 in recent years. In general, this program has been influential in pushing State 1 counties and the state as a whole toward evidence-based practices, including the adoption and usage of a statewide risk and needs assessment. The impact of this program will be seen subsequently as the State 1 personnel tended to mention aggregate data usage and the allocation of resources within their agencies more than interviewees in the other two states. These unique implementation characteristics are summarized in Figure 1.2 below.

Figure 1.2. State-Specific Timelines for OYAS Implementation



Written Policies and Procedures. Aside from various sample characteristics and implementation processes, each state also had its own unique set of written policies and procedures

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regarding risk and needs assessment, with varying degrees of accessibility. While State 2 and State 3 had readily available OYAS policies and procedures on their state agency websites, State 1's OYAS policies were not located on a publicly accessible platform. Instead, the research team obtained the State 1 policies from state contacts. Upon the research team analyzing these three sets of policies and procedures, several general commonalities and discrepancies were identified.

Notably, all three states' policies and procedures manuals reflected the principles of effective intervention (see Andrews et al., 1990) to varying degrees. State 3, the only state whose policy did not mention the OYAS by name, outlined the best practices for intensive and standard probation, including definitions of risk, criminogenic needs, and risk and needs assessment. Best practices for supervision and case planning (e.g., transferring youths from intensive to standard probation based on changes in their risk level, using the risk and needs assessment results to inform the "supervision plan") were woven in alongside administrative guidelines such as budgetary requests, program eligibility, and caseload limits, making the State 3 policies and procedures manual by far the most extensive of the three states', and the most expansive with respect to policies specific to risk and needs assessment itself. The manual served as a general guide for how agencies might have created their own policies surrounding risk and needs assessment, and did not, for the most part, give specific recommendations about timelines or usage. Two notable exceptions were that probation officers were to conduct a risk and needs assessment within 30 days of having a youth assigned to their caseload (only if a youth did not receive one in the pre-disposition phase), and intensive supervision officers were to make treatment referrals within 30 days of disposition as well. Overall, the State 3 policies and procedures manual was lengthy in comparison to State 1 and State 2, and though detailed in its presentation of evidence-based practices in supervision, it did not specifically name the OYAS.

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The State 2 policies and procedures manual also focused on best practices and the underlying purpose of the implementation and use of an actuarial risk and needs assessment. This included guidance for case planning (e.g., tailoring case plans to reassessment results), responsivity assessments (e.g., conducting responsivity assessments as substance use, mental health, or sexual offending needs arise), as well as a user-friendly chart with clear guidelines for conducting each of the five OYAS tools (in addition to the Disposition Screener). While some of the practices were specific (e.g., reassessments were to occur at least every 6 months, and assessment information entered into the automated system within 30 days), others were vague. For instance, case plans were to be updated "as needed." This language may have resulted in case plans that were less "living" documents, reducing their value in assessing change. This will be evidenced by the results in Table 1.6, where State 2 interviewees were the least likely to indicate that the OYAS was used to measure youths' progress. The Disposition Screener and Tool had more specific timelines than the rest of the tools, likely due to the fact that there is a natural timeline to have these tools completed prior to adjudication so that their information may be used in court. Overall, the State 2 OYAS policy was easily accessible, simple to read, and followed the principles of effective intervention.

By contrast, the State 1 written OYAS policies and procedures focused more on the various OYAS user-levels (e.g., administrative, inquiry, supervisor, super user). It did not provide details about best practices for localities, nor were the principles of effective intervention mentioned in detail. The State 1 manual did not include policies for each of the specific OYAS tools, but did provide more general guidance about training processes and user responsibilities. For example, users were to receive "booster training as deemed necessary." Quality assurance practices were mentioned specifically, but focused more on the accuracy of the information entered into the

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automated system, the quantity of overrides, and the timelines by which assessments should be completed, not necessarily concerning the quality of the assessment process itself. Overall, the OYAS policies and procedures manual for State 1 was easy to understand (though not readily available online), but did not go into depth about evidence-based practices, case planning, or the specifics of each of the OYAS screeners and assessments. The lack of specificity in these areas may be a result of the fact that the state authority does not set policy for the counties and expected its localities to develop their own policies related to the OYAS.

Personnel responses on policies and procedures. As written, the policies and procedures sometimes stood in contrast to the personnel responses related to this topic. This is evidenced in Table 1.3, where the majority of interviewees (69.4%) indicated that there are written policies in place.[14] However, as will be seen subsequently, the interviewees generally did not specify the details of a given policy, or know where the policies could be located.

Table 1.3. Interview Sample Descriptive Statistics for Written Documentation Regarding the OYAS

Variable	**State 1**	**State 2**	**State 3**	**Combined**
Agency Has Written Policies in Place?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	25 (42.4)	30 (83.3)	56 (86.2)	111 (69.4)
No	16 (27.1)	3 (8.3)	3 (4.6)	22 (13.8)
Unsure	18 (30.5)	3 (8.3)	6 (9.2)	27 (16.9)
Total	59 (100.0)	36 (100.0)	65 (100.0)	160 (100.0)

Due to missing data, totals are less than the reported sample size.

In Table 1.3, State 1 drove the variation in overall percent of the sample that indicated their agency had written documentation regarding the OYAS. State 1 had approximately half the proportion of affirmative responses as State 2 and State 3, at 42.4 percent. State 1 also had a much higher proportion of respondents who were unsure whether there was written documentation, at

[14] See Q37 under Youth Assessment Practices in Appendix A.

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30 percent (versus about 8% for State 2 and 9% for State 3). This may have been a product of the accessibility of said state policies and/or the degree to which policies were developed at the local level.

Reassessment policies. All three states had reassessment policies written in to their risk and needs assessment policies and procedures manuals. The State 1 policy stated that reassessments should be completed no earlier than four months and no later than six months from the previous assessment. State 2 indicated that reassessments should occur every six months, or more frequently if permissible by "local policy," giving leeway where local context may dictate the appropriate timeline for reassessments. State 3 provided less specific guidance, stating in their policy that probation officers should "periodically examine the needs of each juvenile" to determine whether their supervision level should be modified. To varying degrees, these policies reflected the University of Cincinnati's original design for the OYAS, which indicated that reassessments should occur every six months, or if a major life event occurs before this six-month timeline that would significantly change the score.

Interviewees' perceptions and knowledge of reassessment policies and procedures did not always coincide with the written policies and procedures described previously, and varied from agency to agency. There was also a degree of dissatisfaction expressed regarding reassessment policy, as some interviewees indicated that they are not conducted with enough regularity to capture the quickly changing circumstances of juveniles. Related, interviewees expressed other frustrations with these policies. For example, some noted that they are in need of particular guidance for which tool is appropriate for reassessing residential youths. Others stated that they were in need of guidance on when youths should be reassessed and what constitutes a "major life event."

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Interviewees were asked to identify and describe the OYAS reassessment process,[15] and their responses are presented in Table 1.4. The difference in the response rates between the reassessment questions is partially explained by interviewees' familiarity with reassessment policies, along with built-in skip patterns. For example, if interviewees indicated there was not a reassessment policy in place, or that they were unsure if there was a reassessment policy, then they were not asked whether the said policy was followed.

Table 1.4. Interview Sample Descriptive Statistics for Reassessment Policies

Variable	**State 1**	**State 2**	**State 3**	**Combined**
Reassessment Policy in Place?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	33 (63.5)	31 (88.6)	60 (84.5)	124 (78.5)
No	11 (21.2)	4 (11.4)	5 (7.0)	20 (12.7)
Unsure	8 (15.4)	0 (0.0)	6 (8.5)	14 (8.9)
Total	52 (100.0)	35 (100.0)	71 (100.0)	158 (100.0)
Reassessment Policy Followed?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	21 (77.8)	15 (68.2)	37 (82.2)	73 (77.7)
No	2 (7.4)	4 (18.2)	4 (8.9)	10 (10.6)
Unsure	4 (14.8)	3 (13.6)	4 (8.9)	11 (11.7)
Total	27 (100.0)	22 (100.0)	45 (100.0)	94 (100.0)
Youths Leave Without Reassessment?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	18 (72.0)	15 (62.5)	29 (80.6)	62 (72.9)
No	4 (16.0)	9 (37.5)	5 (13.9)	18 (21.2)
Unsure	3 (12.0)	0 (0.0)	2 (5.6)	5 (5.9)
Total	25 (100.0)	24 (100.0)	36 (100.0)	85 (100.0)

Due to missing data, totals are less than the full reported sample size.

Over 78 percent of interviewees indicated their agency had a reassessment policy in place. Similarly, over 77.7 percent reported that their agency followed the reassessment policies. However, 72.9 percent shared that there were instances when a youth would leave an agency without a reassessment. Similar to the findings depicted in Table 1.3 (regarding all written policies and procedures for the OYAS), State 1 drove the variation with respect to trends in reassessment

[15] See Q50a-c under Youth Assessment Practices in Appendix A.

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policy as well. In Table 1.4, State 1 had by far the smallest proportion of affirmative responses to whether the interviewees' agency had a reassessment policy in place, at 63.5 percent. Again, State 1 also had a higher proportion of interviewees stating that they were unsure whether a reassessment policy was in place, at about 15 percent (as opposed to about 9% for State 3, and 0% for State 2). Again, this may have been the product of both a lack of policy accessibility and/or lack of a local policy. It is possible that turnover may have contributed to this, as State 1 interviewees had the lowest average job tenure of the three states (~11 years). However, a Chi-Square test revealed no significant relationship between job tenure and awareness of a reassessment policy.

In terms of whether the policies in place were followed, State 2 had the lowest proportion of affirmative answers, at about 68 percent. For the combined sample, about one in ten interviewees were unsure whether their reassessment policy was followed within their agency. Nearly three out of four interviewees indicated that youth sometimes left their agencies/facilities without a reassessment, though there was some variability between the states, with State 3 having the highest proportion of affirmative responses, at 80.6 percent (versus State 1 at about 72%, and State 2 at 62.5%).

A Chi-Square test revealed that job classification is related to interviewee perceptions regarding reassessments, though it is not a statistically significant relationship. Particularly, frontline staff tended to agree more that some youths leave the agency without a reassessment ($\chi^2_{(2)} = 5.93$, $p = .052$).[16] This was the only job classification distinction that had suggestively different responses in the reassessment items. This may have been a reflection of frontline interviewees' intimate knowledge of the day-to-day occurrences of an agency, while non-frontline staff may have been less familiar.

[16] The number in the parenthetical stands for degrees of freedom.

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Override policies.[17] As originally designed by the University of Cincinnati, those who administer the OYAS have the discretion to override the overall risk level for up to 10 percent of cases. The State 3 and State 2 policies and procedures manuals did not dictate a specific override policy. In contrast, the State 1 policy dictated that supervisors should check 10 percent of all assessments, to ensure that any overrides found in the process were appropriately done. In general, there was not much specific guidance on the use of overrides in the written policies and procedures for any of the three states. To help explore the nature and use of overrides, staff were asked a series of questions related to this topic (see Table 1.5).[18]

These questions explored the common reasons for overrides, the process to obtain an override, and whether certain types of juveniles and/or offenses lent themselves to an overreliance on overrides. The variation in response rates was attributed to the nature of the three questions. For example, if interviewees indicated that overrides were not allowed at their agency, then they were not asked the following two questions. Additionally, if interviewees were not OYAS administrators, then they were potentially unfamiliar with the practices and policies surrounding overrides. Survey respondents were asked if overrides were allowed at their agency, but were not asked if specific offenses required overrides, or whether the OYAS had limitations that led to the use of overrides. Therefore, the survey responses are displayed for the first item only in Table 1.5.

Table 1.5. Interview and Survey Sample Descriptive Statistics for Override Policies

Variable		**State 1**	**State 2**	**State 3**	**Combined**
Are Overrides Allowed at Agency?		*n* (%)	*n* (%)	*n* (%)	*n* (%)
Interviews					
	Yes	59 (96.7)	35 (97.2)	57 (76.0)	151 (87.8)
	No	2 (3.3)	0 (0.0)	14 (18.7)	16 (9.3)

[17] Overrides are not thoroughly explored here. More information concerning override decisions can be found in the Professional Override of Assessment substudy (Substudy 4).
[18] See Q44d-f under Youth Assessment Practices in Appendix A.

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Table 1.5. Interview and Survey Sample Descriptive Statistics for Override Policies

Variable		**State 1**	**State 2**	**State 3**	**Combined**
	Unsure	0 (0.0)	1 (2.8)	4 (5.3)	5 (2.9)
	Total	61 (100.0)	36 (100.0)	75 (100.0)	172 (100.0)
Surveys					
	Yes	280 (86.7)	183 (90.6)	188 (85.5)	651 (87.4)
	No	43 (13.3)	19 (9.4)	32 (14.5)	94 (12.6)
	Unsure	-	-	-	-
	Total	323 (100.0)	202 (100.0)	220 (100.0)	745 (100.0)
Must Override Specific Offenses? (*Interviews only*)		*n* (%)	*n* (%)	*n* (%)	*n* (%)
	Yes	10 (22.7)	15 (60.0)	17 (41.5)	42 (38.2)
	No	25 (56.8)	9 (36.0)	19 (46.3)	53 (48.2)
	Unsure	9 (20.5)	1 (4.0)	5 (12.2)	15 (13.6)
	Total	44 (100.0)	25 (100.0)	41 (100.0)	110 (100.0)
Specific Limitations of OYAS Lead to Overrides? (*Interviews only*)		*n* (%)	*n* (%)	*n* (%)	*n* (%)
	Yes	16 (43.2)	11 (47.8)	21 (63.6)	48 (51.6)
	No	17 (45.9)	12 (52.2)	8 (24.2)	37 (39.8)
	Unsure	4 (10.8)	0 (0.0)	4 (12.1)	8 (8.6)
	Total	37 (100.0)	23 (100.0)	33 (100.0)	93 (100.0)

Due to missing data, totals are less than the reported sample size.

Overall, 87 percent of interviewees and survey respondents confirmed that overrides were allowed at their agencies/facilities. However, it was unclear if there were official policies to be followed in the override process at the agency level. Some interviewees reported that supervisor approval was needed to conduct an override, while others indicated that staff retain total discretion. Despite an inconsistent perspective on override policies, interviewees indicated that overrides were infrequently used. A substantial amount of State 3 interviewees (nearly 19%) stated that overrides of OYAS risk level were not allowed, while nearly 100 percent of State 1 and State 2 interviewees indicated that overrides were allowed at their respective agencies. To illustrate, one State 2 interviewee indicated his/her agency allows for overrides to the OYAS risk level (which is tied to the supervision level), and has written policies and procedures for this process. Staff do not

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complete overrides themselves, but make recommendations to a supervisor, who will then decide whether to complete the override.

In addition, for those who answered in the affirmative, there was much variation in whether specific offenses were automatically overridden (e.g., sex offenses). A substantially higher portion of State 3 interviewees perceived the OYAS to have specific limitations that lead to the need for overrides (at nearly 67%, compared to about 43% for State 1 and 48% for State 2). This may have been a product of three points. First, the State 3 staff reported serving a more diverse population of youths. Second, when the interviews were conducted, the OYAS had not yet been validated specifically for their state, while State 1 and State 2 have had the OYAS validated on their respective populations. Third, State 3 interviewees more commonly noted the need (or in some cases, the agency policy) to override sex offenders to high risk. Of the 64 interviewees that mentioned sex offenders scoring low as a common reason for overrides, 21.9 percent were from State 1, 29.7 percent were from State 2, and 48.4 percent were from State 3. However, this result was somewhat tempered by the web-based survey results, as a higher proportion of State 2 respondents indicated that sex offenses was a common reason for the use of an override (84.1% affirmative, compared to 76.9% in State 3, and 70.8% in State 1).

State-specific override practices. Interviewees in all three states enumerated the specifics of when overrides were likely to occur at their respective agencies. In State 3, overrides were typical when a youth had been adjudicated for a sex offense, or when collateral information (e.g., information provided from schools, families, court records) indicated an override was necessary. This reflects many interviewees' perceptions of the "hierarchy of information" regarding OYAS scoring, as most value collateral information more than information from the youth interviews. State 3 interviewees also noted that supervisors must approve and sign any overrides to risk level.

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In State 2, the interviewees indicated that overrides to risk level simply required a "good reason." Common reasons for overrides included offense-based characteristics such as sex offenses, and serious and violent offenses (particularly including the involvement of guns). In this way, the use of an override appeared to be compensation for what interviewees perceived to be the potential for a lack of punishment in court decision-making. In general, the State 2 interviewees indicated that overrides were not commonly used, but allowed if needed.

Like State 3, State 1 interviewees indicated that conflicting answers from collateral information may lead to an override of risk level. State 1 interviewees also indicated that supervisor approval and a narrative justification for the override were required. Similar to State 2, other reasons for overrides were more charge-based, including sex offenses, human trafficking cases, guns/violent offenses, or a long history of juvenile justice involvement. Lastly, positive urine toxification tests and frequent disciplinary infractions inside residential facilities may also have triggered a risk level override.

Among many of the interviews, there was some question as to the "hierarchy of information," that is, which source it is appropriate to draw from most heavily when information from the youth interviews, case records, or other sources of collateral information conflict.[19] For example, some interviewees indicated that information from the youths' self-report was the highest on the hierarchy, and therefore score the items according to how the youths complete the self-report survey. Moreover, some interviewees have omitted questions from the interview that are also on the self-report, as a method of shortening the interview process. However, the self-report survey was designed as a supplementary source of information, and not a replacement of the

[19] As designed, if there is any confirmatory evidence of a risk/need factor, staff should score the items as a risk factor. Interview data indicate that in some sites, however, staff gave preference to different sources of information and may have been underscoring items and assessments, which may have led to some overrides.

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interview guide. Other interviewees indicated that collateral information (e.g., school records, information from family) was the highest on the information hierarchy, and would use this information often as a justification for an override. Evidence of these patterns will be seen in the interview findings as well.

Juvenile Justice Personnel Interview Findings

How Agencies Use the OYAS. The OYAS was designed to assist in several decision points throughout the juvenile justice process. Uses of the OYAS may include identifying risk level, determining supervision levels, making treatment and service referrals, noting responsivity strengths and barriers, allocating resources within an agency, developing specialized caseloads, and/or monitoring youths and system progress in addressing risk and needs. However, usage practices may look different based on the job role of the interviewee, and their proximity to the OYAS. For example, judges and magistrates (nearly 10% of the sample) often receive a general, summarized version of the OYAS information, including major treatment needs and overall risk level. This information is most often included in the pre-sentencing investigation (PSI) report, which judges and magistrates may use to assign the type (e.g., family, drug, peers) and quantity of treatment. In general, the judges and magistrates place differing emphases on the OYAS information and the PSI report, and use this information in different ways (e.g., informing treatment mandates), showing how usage practices may differ, even within a given job role. Another example are treatment staff, who may not administer the OYAS, but likely use its information in treatment and aftercare plans, or to make placement decisions within facilities.

During the interviews, staff identified numerous ways in which the OYAS was used throughout their agencies/facilities. Interviewees were asked if the OYAS assists in specific

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decision points in the juvenile justice system.[20] The results for these questions are presented in Table 1.6. The variation in response rates may be indicative of the interviewees' job roles, with those who were not frontline staff being potentially less familiar with the specific ways in which the OYAS information is used. Variation in responses is also noted in Table 1.7 regarding whether OYAS information is shared with outside referral agencies.

Table 1.6. Interview Sample Descriptive Statistics for How Agencies Use the OYAS

Does Your Agency Use the OYAS Assessment Information to…	**State 1**	**State 2**	**State 3**	**Combined**
Allocate Resources in Agency?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	24 (38.1)	11 (29.7)	15 (22.4)	50 (29.9)
No	23 (36.5)	22 (59.5)	37 (55.2)	82 (49.1)
Unsure	16 (25.4)	4 (10.8)	15 (22.4)	35 (21.0)
Total	63 (100.0)	37 (100.0)	67 (100.0)	167 (100.0)
Develop Specialized Caseloads?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	21 (34.4)	7 (20.0)	13 (19.7)	41 (25.3)
No	30 (49.2)	26 (74.3)	48 (72.7)	104 (64.2)
Unsure	10 (16.4)	2 (5.7)	5 (7.6)	17 (10.5)
Total	61 (100.0)	35 (100.0)	66 (100.0)	162 (100.0)
Determine Supervision Level?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	45 (73.8)	31 (86.1)	56 (77.8)	132 (78.1)
No	11 (18.0)	4 (11.1)	9 (12.5)	24 (14.2)
Unsure	5 (8.2)	1 (2.8)	7 (9.7)	13 (7.7)
Total	61 (100.0)	36 (100.0)	72 (100.0)	169 (100.0)
Measure Youths' Progress?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	33 (53.2)	18 (52.9)	49 (71.0)	100 (60.6)
No	21 (33.9)	12 (35.3)	16 (23.2)	49 (29.7)
Unsure	8 (12.9)	4 (11.8)	4 (5.8)	16 (9.7)
Total	62 (100.0)	34 (100.0)	69 (100.0)	165 (100.0)
Match Youths to Services?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	55 (88.7)	29 (80.6)	47 (68.1)	131 (78.4)
No	5 (8.1)	6 (16.7)	18 (26.1)	29 (17.4)
Unsure	2 (3.2)	1 (2.8)	4 (5.8)	7 (4.2)
Total	62 (100.0)	36 (100.0)	69 (100.0)	167 (100.0)

[20] See Q43a-h under Youth Assessment Practices in Appendix A.

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Table 1.6. Interview Sample Descriptive Statistics for How Agencies Use the OYAS

Does Your Agency Use the OYAS Assessment Information to…		**State 1**	**State 2**	**State 3**	**Combined**
Assist in Diversion, Disposition Decisions?		*n* (%)	*n* (%)	*n* (%)	*n* (%)
	Yes	39 (63.9)	29 (80.6)	35 (51.5)	103 (62.4)
	No	17 (27.9)	6 (16.7)	19 (27.9)	42 (25.5)
	Unsure	5 (8.2)	1 (2.8)	14 (20.6)	20 (12.1)
	Total	61 (100.0)	36 (100.0)	68 (100.0)	165 (100.0)
Additional Uses?		*n* (%)	*n* (%)	*n* (%)	*n* (%)
	Yes	14 (35.0)	3 (17.6)	13 (30.2)	30 (30.0)
	No	18 (45.0)	13 (76.5)	29 (67.4)	60 (60.0)
	Unsure	8 (20.0)	1 (5.9)	1 (2.3)	10 (10.0)
	Total	40 (100.0)	17 (100.0)	43 (100.0)	100 (100.0)

Due to missing data, totals are less than the reported sample size.

As can be seen, the results varied greatly for these decision points. For example, 78 percent of interviewees indicated the OYAS is used to determine supervision levels, but other areas saw less consistency in perceived use (e.g., assist in diversion and disposition decisions). One State 2 interviewee suggested specifically that there needs to be trainings on youths' strengths and barriers to help identify them in the responsivity sections of the OYAS. In fact, a sizeable number of the interviewees responded that they did not fill out the strengths and barriers consistently (mainly because these are trained as being optional).[21] As such, the information may not have been routinely used for case planning or other purposes. In turn, staff may not have been clued in to when to use additional responsivity assessments and work to match youths to services based on these factors. Related, many interviewees felt strongly that there should be more mental health

[21] Several of the OYAS tools (i.e., Disposition, Residential, and Reentry) have optional strengths and barriers listed in each of the dynamic need areas. This information is often considered optional and some staff do not complete these sections. Some of the strengths and barriers overlap with risk items. See usage study 6 (Usage of OYAS Strengths and Barriers) for more detail on usage of these items.

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items on the OYAS. This concern could potentially be alleviated by the systematic use of the responsivity factor sections on the OYAS tools.

According to the interviewees, the main two uses of the OYAS information were to determine supervision level and match youths to services (approximately 80% in both instances), which reflect a general alignment with the principles of risk, need, and responsivity (Andrews et al., 1990). However, interviewees expressed difficulty in several areas. First, there was difficulty particularly in adhering to the risk principle (which dictates, among other things, that youths are to receive a quantity of treatment that is appropriate for their risk level). For example, many interviewees, along with using OYAS information to match youths to treatment, expressed the desire to refer low risk youths to more intensive services. In some cases, this led to the use of an override to justify such service provision, and in other cases, the personnel generally described bypassing risk levels and assigning youths treatment quantities based on their own professional discretion. On the opposite end of this concern, many other interviewees found that community resources were hard to navigate and/or largely unavailable (particularly in rural areas). Therefore, they found it difficult to use the assessment information to dictate any amount of treatment referrals.

Another concern regarding using OYAS information to determine supervision level was that this created a "net-widening" effect, as more youths at one particular agency were being classified as "high risk" than before. These patterns of classification generally depended on the agency where the personnel was interviewed, but overall, there were concerns expressed about the manner in which risk level was tied to supervision and service levels. Case planning was also frequently mentioned as a challenge. For example, an interviewee from State 3 expressed frustration with using OYAS assessment results in case planning. S/he noted that staff had "no

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formal training on how to create [a case plan], so everyone's case plan looks different [and] include[s] different things, [we] can't delete or update [the] case plan, so everything stays even if [mistakes are made]." In examining the wealth of responses on assessment information usage, it is evident that the full utility of the OYAS is not yet in practice in any of the states.

Notably, the four most common uses were reflected in much of the three states' written policies and procedures (i.e., determining supervision level, measuring youths progress, matching youths to services, and assisting in diversion/disposition/release decisions), whereas the less common uses were not. This suggests that written policy may dictate much of the risk and needs assessment usage within an agency/facility. Still, even those uses were not consistently as high as might be expected according to theory underlying optimal risk and needs assessment usage (Vieira, Skilling, & Peterson-Badali, 2009; Vincent et al., 2012). On the whole, just over 60 percent of interviewees perceived the OYAS as being useful for case decisions and measuring youths progress.

The most between-state variation in responses is observed in whether OYAS information is used to allocate resources within the agency, measure youths' progress while on supervision, or assist in diversion/disposition/release decisions. Less than one-third of interviewees indicated that OYAS information is used to allocate resources within the agency (ranging from about 21% to 38% between the three states). This may include the creation of specialized units (i.e., those dedicated solely to low or high risk), or dedicating more funds to specific programs that are needed by a wide range of youths (e.g., substance use treatment). Whether the OYAS information is used to measure youths' progress was also highly dependent on state context. While about 61 percent of the total sample responded in the affirmative, State 3 was seemingly an outlier, with 72 percent responding in the affirmative (compared to 53% in State 2, and 55% in State 1). Despite the lower

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numbers in State 1 and State 2, one interviewee in State 2 noted that s/he uses the OYAS to measure progress by sharing the results over time with the youths and their families—indicating where they started and where they are currently. Related, one State 1 interviewee noted that s/he used the OYAS, in combination with another assessment, to help determine rewards and sanctions to include on behavioral contracts for youths.

Lastly, there was much variation in response to whether the OYAS information assists in making diversion/disposition/release decisions. Here, 81 percent of State 2 interviewees indicated that OYAS information is used for these decisions (compared to 60% in State 1 and 52% in State 3). One State 3 interviewee added context to these results, indicating that in his/her agency, the OYAS Diversion Tool was often conducted after diversion was already decided for a youth. Therefore, conducting the Diversion Tool felt like a "waste of time." This speaks to the importance of setting up assessment processes so that personnel are able to see its impact on juvenile justice decision-making.

A large portion (21%) of the combined interviewee sample was uncertain as to whether the OYAS information is used to allocate resources within their respective agencies. Interviewees from all three states indicated that the OYAS is rarely used for additional purposes. Other purposes that were stated though, include using the OYAS scores to determine the rewards and consequences on behavioral contracts for youths, using the OYAS information (i.e., risk and needs levels) when explaining supervision and programming decisions to parents, explaining disposition decisions to victims and community stakeholders, justifying contact requirements or home confinement (e.g., low risk youths reporting once a month, high risk reporting once a week), and using OYAS information as a starting point for collaboration with outside service providers on treating high risk areas. These additional uses are consistent with some of the "balanced

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supervision" models, such as those outlined in Maloney, Romig, and Armstrong (1988). As such, the results indicate that these states may be able to more fully capitalize on the information available from risk and needs assessments.

Sharing OYAS Assessment Information. Interviewees were asked whether their respective agencies shared the information gained in conducting an OYAS assessment to facilitate the work of treatment agencies and other placement sites.[22] Information sharing can help ensure that resources from these secondary agencies are not spent duplicating assessments and can save resources. The risk and needs information in the OYAS can also help an agency to adhere to the principles of effective intervention. For example, an agency could have separate groups for low risk youths or provide higher risk youths with more intensive treatment services. Table 1.7 below contains the interviewees' responses concerning sharing the assessment information with other agencies.

Table 1.7. Interview Descriptive Statistics for Sharing OYAS Information

Variable	**State 1**	**State 2**	**State 3**	**Combined**
Does Your Agency Share OYAS Information?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	31 (54.4)	16 (50.0)	30 (45.5)	77 (49.7)
No	17 (29.8)	9 (28.1)	27 (40.9)	53 (34.2)
Unsure	9 (15.8)	7 (21.9)	9 (13.6)	25 (16.1)
Total	57 (100.0)	32 (100.0)	66 (100.0)	155 (100.0)

Due to missing data, totals are less than the reported sample size.

Only half of the total sample indicated that their agencies share OYAS information with outside providers, though, those who do indicated that they do not have difficulty in doing so.[23] This low proportion may be a product of barriers to sharing information (e.g., youths/parents having to sign releases of information), or the lack of a systematized method/requirement of

[22] See Q51 under Youth Assessment Practices in Appendix A.
[23] Interviewees were also asked if they have had any issues in sharing OYAS information (Q51b. "Are there any issues with sharing this information?"). Due to too little variation in responses (with only three affirmative answers in the sample), these results were omitted from Table 1.7.

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sharing information, or that the court has not educated the secondary agencies on how the information may help to inform service delivery. In addition, the low level of information sharing may be a product of low buy-in for the OYAS—if staff do not see the value in conducting an OYAS or using it to make decisions, they may not recognize any value in sharing it with other agencies or personnel involved in a youth's case.

State-specific OYAS information sharing. Interviewees from all three states indicated that they may share OYAS information with outside individuals for specific purposes. In State 3, interviewees indicated that a shared automated system allows other agencies to view OYAS information, including case plan information as well as assessment results. This information can be made available to outside service providers such as treatment staff, counselors, and attorneys. Some interviewees have made it a regular practice to send the OYAS information along with treatment referrals, whereas others wait for outside agencies to request the information.

State 2 interviewees also indicated that they share OYAS information across juvenile justice agencies (e.g., counties, judges, probation, and parole agencies) via shared access to the OYAS automated system. In addition, the information is often shared with counselors and residential placement staff, but there is no systematized method. Lastly, some interviewees indicated that OYAS information is shared indirectly through pre-disposition reports, which are available to individuals working with youths.

Unlike State 3 and State 2, some State 1 interviewees indicated that they share the results of the OYAS with the youths' families. Information is also often shared with children's services and mental health providers. Like the other two states, State 1 interviewees can give stakeholders view-only access to the OYAS automated system, so that staff across agencies can freely access this information. It is evident that all three states have the ability to share OYAS information, but

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do not necessarily choose to do so and have not systematized this process. This is an area where agencies could further capitalize on the usefulness of JRNA information.

Aggregate Data Usage. One of the benefits of conducting risk and needs assessments is that it allows states and local entities the ability to examine data produced during the assessment process. Interviewees were asked whether their agency uses aggregate OYAS data to inform decision-making at that level.[24] The results are displayed in Table 1.8. Similar to the previous tables illustrating OYAS usage practices, the varying response rates in Table 1.8 below are likely due to variation in job roles. However, in the aggregate data usage context, it is more likely that missing data come from frontline interviewees' potential unfamiliarity with data aggregation processes. As such, it is likely that interviewees in administrative roles were more familiar with this aspect of data management.

Table 1.8. Interview Descriptive Statistics for Aggregate Data Usage

Variable		**State 1**	**State 2**	**State 3**	**Combined**
Agency Uses Aggregate Data?		*n* (%)	*n* (%)	*n* (%)	*n* (%)
	Yes	22 (36.1)	10 (31.3)	10 (17.5)	42 (28.0)
	No	21 (34.4)	15 (46.9)	37 (64.9)	73 (48.7)
	Unsure	18 (29.5)	7 (21.9)	10 (17.5)	35 (23.3)
	Total	61 (100.0)	32 (100.0)	57 (100.0)	150 (100.0)

Due to missing data, totals are less than the reported sample size.

The overall average affirmative response across the states for using aggregate data was low (28%), with State 3 having the lowest proportion of affirmative responses at 17.5 percent (versus 31.3% in State 2, and 36.1% in State 1). This may have been the product of two points. First, State 3 was the last of the three states to adopt the OYAS, and may not have had a plan in place for aggregate data at the time of data collection for the current study. Second, there may have been a

[24] See Q35 under Implementing the OYAS in Appendix A.

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lack of faith in the accuracy of the information as the OYAS was not yet validated in the state. A large proportion of the interview sample (nearly one in four interviewees) were also unsure whether aggregate data are used in any way. These findings suggest that if aggregate OYAS information is being generated and utilized routinely, this is not being shared with the frontline staff and this may also affect satisfaction levels. Staff from two states were able to provide examples of limited uses of aggregate data. In State 1, an agency justified the allocation of an evening reporting center for high risk youths. In State 2, an agency used aggregate data to justify a special unit at a correctional facility. In addition, some interviewees in State 2 also indicated that aggregate OYAS data might be used in the future to justify paying for licensure training for key staff to be able to provide substance abuse services since a large number of their youths struggle with substance use.

However, one frontline interviewee did note that aggregate data was shared with him/her at the agency, which ultimately reduced his/her confidence in the OYAS, as many of the "low risk" youths recidivated. This speaks to the balance of aggregating data during early implementation, while maintaining confidence in the tools and continuing proper usage practices. This also speaks to the importance of tempering expectations about the impact of a risk and needs assessment, as a degree of recidivism is to be expected at all risk levels, despite intervention efforts.

State-specific aggregate data usage. Interviewees in all three states emphasized that aggregate data collection and usage seemed to be concentrated at the state level. State 3 interviewees indicated that the central state office sends emails to the staff with aggregate OYAS information, though some interviewees complained that these data are outdated because the counties depend on the state office to aggregate the data and send it out to the counties. It is for this reason that interviewees claimed the aggregate information is not used for any specific

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purpose. State 3 interviewees agreed that it would be advantageous to be able to pull and share aggregate information as needed at the local level. One state-level State 3 interviewee expressed the desire to compare data on mental health outcomes and treatment records to aggregate OYAS data, in order to explore or confirm that the assessment results are matching more general service usage patterns of the youths in that area.

The only two uses of aggregate data in State 2 interviews were mentioned above. In general, State 2 interviewees believed that JDAI efforts may collect and share aggregate OYAS information more than the individual counties, but none of the interviewees could elaborate on the process. The only use of aggregate data in State 1 interviews was mentioned above. As was stated in the "State Context for Implementation and Usage" section, State 1 collects data on programs that are implemented to keep youths in the community and related policy changes and this may include OYAS information. In general, State 1 appeared well-positioned, due to ongoing state- and county-level efforts, to collect and use aggregate OYAS data to improve supervision practices and treatment delivery to youths though it had not capitalized on that effort at the time the interviews took place. It has, however, promoted the implementation of the assessment system as helping to facilitate reducing the use of state residential placements relative to community-based alternatives.

Attitudes Toward Risk and Needs Assessment and the OYAS. Table 1.9a shows the means and standard deviations for the three questions that gauged interviewees' attitudes about risk and needs assessment generally, and the OYAS specifically. Interviewees were asked to rate their attitudes and perceptions on a scale of 1 – 5 with 5 indicating greater support for each statement. Figure 1.3 outlines the detailed distributions of responses to these items for the

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combined interview sample.[25] These questions gauged whether staff feel that the OYAS benefits the youths, their agencies, and whether it enhances fairness in the juvenile justice decision-making process.

Table 1.9a. Interview Descriptive Statistics for the General Attitudes toward Risk and Needs Assessment and the OYAS

Variable	**State 1**	**State 2**	**State 3**	**Combined**
	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
OYAS Benefits the Youths (N = 201)	3.75 (.87)	3.40 (1.21)	3.59 (0.99)	3.60 (1.01)
OYAS Benefits the Agency (N = 192)	3.95 (.90)	3.57 (1.24)	3.77 (1.15)	3.79 (1.10)
JRNAs Enhance Fairness in Decision-making (N = 208)	3.88 (.85)	4.05 (.97)	3.62 (1.10)	3.80 (1.00)
Total	3.86 (.87)	3.67 (3.42)	3.66 (1.08)	3.73 (1.04)

Due to missing data, totals are less than reported sample size.

Analyzing the results by state, State 1 interviewees gave a higher average score on whether the OYAS benefits the youths, and whether it benefits their agencies. This may have been due to the fact that the OYAS was implemented first in State 1, and had a higher proportion of state-level administrators in the interviewee pool. State 2 interviewees gave the highest average rating for whether risk and needs assessments in general enhance fairness in juvenile justice decision-making. A Chi-Square test revealed no significant differences between the states in their average level of agreement on these three items. There appears to be consensus across the states with regard to JRNA increasing fairness and benefiting the agency, more so than benefiting the youth directly.

Meaningful differences arose when analyzing the sample by various job classifications. For example, those who work on the "frontline" (i.e., working directly with youths in supervisory or treatment capacities on a daily basis), versus those who work in another juvenile justice capacity

[25] See Q15-17 under General Agency/Facility Approach to Youth Assessment in Appendix A.

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(e.g., state-level administrator, attorney, treatment supervisor). In the combined sample, a Chi-Square test revealed that the only statistically significant difference between frontline and non-frontline interviewees' average ratings was in whether risk and needs assessments reduce bias in juvenile justice decision-making ($\chi^2_{(8)} = 25.05$, $p < .05$, Cramer's $V = .35$). On average, non-frontline employees rated this item a 4.13 (*sd* = .93), while frontline employees rated this item a 3.54 (*sd* = .98).

One interviewee gave context to these results, stating that "Line officers don't really like [the OYAS], [but] supervisors base everything off it." This illustrates some of the potential skepticism of the OYAS among frontline personnel; however, their average score for this item, though significantly lower than non-frontline personnel, still indicated that they were in general agreement that risk and needs assessments reduce bias. In terms of "basing everything" off of the OYAS, this runs in contrast to the importance of frontline personnel recognizing that the OYAS is a piece of the "rehabilitation puzzle," and is meant to interact with existing processes and services in order to most appropriately service the youths. This notion of an "end-all, be-all" tool may impact buy-in from personnel who expect a risk and needs assessment tool to go above and beyond its intended uses as a result of how it is promoted in rollout and training. The exercise of balance and sensitivity in risk and needs assessment is necessary to inform juvenile justice decision-making to the proper degree. Another frontline interviewee expressed concern that staff were "relying too much" on the risk score, and essentially attributing this to a "worse kid," rather than a youth with a higher risk for recidivism.

Aside from differences in the frontline and non-frontline interviewee perceptions, another potentially meaningful distinction is between the supervisors/managers and the rest of the sample, who were referenced earlier in the report as the "middle-managers" (i.e., these individuals were

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often former frontline workers who are now charged with supervising staff and enforcing policies, potentially including those associated with the OYAS). After accounting for this distinction, a Chi-Square test revealed no significant differences between supervisors/managers and the rest of the full sample in their level of agreement that the OYAS benefits the youths ($\chi^2_{(7)} = 16.82$, $p < .05$, Cramer's $V = .29$) or benefits their agency ($\chi^2_{(7)} = 22.10$, $p < .05$, Cramer's $V = .34$). On average, supervisors/managers rated the "Benefits the Youths" item a 3.57 (*sd* = 1.13), and the rest of the sample rated it a 3.61 (*sd* = .98). On the "Benefits the Agency" item, the supervisors/managers gave an average rating of 3.82 (*sd* = 1.14), and the rest of the sample rated it a 3.78 (*sd* = 1.09). As such, it appears that being in a supervisory role produces a mixed effect in terms of its impact on interviewees' perceptions of the OYAS, and of risk and needs assessment in general.

Figure 1.3 below clearly illustrates the stronger levels of agreement among the combined interview sample that the OYAS benefits the agency, and that risk and needs assessment enhance fairness in the juvenile justice decision-making process. From this figure, it is clear that those who were in direct disagreement with any of these three items represented a smaller percentage of the sample. In the event that an interviewee listed a range in their response (e.g., "from three to 3.5", or "from three to four"), the midpoint was used (e.g., 3.25 or 3.5, respectively), and the response was then rounded to the nearest category for the sake of display in Figure 1.3.

Continuing with the interviewees' general attitudes toward JRNA, Table 1.9b shows the results of four additional questions that more specifically focused on the OYAS. Interviewees were asked whether OYAS information is a valuable part of the decision-making process[26], whether it

[26] See Q42a, Q44f, Q47, and Q48 under Youth Assessment Practices in Appendix A.

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provides useful information regarding criminogenic and non-criminogenic needs, and whether there are limitations to the OYAS that lead to the use of overrides.[27]

Figure 1.3. Detailed Distribution of Interview Responses for the General Attitudes toward Risk and Needs Assessment and the OYAS

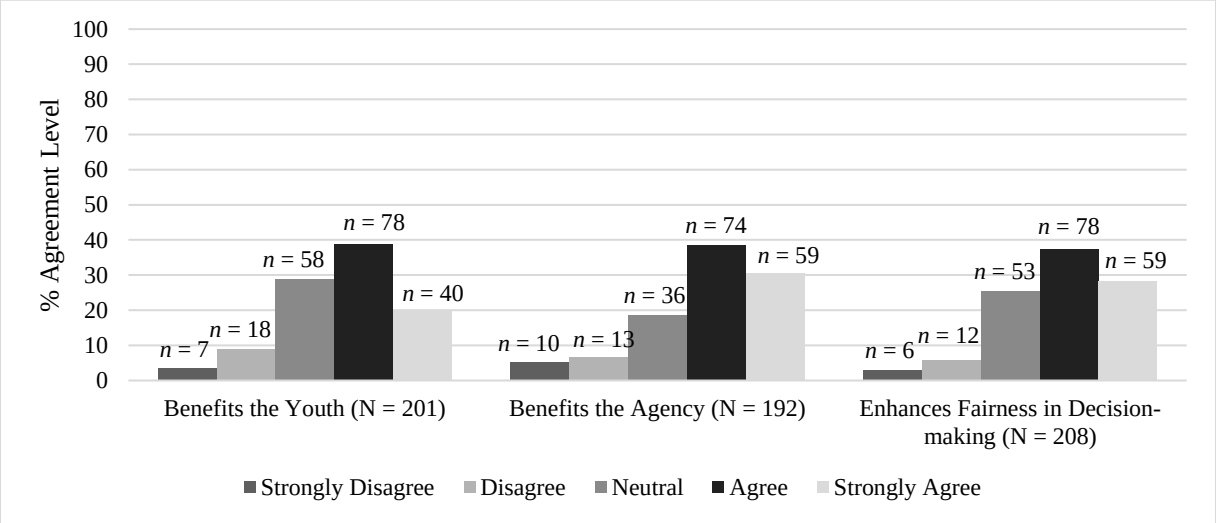

Table 1.9b. Interview Descriptive Statistics for the General Attitudes about the OYAS

Variable	**State 1**	**State 2**	**State 3**	**Combined**
Valuable Part of Decision-making Process[28]	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	36 (72.0)	31 (83.8)	49 (79.0)	116 (77.9)
No	10 (20.0)	4 (10.8)	12 (19.4)	26 (17.4)
Unsure	4 (8.0)	2 (5.4)	1 (1.6)	7 (4.7)
Total	50 (100.0)	37 (100.0)	62 (100.0)	149 (100.0)
Useful Information Regarding Criminogenic Needs	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	49 (84.5)	28 (90.3)	61 (91.0)	138 (88.5)
No	6 (10.3)	3 (9.7)	4 (6.0)	13 (8.3)
Unsure	3 (5.2)	0 (0.0)	2 (3.0)	5 (3.2)
Total	58 (100.0)	31 (100.0)	67 (100.0)	156 (100.0)
Useful Information Regarding Non-Criminogenic Needs	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	27 (58.7)	13 (56.5)	31 (52.5)	71 (55.5)
No	13 (28.3)	8 (34.8)	23 (39.0)	44 (34.4)

[27] Throughout the interviews, personnel also mentioned overriding individual items on the OYAS due to youth dishonesty, though overrides to risk level were far more common, and also the proper way to conduct an override according to the intended design of the assessment.

[28] The interview guide was revised after the State 1 interviews had already begun. Therefore, some State 1 interviewees (*n* = 8) responded to a slightly different question from question 42a listed in Table 1.9b. Instead of answering, "Do you believe that the information from the OYAS is a valuable part of the decision-making process?", some State 1 interviewees answered the following: "Do you think the OYAS provides valuable information?"

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Table 1.9b. Interview Descriptive Statistics for the General Attitudes about the OYAS

Variable		**State 1**	**State 2**	**State 3**	**Combined**
	Unsure	6 (13.0)	2 (8.7)	5 (8.5)	13 (10.2)
	Total	46 (100.0)	23 (100.0)	59 (100.0)	128 (100.0)
Limitations Lead to Overrides		*n* (%)	*n* (%)	*n* (%)	*n* (%)
	Yes	16 (43.2)	11 (47.8)	21 (63.6)	48 (51.6)
	No	17 (45.9)	12 (52.2)	8 (24.2)	37 (39.8)
	Unsure	4 (10.8)	0 (0.0)	4 (12.1)	8 (8.6)
	Total	37 (100.0)	23 (100.0)	33 (100.0)	93 (100.0)

Due to missing data, totals may be less than the reported sample size.

Compared to State 1 and State 3, State 2 interviewees expressed slightly more favorable attitudes toward the OYAS. Nearly 84 percent indicated it is a valuable part of the decision-making process, 92 percent indicated that the OYAS provides useful information regarding criminogenic needs, and about 48 percent indicated that the OYAS has specific limitations that lead to overrides. State 3 had a much higher proportion of interviewees than State 1 or State 2 who indicated that the OYAS has specific limitations that lead to overrides (at about 64%). This may be attributed to the fact that the OYAS was not yet validated in State 3 at the time of the interviews, and may have had legitimate limitations that lead to the need for overrides with their juvenile population (e.g., State 3 has more variation in youths' demographics characteristics in comparison with State 1 or State 2—See Table 2.7 in Section II). Lastly, though the vast majority of interviewees from all three states expressed that the OYAS provides valuable information regarding criminogenic needs, only slightly more than half of the interviewees from each state indicated that the OYAS provides valuable information regarding non-criminogenic needs. This may be due to either the underutilization of the strengths and barriers sections of the tools by some staff or the feeling of some that how the OYAS measures strengths and barriers is not sufficient. There is also likely to be some variation across states and sites due to how staff are trained and oriented to that section of the tool.

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Chi-Square tests were conducted to determine whether there were differences between the states on these items. No significant differences were found. These results suggest somewhat similar general attitudes toward the OYAS between the three states, when each state sample was analyzed collectively (i.e., when not considering interviewee characteristics such as job classification). Analyzing the full sample by job classification, the only significant difference in results for the four general attitudes items was between the non-supervisory treatment staff (i.e., those who provide the day-to-day substance use or mental health treatment to the youths), and staff in other roles. Non-supervisory treatment staff were significantly less likely to indicate that the OYAS provides valuable information ($\chi^2_{(2)} = 8.17$, $p < 05$, Cramer's $V = .23$). It is possible that these individuals' job roles relied more on information from secondary assessments or responsivity assessments that target mental health or substance use. No other significant differences on these items by job classification were found.

Interviewees elaborated on their concerns that the OYAS has limitations that lead to overrides. For example, some suggested that status offenders consistently receive a "low risk" designation, but are typically the youths who are in need of the most services. These youths, for example, may be experiencing significant issues in the home or at school, but may not receive services since such cases are often diverted.[29] As risk level is often tied to service provision (i.e., program eligibility may require a higher risk level designation), overrides are sometimes used to compensate. This scenario highlights the balance between risk, criminogenic need, non-criminogenic need, and how some programmatic elements (i.e., eligibility requirements) may impede the accuracy of a youth's assigned risk level.

[29] The OYAS diversion tool comprises mainly current offense and juvenile justice history items with two questions on familial arrest and parental supervision of the youth.

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Overall Satisfaction and Levels of Support for the OYAS. Support for the OYAS was identified through two questions and is presented in Table 1.10. First, staff were asked to rate their personal satisfaction with the OYAS (1 being "not at all satisfied" and 5 being "very satisfied").[30] Second, staff were asked to rate the overall level of staff support for the use of the OYAS (1 being "not at all supportive" and 5 being "very supportive").[31] This differed from the previous question slightly in that it gauged the interviewees' perception of the way the OYAS is used throughout the agency, thus moving the focus from the interviewee to his/her colleagues.

Table 1.10. Interview Descriptive Statistics for the Overall Satisfaction and Levels of Support for the OYAS

Variable	**State 1**	**State 2**	**State 3**	**Combined**
Rate your opinion on the following from 1 (low) to 5 (high)…	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
Personal Satisfaction with the OYAS (N = 200)	3.75 (.74)	3.67 (0.82)	3.34 (0.92)	3.56 (.86)
Overall Level of Staff Support for the Use of the OYAS (N = 200)	3.49 (1.01)	3.26 (1.13)	2.93 (1.14)	3.21 (1.11)

Due to missing data, totals are less than the reported sample size.

Many interviewees' personal level of satisfaction was at a four or higher (35.5% of the full sample), with the mean level of satisfaction falling at 3.56 (*sd* = .87). Similarly, nearly half of the respondents (48%) rated staff support at a four or higher. The mean level of staff support from 200 responses was 3.21 out of five (*sd* = 1.13). The average perceived staff support for the OYAS was not only lower than personal support for the OYAS, but it had more variation, indicating that interviewee responses on this item were more dispersed around the mean. Essentially, there was more consensus around personal support for the OYAS than there was regarding perceived overall staff support for the use of the OYAS.

[30] See Q54 under Youth Assessment Practices in Appendix A.
[31] See Q22 under General Agency/Facility Approach to Youth Assessment in Appendix A.

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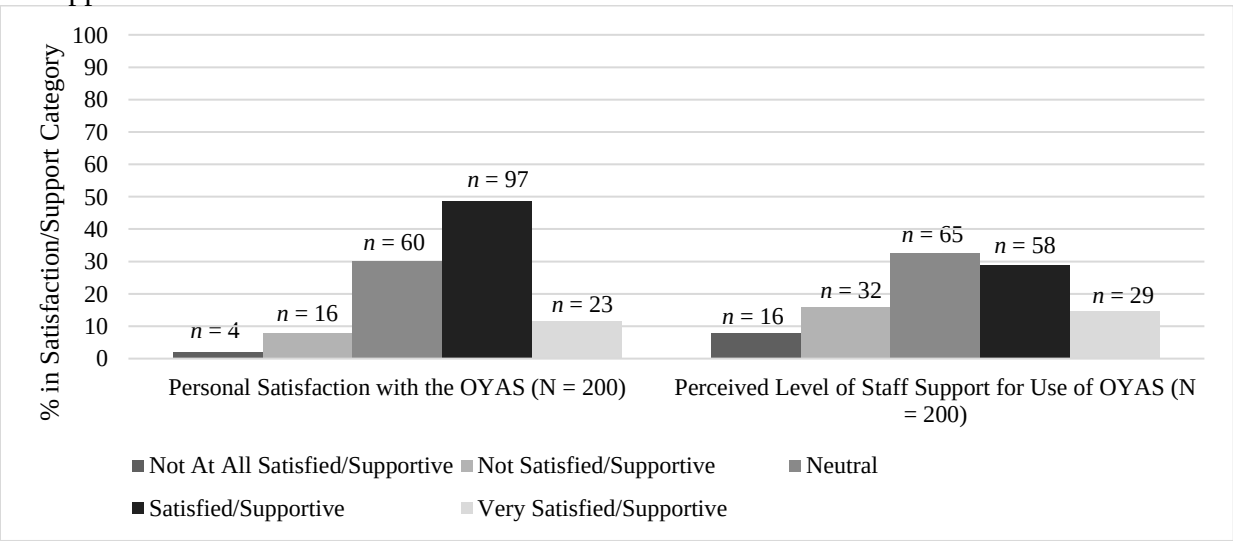
There was meaningful variation between the states when analyzing the combined sample. There were significant differences in both the personal satisfaction with the OYAS (F = 5.216, df = 2, p < .05), and the perceived overall satisfaction with the OYAS (F = 4.397, df = 2, p < .05) between the states. State 3 presented the lowest average score for the level of staff support for the use of the OYAS, at 2.93, but a significantly higher personal level of satisfaction with the OYAS. State 1 interviewees exhibited a significantly higher perception of the overall satisfaction with the OYAS than State 2 or State 3 interviewees. Overall, personal satisfaction with the OYAS appeared to be higher than the perceived overall level of staff support for the use of the OYAS. Essentially, interviewees noted that their agency peers had more negative perceptions of the OYAS than they did personally. Figure 1.4 illustrates further the interviewees' higher ranking of their own personal satisfaction with the OYAS, over their perceived level of support for the use of the OYAS by their peers. Similar to Figure 1.3, the scores in Figure 1.4 are rounded to the nearest category for the sake of display. As can be seen, personal satisfaction with the OYAS trends toward the positive side of the rating scale while a greater degree of "neutrality" arises when rating the second item, as this became the modal category.

Figure 1.4. Interview Detailed Distribution of Responses for the Overall Satisfaction and Levels of Support for the OYAS



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Qualitative Evidence in Support of the OYAS. After being asked their personal level of support, and their perceived level of support for the OYAS from other staff members, interviewees were asked to identify several strengths of the tools. Two questions were asked of staff during interviews: one to identify perceived strengths of the OYAS in general, and another to assess their perceived strengths in how their agency uses the instruments.[32] Responses were analyzed and summarized in a word cloud using QDA Miner (Figure 1.5), and code frequencies for the top five most frequent codes are displayed in Figure 1.6. The word cloud in Figure 1.5 represents the code frequencies from the full sample, while a more comparative analysis is made between the states in Figure 1.6.

The 191 responses to these questions yielded 15 codes regarding the strengths of the OYAS and its usage within the agencies/facilities. These codes are graphically displayed in Figure 1.5. In this visual representation of code frequencies, the font size of each code is relative to their frequency in the interviews, with the more frequently named strengths being represented by the larger fonts, and the less frequently named strengths being represented by the smaller fonts. As one example of the inductive coding process, many interviewees indicated that the OYAS is helpful, but did not indicate a specific reason as to why or how it is helpful. Whereas these were not initially coded, it became clear that a significant portion of the interviewees had positive feelings toward the assessment that were not being represented in the results. Therefore, a "Helpful (not otherwise specified [NOS])" code was created and defined as "Any mention of support that characterizes the assessment, assessment process, or its results as generally helpful, but does not indicate a specific reason for why, or in what capacity (i.e., is not otherwise specified)."[33]

[32] See Q26 under General Agency/Facility Approach to Youth Assessment and Q52 under Youth Assessment Practices in Appendix A.
[33] Please refer to the Semi-structured interview and analytic process sections for general details on the qualitative data analysis process.

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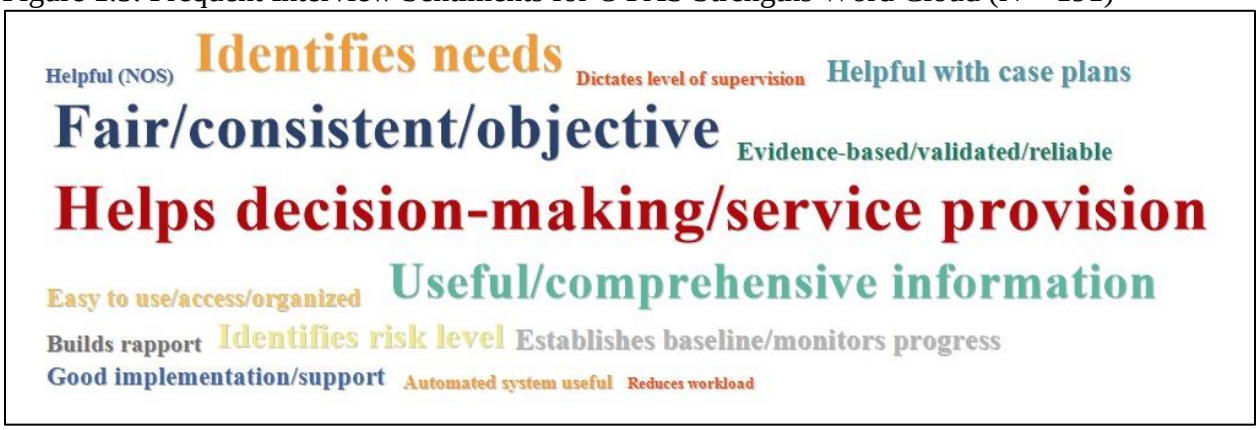
Figure 1.5. Frequent Interview Sentiments for OYAS Strengths Word Cloud (N = 191)



The list of strengths from the full sample were as follows, with the case frequencies in the parenthetical: (1) "Helps decision-making and service provision" (*n* = 85, 44.5%); (2) "Fair/consistent/objective" (*n* = 71, 37.2%); (3) "Identifies needs" (*n* = 64, 33.5%), (4) "Useful/comprehensive information" (*n* = 59, 39.0%); (5) "Identifies risk level" (*n* = 31, 16.2%); (6) "Helpful with case plans" (*n* = 28, 14.7%); (7) "Establishes baseline/monitors progress" (*n* = 25, 13.1%); (8) "Evidence-based, validated, reliable" (*n* = 20, 10.5%); (9) "Good implementation/support" (*n* = 19, 9.9%); (10) "Easy to use/access/organized" (*n* = 17, 8.9%); (11) "Builds rapport" (*n* = 16, 8.4%); (12) "Helpful (NOS)" (*n* = 12, 6.3%); (13) "Dictates level of supervision" (*n* = 9, 4.7%); (14) "Automated system useful" (*n* = 8, 4.2%); and (15) "Reduces workload" (*n* = 2, 1.0%). A number of these strengths are likewise listed as limitations by other interviewees (e.g., validity/reliability, case planning, implementation), which is noted and further explored in the next subsection "Qualitative Evidence for OYAS Concerns and Areas in Need of Improvement."

The interviewees cast a wider net for strengths of the OYAS than they did for its limitations, meaning that interviewees named more unique strengths, some of which, in turn, have lower frequencies (e.g., see "Automated system useful" or "Reduces workload" above). This pattern seems to indicate that, while interviewees were able to name a diverse array of the strengths

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of the OYAS, there was more consensus regarding its perceived limitations (which perhaps bear more influence on interviewees' general attitudes toward the assessment, as evidenced in Tables 1.9a-b). To illustrate, one State 1 interviewee commented that the OYAS automated system is quick to use and clear, and interfaces with other statewide initiative platforms. However, many more respondents (as demonstrated below) mentioned the automated system under limitations.

Continuing with the strengths of the OYAS, Figure 1.6 shows the results of the top five most frequent codes from the full sample analyzed by state.[34] The code frequencies represent the percent of respondents within each state who named a given strength in their response to these open-ended questions. It is important to note again that each state has its own unique characteristics surrounding the implementation and usage of the OYAS, including state- or county-specific initiatives and policies (see Figure 1.2). Additionally, each state had a unique makeup of interviewees, where certain types of positions (e.g., frontline vs. administrator) or job locations (e.g., probation vs. court) are overrepresented in one state (e.g. State 3 had an overrepresentation of frontline staff in probation when compared to State 1 or State 3, see Table 1.2). These characteristics, as outlined previously, likely influenced the results displayed in Figure 1.6.

Figure 1.6 reveals that state context matters when considering the strengths of the OYAS. For example, 43.6 percent of State 2 interviewees (n = 17), 48.5 percent of State 1 interviewees (n = 32), and 25.6 percent of State 3 interviewees (n = 22) named "Fair/consistent/objective" as a strength of the OYAS. The fact that a smaller proportion State 3 interviewees named the OYAS as fair, consistent, or objective may be a reflection of validation concerns for their state. State 2 had a lower proportion of interviewees that indicated that the OYAS provides useful/comprehensive information. Approximately 20.5 percent of State 2 interviewees (n = 8),

[34] See Appendix C for definitions of each code displayed in Figures 1.5 and 1.6.

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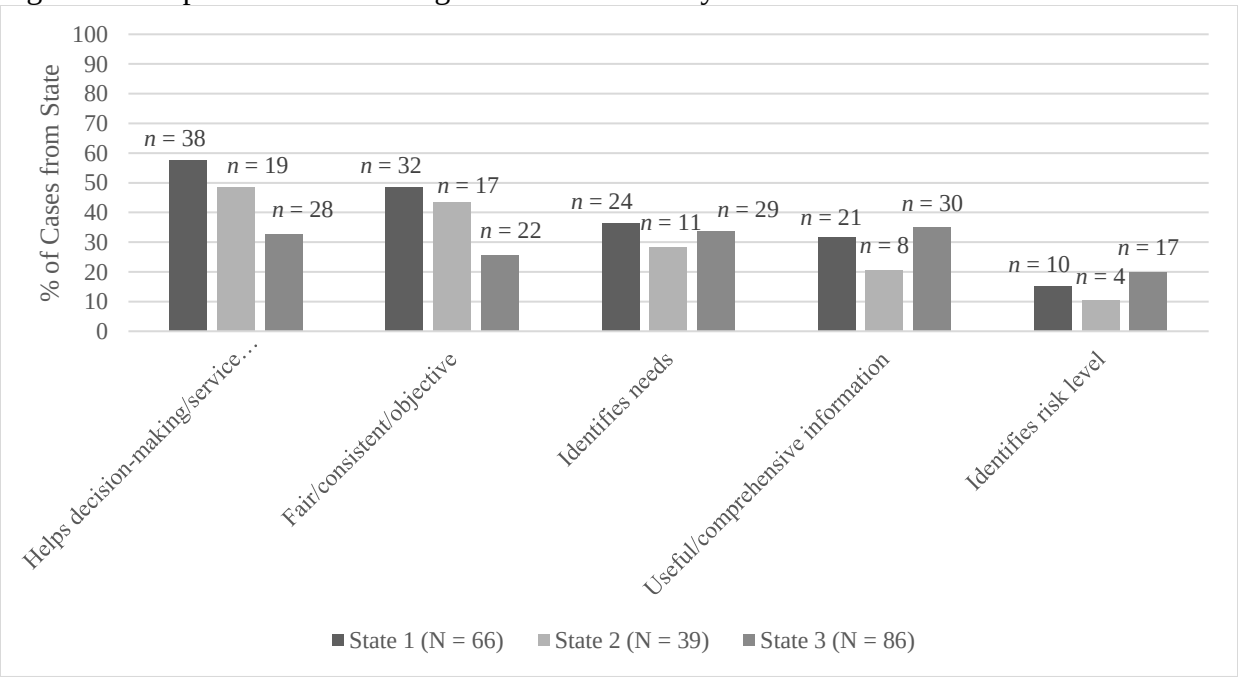
34.9 percent of State 3 interviewees (*n* = 30), and 31.8 percent of State 1 interviewees (*n* = 21) named "Useful/comprehensive information" as a strength of the OYAS.

Figure 1.6. Top Five OYAS Strengths for Interviews by State



State 1 had the highest proportion of interviewees state that the OYAS helps in decision-making and service provision, at 57.6 percent of interviewees (*n* = 38), followed by nearly half (48.7%) of State 2 interviewees (*n* = 19), and only 32.6 percent of State 3 interviewees (*n* = 28) named "Helps decision-making/service provision" as a strength of the OYAS. One State 2 interviewee stated that, since the adoption of the OYAS Diversion Tool his/her agency has begun to divert far more youths, which suggests that the Diversion Tool is working to keep low risk youths in the least restrictive intervention available. This stands in contrast, however, to the aforementioned point that some personnel override low risk youths to moderate or high risk for the purpose of designating them to a higher level of service, despite their low prevalence of criminogenic need.

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In terms of strengths that reflect the principles of effective intervention (Andrews et al., 1990), interviewees from all three states named "risk" and "need" related strengths. Around 10.3 percent of State 2 interviewees (*n* = 4), 19.8 percent of State 3 interviewees (*n* = 17), and 15.2 percent of State 1 interviewees (*n* = 10) named "Identifies risk level" as a strength of the OYAS. A total of 28.2 percent of State 2 interviewees (*n* = 11), 33.7 percent of State 3 interviewees (*n* = 29), and 36.4 percent of State 1 interviewees (*n* = 24) named "Identifies needs" as a strength of the OYAS. Though there was some variation in frequencies across the states, this may reflect a general familiarity with the principles of effective intervention that may have potentially been gained through the OYAS training process.

For nearly every strength listed in Figure 1.6, the State 2 results more closely mirrored those of State 1 over State 3. This may potentially come from the similarities in youths' demographics across these two states when compared to State 3, or from the fact that the OYAS had been validated for both State 1 and State 2 but not for State 3 at the time of the interviews. As demonstrated in Figure 1.2, State 1 and State 2 also implemented the assessment earlier than State 3, and therefore have had more experience with it.

Qualitative Evidence for OYAS Concerns and Areas in Need of Improvement. Interviewees were also asked to name their concerns regarding the OYAS and the perceived limitations of the tools. Through the nature of open-ended questioning, some interviewee concerns were more relevant to the implementation process than to the OYAS as a risk and needs assessment tool. These implementation concerns are named here and discussed more explicitly later in the report (see "Degree of Assessment Implementation" and "Views on Implementation Processes" sections), as the current section focuses on concerns with the assessment itself (including its contents, processes, outcomes, etc.).

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To elicit staff concerns, staff were asked to identify some areas in need of improvement that are specifically related to the OYAS tools. Second, staff were asked what they see as some of the limitations of the tools based on how their agency currently uses the OYAS.[35] Third, staff were asked what concerns are raised by other staff regarding the OYAS.[36] Similar to the strengths, the 195 cases that responded to any one of these questions about concerns/limitations were analyzed using QDA Miner, and are displayed graphically in Figures 1.7 and 1.8. Ten codes emerged from these questions. This represents a more consolidated response than the strengths of the OYAS (which elicited 15 codes), in that the interviewees focused on a smaller pool of similar concerns/limitations.

As with the strengths codes, the concerns/limitations codes were assigned inductively. For example, the "Lack of validity/reliability" code is assigned to "Any mention of concern regarding the validity or reliability of the assessment. This includes any mention of uncertainty or subjectivity in scoring, but does not include any mention of concern about sex offenders, which are captured in the 'inaccurate for sex offenders' code". In this example, although concerns about sex offenders' risk not being captured accurately would technically be a validity concern, it was clear that concerns about sex offenders were so prominent that this concern merited its own code. Otherwise, this information would have been lost within the "Lack of validity/reliability" code.[37] Notably, "Lack of validity/reliability" is the code that captures any concerns about the need for "professional discretion," where interviewees may have mentioned generally that the OYAS does not produce accurate risk levels, and feel that their own judgment serves as a more accurate measure of risk in some cases.

[35] See Q26 under General Agency/Facility Approach to Youth Assessment, and Q53 under Youth Assessment Practices in Appendix A.
[36] See Q25 under General Agency/Facility Approach to Youth in Appendix A.
[37] See Appendix D for a full list and definitions of the OYAS limitations codes.

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All ten codes from the full sample are displayed in Figure 1.7, with the top five most frequently named codes displayed in Figure 1.8. Figure 1.7 represents the results from the full sample, whereas Figure 1.8 provides a more comparative analysis between the states. As with the strengths, the code frequencies for concerns/limitations are relative to their font size, with the more frequently named codes represented by the larger fonts and the less frequently named codes represented by the smaller fonts.

The full list of limitations/concerns are as follows, with the case frequencies that named a given weakness/concern in the parenthetical: (1) "Lack of validity/reliability" (*n* = 95, 48.7%); (2) "Items on assessment" (*n* = 86, 44.1%); (3) "Poor implementation/training" (*n* = 84, 43.1%); (4) "Time-consuming" (*n* = 51, 26.2%); (5) "Utilization" (*n* = 44, 22.6%); (6) "Youths/family manipulate scores" (*n* = 31, 15.9%); (7) "Difficulty in case planning" (*n* = 27, 13.8%); (8) "Lack of buy-in" (*n* = 25, 12.8%); (9) "Inaccurate for sex offenders" (*n* = 24, 12.3%); and (10) "Automated system issues" (*n* = 24, 12.3%).Concerning the most frequently noted weakness/concern around validity/reliability, State 3 interviewees were especially concerned that the OYAS had not been validated on their youths, and many interviewees described feeling that the assessment information was inaccurate, and therefore irrelevant to their daily work.

There are some characteristics of the limitations/concerns responses that are unique from the strengths of the OYAS. Namely, the consensus drawn by nearly half of the full sample that a "Lack of validity/reliability" is a major concern of the OYAS (48.7%). This suggests a larger preoccupation within the sample about the validity and/or reliability of the tools (and tangentially, professional discretion). This sentiment has important implications for usage practices, as interviewees who do not believe the OYAS provides accurate information may likely be resistant to using its information in a meaningful way (e.g., measuring youths progress).

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As mentioned previously, multiple limitations/concerns are also represented within the strengths. This is particularly remarkable in light of the open-ended nature of the interview questions, as well as the inductive coding process. Essentially, the interviewees tended to have strong positive or negative feelings about some of the same elements of the OYAS. Case planning, implementation/training, and the automated system seem to be areas of contention among the interviewees, though typically, more perceived these elements as a concern/weakness than as a strength. To highlight one of these, the automated system, the current study revealed many issues with the "practicalities" of the automated OYAS system, namely that interviewees did not see the automated system as having a user-friendly interface. For example, an interviewee from State 2 requested capabilities for uploading case notes from the OYAS interview to provide context for anyone who needs to work a youth in the future.

Figure 1.7. Frequent Interview Sentiments for OYAS Limitations/Concerns Word Cloud (N = 195)

State 1 and State 2 interviewees did not express much concern specifically regarding the process of case planning with the OYAS, though this was a substantial concern for State 3. Only one State 2 interviewee and three State 1 interviewees expressed concern regarding case planning in relation to the OYAS, while 25.8 percent of State 3 interviewees (*n* = 23) did name "Difficulty in case planning" as a concern. Overall, there were concerns regarding case planning across the three states. These concerns were typically coupled with requests for more detailed case plan

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training, specific to helping frontline staff with incorporating case plans based on the OYAS results into their daily practice.

Figure 1.8 shows a comparison of the results of the top six most frequent codes for OYAS concerns and limitations analyzed by state. The code frequencies in Figure 1.8 represent the percent of respondents within a state who named a given weakness or concern in their response to these open-ended questions. Again, it is important to consider each state's unique context surrounding implementation and their unique pool of interviewee characteristics. Figure 1.8 shows divergence between states in multiple concerns, particularly for the "Items on assessment," "Lack of validity/reliability," and "Time-consuming". State 2 interviewees are disproportionately concerned over the items on the assessment, as 65.8 percent (n = 25) named this as a concern. Only 38.2 percent of State 3 interviewees (n = 34), and 39.7 percent of State 1 interviewees (n = 27) named "Items on assessment" as a concern. Across the three states, interviewees reported "cutting out" questions from the OYAS that they felt to be repetitive or time-consuming in order to shorten the assessment. For example, multiple interviewees noted that they disliked the item on the OYAS Disposition Tool related to self-esteem.[38]

Validation is clearly impactful for obtaining buy-in and readiness for change, which is a product of both organizational and individual factors (Backer, 1995). However, items on the assessment remained a large concern for 39.7 percent of State 1 interviewees as well, the first

[38] As part of the OYAS disposition tool, the youth are asked, "On a scale of 1 to 10, how cool do you consider yourself?" They are then asked, "If your friends had to rate you, how cool would they rate you on a scale of 1 to 10?" According to the OYAS scoring guide, "The purpose of this item is to determine the youth's level of inflated self-esteem. Score this item as 0 if the youth has an appropriate level of self-esteem and does not believe that he/she is better than the system. If the youth demonstrates inflated self-esteem, score this item as 1. Examples of inflated self-esteem, include statements that he/she is smarter than the system, can manipulate or 'play' the system, or they paint an image of him or herself that is higher than what others would offer. If the youth rates himself/herself as an 8 or higher and states that friends would rate him/her as an 8 or higher, score this item as 1. If the youth rates one of the questions as 8 or higher and 1 as 7 or lower, the interviewer should take into account the totality of the interview. If the youth rates both statements as 7 or lower, score this item as 0."

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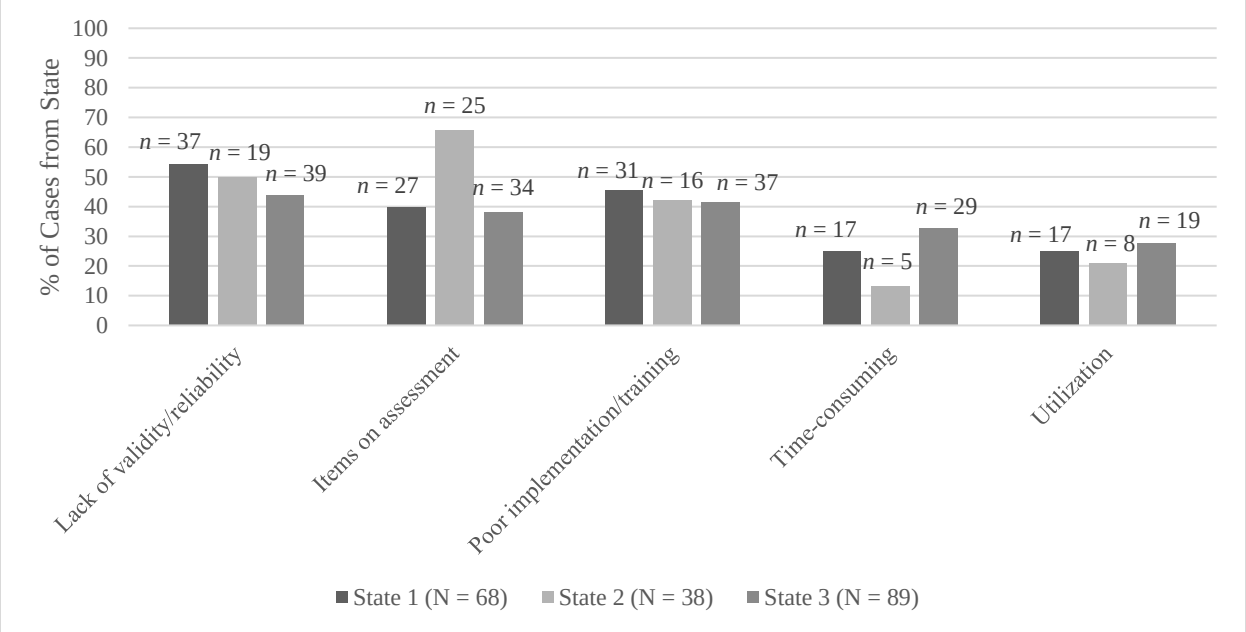
adopter of the tools, indicating that validation may not account for 100 percent of the concern over the assessment items. There was evidence in the interviews that staff who conduct the OYAS did not believe that certain items (e.g., high self-esteem) should be equated with antisocial behavior. There is also evidence that staff do not feel the assessment items go into enough detail about such things as gang membership, and that the "antisocial" scenarios built into the assessment are unrealistic. Here, there is a clash between tool validation and the "face validity" of some of the tools' items, which repeats itself in the survey data as well.

Figure 1.8. Top Five OYAS Limitations/Concerns for Interviews by State



In a similar vein, interviewees were differentially concerned about the validity and reliability of the tools, that is, the ability to accurately and repeatedly measure one's risk for recidivism using the OYAS. 50 percent of State 2 interviewees (*n* = 19), 43.8 percent of State 3 interviewees (*n* = 39), and 54.4 percent of State 1 interviewees (*n* = 37) named "Lack of validity/reliability" as a concern. While this was concerning to a larger portion of State 1 interviewees (for which the tools had been validated at the time of the interviews), all three states were genuinely concerned with this piece. This may speak to the need for ongoing training to

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monitor and improve tool reliability, and clearer communication regarding the validation process and what this means for the individual items, as well as the assessment as a whole.

Again, validation appears to play an important role in the buy-in process, but is not the sole determining factor, as evidenced by State 1 interviewees' concern for the tool's validity. Anecdotally, interviewees also expressed concern that the OYAS was "less valid" for certain subgroups, such as females, giving the example that high rates of substance use tend to increase females' risk level to an inaccurate degree on the OYAS, whereas they have more "needs" instead of actual risk to reoffend. As indicated in the beginning of this section, there was also a great deal of concern across the three states (12.3%) that the OYAS was not valid for the sex offender population, though these concerns merited a unique code ("Inaccurate for sex offenders").

The amount of time for completion of the more comprehensive OYAS tools (i.e., Disposition, Residential, Reentry) was also a concern for all three states, though more so for State 3 and State 1 than State 2. 13.2 percent of State 2 interviewees (n = 5), 32.6 percent of State 3 interviewees (n = 29), and 25 percent of State 1 interviewees (n = 17) named "Time-consuming" as a concern. This may also tie in to issues with the items on the assessment, as seemingly "irrelevant" items (e.g., high self-esteem) may have exacerbated the interviewees' perception that the OYAS is too lengthy.

In terms of implementation and training, 42.1 percent of State 2 interviewees (n = 16), 41.6 percent of State 3 interviewees (n = 37), and 45.6 percent of State 1 interviewees (n = 31) named this as a concern. Adding context to this concern, one interviewee explained that, as a member of the detention staff, the trainings were too "probation-focused," and not as applicable to their role as they would have liked. Numerous other interviewees noted that the lag in time from training to rollout was not only concerning, but that it decreased buy-in amongst the staff. Overall, these

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results suggest a similar amount of concern regarding implementation across the three states, at least in the context of open-ended questioning format used in the interviews. The following section explores implementation concerns with more detail.

Degree of Assessment Implementation and Views on Implementation Processes. Interviewees were asked to rate their agency's status with respect to the implementation of the OYAS.[39] All three states gave a relatively high rating for perceived degree of assessment implementation, ranging from 4.02 to 4.42 out of 5 (means and standard deviations are listed in Table 1.11). The impact of this sense of "arrival" to full implementation is seen in terms of its impact on continuous quality improvement practices and attention to fidelity in risk and needs assessment (see "Quality Assurance Measures" section).

Table 1.11. Interview Descriptive Statistics for the Degree of Assessment Implementation

Variable	**State 1 (N = 63)**	**State 2 (N = 42)**	**State 3 (N = 79)**	**Combined (N = 184)**
	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
Current Status With Respect to Assessment Implementation Process	4.47 (.76)	4.02 (.99)	4.10 (1.11)	4.21 (.99)

Due to missing data, totals are less than the reported sample size.

State 1 had the highest average rating for degree of assessment implementation, which was expected given the combination of its position as the first state in the current sample to implement the OYAS and the additional impetus for its use at the state level (youths have to have an OYAS completed before placement at a state facility; see the "State Context for Implementation and Usage section" for additional information). State 2 had the lowest average rating on this item, despite it being the second of the three states in the current sample to adopt and that the tools. State 3 was more similar to State 2 in their ratings and this may have been due to the fact that the OYAS

[39] See Q5 under Agency & Staff Characteristics in Appendix A.

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had not been validated in State 3.[40] A one-way ANOVA indicated a significant difference in ratings between the interviewees in the three states ($F = 4.366$, $df = 2$, $p = .05$). Across job classification within the full sample, there were also no significant differences. In this way, it appears that that sample, across state contexts and job classifications, maintained similar views regarding their agency's status with respect to the OYAS implementation process, and that overall, the OYAS had been fully implemented.

Process of Buy-In for the OYAS. Three questions identified staff perceptions of the buy-in process for the OYAS. The responses to these questions are presented in Table 1.12. First, the interviewees were asked if they were ever told the specific reasons for using the OYAS.[41] Second, the interviewees were asked if anyone within the agency took specific steps to facilitate buy-in.[42] Lastly, interviewees were asked if resources were introduced specifically to ease the rollout of the OYAS.[43] The variation in response rates to these questions can be partially explained by job tenure, as some of the interviewees were not at their current agency at the time of the OYAS rollout. Therefore, they did not have information regarding the OYAS buy-in process, at least at initial rollout.

Table 1.12. Interview Descriptive Statistics for the Process of Buy-In for the OYAS

Variable	**State 1**	**State 2**	**State 3**	**Total Sample**
Told Reasons for Using the OYAS?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	51 (75.0)	29 (76.3)	63 (70.8)	143 (73.3)
No	12 (17.6)	6 (15.8)	23 (25.8)	41 (21.0)
Unsure	5 (7.4)	3 (7.9)	3 (3.4)	11 (5.6)
Total	68 (100.0)	38 (100.0)	89 (100.0)	195 (100.0)
Steps Taken to Achieve Buy-in?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	35 (54.7)	16 (45.7)	35 (45.5)	86 (48.9)

[40] As part of this project, the OYAS Residential Tool and OYAS Reentry Tool were validated for a state agency in State 3 (see McCafferty, Newsome, & Sullivan, 2017 for further details). Separately, the OYAS is being validated for three counties in State 3 (but not by this research team).
[41] See Q20 under General Agency/Facility Approach to Youth Assessment in Appendix A.
[42] See Q21 under General Agency/Facility Approach to Youth Assessment in Appendix A.
[43] See Q27 under Implementing the OYAS in Appendix A.

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Table 1.12. Interview Descriptive Statistics for the Process of Buy-In for the OYAS

Variable		State 1	State 2	State 3	Total Sample
	No	21 (32.8)	14 (40.0)	39 (50.6)	74 (42.0)
	Unsure	8 (12.5)	5 (14.3)	3 (3.9)	16 (9.1)
	Total	64 (100.0)	35 (100.0)	77 (100.0)	176 (100.0)
Resources Introduced to Ease Rollout?		*n* (%)	*n* (%)	*n* (%)	*n* (%)
	Yes	30 (53.6)	24 (82.8)	48 (72.7)	102 (67.5)
	No	14 (25.0)	4 (13.8)	9 (13.6)	27 (17.9)
	Unsure	12 (21.4)	1 (3.4)	9 (13.6)	22 (14.6)
	Total	56 (100.0)	29 (100.0)	66 (100.0)	151 (100.0)

Due to missing data, totals are less than the reported sample size.

Table 1.12 shows particularly low numbers in light of what is known about effective implementation (Vincent et al., 2012; Vincent et al., 2018). Over 70 percent (73.3 percent) of interviewees reported being told at least one reason for implementing the OYAS, with a similar proportion in each state, though slightly lower in State 3 (70.8%). Commonly cited reasons for the implementation of the OYAS included the move to evidence-based practices, the need to identify youths' risk levels, and the desire for a validated tool. One interviewee stated that the OYAS trainers clearly communicated in the training that a statewide risk and needs assessment had the potential to reduce the overall incarcerated population of youths, and was adopted, at least in part, for this purpose. About half (48.9%) responded in the affirmative that steps were taken to achieve buy-in. As is discussed subsequently, this low number may have contributed to the levels of overall staff buy-in for the OYAS in all three states. To illustrate, interviewees in State 3 stated that they would have appreciated the OYAS trainers making the connection between risk and needs assessment, evidence-based practices, and the JDAI initiative more concretely. A different State 3 interviewee suggested the positive impact of starting trainings by asking the staff, "What do you want the tool to do for you?"

Over 67 percent of interviewees affirmed that resources were dedicated specifically to the OYAS rollout. Though State 1 had the highest average rating for degree of assessment

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implementation, the State 1 respondents indicated the lowest level of agreement that resources were dedicated to ease the rollout of the OYAS. This may have been a symptom of their greater distance from initial implementation, as interviewees may not recall the specifics of the strategies used (with State 1 being the first of the three states to implement the OYAS), but can also reflect a belief that more could have been done to facilitate the rollout of the assessment tools and process.

There was one significant differences in the results between the states, indicating that interviewees from the three states shared similar views about whether they were told the reasons for the OYAS. The significant difference was on the item regarding resources dedicated to easing the roll-out ($\chi^2_{(4)}$= 9.71, $p < .05$, *Cramer's V* = .18). State 2 had the highest affirmative response rate concerning resources introduced to ease rollout and State 1 the lowest. This is illustrated by the fact that once the OYAS was selected and adopted in State 2, the risk and needs assessment task force requested that there be in-state trainers for ease of training coordination and increased buy-in. In terms of job classification, there were no significant differences on these three items. As non-supervisory staff were significantly less likely to indicate that the OYAS provides useful information (see Table 1.9b), this particular job classification may be a) be less familiar with the purpose of the OYAS, and b) perceive less benefit in its use.

Though there is little research on this topic specifically, general insight on diffusion of policy and practice suggests that additional knowledge of the tool and/or the implementation process should translate into support for or satisfaction with the tool, as it reaches the agency (see Greenhalgh, Robert, MacFarlane, Bate & Kyriakidou, 2004). In light of the variation in whether personnel were told the reasons for using the OYAS, and whether resources were dedicated specifically to its implementation (i.e., about 70% gave an affirmative response to either item, see Table 1.12), we used multivariate linear regression to test whether knowledge of the

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implementation process increased the overall satisfaction with the tool. We controlled for whether interviewees administered the assessment, how long they have worked in the field (for descriptive statistics of the "Overall Satisfaction" item, see Table 1.10, and for descriptive statistics of the "OYAS Administrator" and "Job Tenure" variables, see "Descriptive Statistics and State-Specific Characteristics"). This test allowed for some insight into the conditional probability of satisfaction with the tool, given the two explanatory variables that we operationalized to represent knowledge of the implementation process. Specifically, knowledge of the implementation process was measured by (1) being told the reasons for the use of the OYAS, and (2) being aware of specific resources that were dedicated to its initial rollout. Both of these variables were recoded into binary, yes/no answers. People who were unsure or were not asked the question (i.e., legitimate skips) were coded as "no", resulting in 200 valid cases for this analysis.

The results of this regression indicated no significant differences in overall satisfaction with the OYAS between those with knowledge of the implementation process, and those without (N = 200). Further, the explanatory power of the independent variables was rather weak (R^2 = .024), and an F-test revealed the model itself was non-significant (F = 1.192, p = .315). We also completed an independent samples t-test to compare the mean levels of satisfaction for people coded as yes/no on either explanatory variable (i.e., "Told Reasons Why" and "Resources Used to Ease Rollout"). These tests were also non-significant (t = -.592, p = .555, and t = .123, p = .902, respectively). As such, there are two possible conclusions: first, our explanatory measures may not have fully captured the concept of knowledge of the implementation process; second, it is also possible that knowledge of the implementation process (as measured in the current analysis), has less impact on the level of satisfaction with the tool than other characteristics (e.g., job setting, job role, proximity to the assessment, experience with its uses in decision-making processes).

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State-specific strategies for garnering staff buy-in for the OYAS. Interviewees in all three states suggested that trainings and recertifications were the main strategies for garnering staff buy-in for the OYAS. In the same vein, it was common for interviewees to describe the trainings as "piecemeal" or "inconsistent," suggesting that, though they were often the only attempt at establishing buy-in, they could hinder it in some cases. Here, the importance of high quality, comprehensive, and evidence-based training is notable. More in-depth training on the purpose of the OYAS (including the purpose of each individual tool) was also suggested by a number of interviewees, as well as cross-training, that includes individuals from different agencies in different roles. As such, training is a necessary but insufficient ingredient for obtaining buy-in for risk and needs assessment. One state-level State 3 interviewee suggested the importance of asking staff, "What do you want the tool to do for you?" for establishing buy-in prior to conducting trainings. Though, the value in doing so is decidedly in whether trainers and/or agency leadership adjust their approach according to trainees' responses.

Aside from staff training and recertification, there were meaningful similarities and differences in the methods used by each state to achieve buy-in for the OYAS. Numerous State 2 interviewees noted the value in having all staff trained (not just those who conduct the tools), and stated that this helps all staff to understand the risk and needs assessment process and its value at their agencies. The interviewees in State 2 also noted that a multi-agency assessment task force was created specifically to help harness buy-in from stakeholders from all parts of the juvenile justice decision-making process. These task force members played an integral role in selecting the assessment and planning its statewide implementation. State 3 interviewees described capitalizing on the enthusiasm of those staff who bought-in (such as supervisors or newer staff) to be influencers for those who had not yet bought-in. Additionally, question and answer sessions were

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held twice annually to encourage the staff to ask questions and challenge their beliefs or assumptions about the inaccuracy or lack of utility of the OYAS. Lastly, interviewees described a long build-up to implementation, where state office employees and supervisors discussed the OYAS long before its actual adoption, which reportedly helped fuel anticipation.

State 2 interviewees noted that "higher-ups" in the county agencies and state office met with agency staff to discuss the OYAS prior to the start of training. At some agencies, all staff were trained in the OYAS (despite whether they conduct the assessments or not), so that they were familiar with its purpose and the process. The staff were trained to include OYAS information in case plans, reinforcing the notion that the information is important and useful and better enabling staff to monitor youths progress (though, State 2 did not use the OYAS case plan). Lastly, State 2 interviewees described keeping a website with all OYAS documents and policies, and having an OYAS task force as two other methods that have helped to encourage staff buy-in with the tools. This task force was comprised of probation officers and local community corrections staff, institution staff, special court staff, a trial judge representative, and a state-level representative. Their responsibilities included communicating with the developers of the OYAS throughout the validation process, and then drafting OYAS policy regarding certification and eligibility.

In State 1, state-level interviewees described their state central office as small, and having completed "natural buy-in" through seeing the entire process of the development, adoption, and implementation of the OYAS. Site visits from the central office to the individual counties have garnered buy-in by encouraging a dialogue between the state and the counties. In this way, state employees and local supervisors were able to discover staff misconceptions about the OYAS and address them. At the county level, some supervisors made continuous efforts to include the OYAS in daily conversations, referring back to the assessment at various decision points, (e.g., "What did

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the OYAS say?"). Supervisors found it helpful to frame the OYAS as a "piece of the puzzle", and not an end-all-be-all tool for dictating placement and supervision decisions. Lastly, the OYAS trainings were open to all staff who are interested in them, which meant that there was a mix of those mandated to training with those who were naturally interested (and therefore demonstrated some natural buy-in). It is unclear, however, how many staff who were not mandated took advantage of this opportunity.

Modifications to Usage/Implementation. Interviewees were asked about any changes made to the usage or implementation practices since the OYAS was first introduced in their respective agencies.[44] Their responses are presented in Table 1.13. The variation in response rates for this question can likely be attributed to job tenure, with some interviewees not having been at their agency long enough to have witnessed modifications to OYAS usage/implementation since initial rollout.

Table 1.13. Interview Descriptive Statistics for Modifications to Usage/Implementation

Variable	State 1	State 2	State 3	Combined
Modifications to Usage or Implementation Practices Since OYAS First Introduced?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	23 (39.7)	13 (41.9)	35 (56.5)	71 (47.0)
No	29 (50.0)	17 (54.8)	23 (37.1)	69 (45.7)
Unsure	6 (10.3)	1 (3.2)	4 (6.5)	11 (7.3)
Total	58 (100.0)	31 (100.0)	62 (100.0)	151 (100.0)

Due to missing data, totals are less than the reported sample size.

Overall, less than half (47.0%) of the total sample indicated that changes have been made since the rollout of the OYAS. A relatively large proportion of State 1 interviewees (10.3%) were uncertain if there have been modifications to the usage or implementation practices since the OYAS was first introduced in their state. State 3 interviewees exhibited a substantially higher level

[44] See Q30 under Implementing the OYAS in Appendix A.

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of agreement (56.5%) that changes have been made since rollout, which again may be a reflection of the shorter period of time since implementation and staff may have been more familiar with changes that have taken place.

State-specific examples of modifications to OYAS usage/implementation. The interviewees from all three states gave examples of modifications to the usage and implementation practices for the OYAS. One common modification was the addition of various OYAS tools as roll-out progressed, typically including the Disposition Screener and the Residential Tool. These were two tools that many interviewees indicated were not initially used when the OYAS was first implemented in their state, but were then adopted to better serve the youths.

State 3 interviewees indicated that three OYAS tools have been added since the initial rollout (i.e., Residential, Reentry, and the Disposition Screener). Additionally, some interviewees noted that the State 3 interview guide had been revised for the purpose of conducting reassessments. In terms of case plans, some interviewees indicated that these had been updated and were then used as an addition to the assessment process; however, State 3 did not employ one uniform case plan, and this change may reflect a change at one or more local-level agencies. One interviewee noted that training practices had been improved in conjunction with the statewide training group to include new OYAS information as it was captured.

Like State 3, State 2 interviewees named several modifications to the usage and implementation of the OYAS. First, a detention center was required to conduct OYAS assessments (presumably the Detention Tool) in place of a different diversionary tool that is not part of the OYAS, the Detention Risk Assessment Instrument (DRAI). Second, OYAS policies and procedures had been updated to reflect these changes, as well as the addition of the Disposition Screener in the state. Lastly, State 2 importantly became one of the first statewide participatory

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entities of JDAI starting in 2006, and continued its expansion across the state through 2016. JDAI calls for a comprehensive reform strategy to reduce the reliance on secure confinement for youths. After becoming a part of this initiative, the counties in State 2 began to link supervision levels to OYAS risk levels, and use this information to incarcerate as few youths as possible.

State 1 interviewees also indicated numerous modifications that had been made to the usage and implementation of the OYAS since rollout. For example, at one residential facility, the assessment was conducted by an intake social worker at the facility, as opposed to being conducted by someone from the county level at the time of referral. In addition, one interviewee indicated that reassessments were not completed every six months for youths in residential placement, but only prior to a youth leaving the facility for the community. In general, State 1 interviewees identified fewer modifications to usage and implementation, which may be an indication of State 1 having used the OYAS the longest, and that its processes surrounding OYAS usage and implementation are, consequently, more solidified.

Qualitative Evidence in Areas for Improvement for the Implementation of the OYAS. One of the key objectives of the study is to understand how implementation of the OYAS and related processes were perceived by staff. Notably, the research team wanted to understand the ways in which staff thought the implementation of the OYAS might be improved upon. These areas for improvement were identified through two open-ended questions. First, staff were asked how the implementation process might be improved.[45] Second, staff were asked what they would suggest to other agencies that are looking to implement a risk and needs instrument.[46] The responses to these questions are analyzed by state, as the OYAS was implemented independently in State 1, State 2, and then State 3.

[45] See Q28a under Implementing the OYAS in Appendix A.
[46] See Q29 under Implementing the OYAS in Appendix A.

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State-specific views on OYAS implementation processes. State 1 was the first of the three states included in this study to adopt the OYAS, and some of the interviewees' concerns about implementation reflected the fact that more time has passed since the initial rollout. State 1 interviewees voiced concerns about "housekeeping items," including "top-down" communication from state and agency leadership about recertification timelines and how to set up and utilize the automated system. Furthermore, concerns from the interviewees were reported about the lack of integration of the OYAS automated system with their existing framework, noting that case planning became more difficult when having to use two separate automated systems (i.e., the OYAS automated system and another extant case planning system) that do not communicate. This speaks to the importance of integrating service systems such that personnel are able to use them efficaciously.

In terms of training, State 1 interviewees expressed the need for more frequent booster trainings, and more trainings on the automated system and case planning, specifically. Related, interviewees also requested a more user-friendly interface with the automated system, with capabilities for uploading case notes from the OYAS interview. One State 1 interviewee noted that poor systems integration can reduce buy-in for a tool and its automated system, and how beneficial it would be to have a case management system that imports OYAS information directly, which would reduce the time staff spend inputting data.

The State 1 interviewees also noted that the time period between training and "going live" with the assessment was critical, and should be as short as possible. Interviewees were also concerned about quality assurance, and some suggested having a smaller team of OYAS assessors to encourage consistency, as opposed to training all or most staff at an agency to conduct the OYAS. Regardless of who receives the training, interviewees voiced concern that all staff should

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be made aware of the purpose and utility of the OYAS, with more of a focus on how to use the information after conducting the assessment.

State 2 interviewees provided many similar suggestions for improving the OYAS implementation process, including better communication about timelines and the benefits and potential uses of the tools. Interviewees also requested more frequent training opportunities and ongoing quality assurance efforts. In addition, State 2 interviewees were acutely aware of the importance of garnering staff buy-in, and suggested providing information sessions for all stakeholders (i.e., not just those who would be conducting or using OYAS information). One interviewee suggested a trial period for the tools, where staff could decide for themselves how it would be the most useful for a department. In this way, while the tools may be mandated in a state, each agency, department, and/or unit could have the opportunity to determine *how* to best introduce each tool for their setting.

State 3 interviewees expressed considerable concern over technical issues with the automated system, and difficulty in retrieving its data and forms. In terms of training, some State 3 interviewees called for more statewide booster trainings to facilitate inter-agency learning and collaboration. These same interviewees indicated that too much discretion in implementation was given to the individual counties, which promoted inconsistency in implementation. Contrarily, other State 3 interviewees stated that they would appreciate a more decentralized training process, whereby staff questions and concerns could be addressed more locally (and thus, in a timelier and more relevant fashion). Regardless of whether the process is centralized or not, it is clear from the interviews that there are certain necessary components for implementation (e.g., a streamlined, automated system, continuous booster trainings), and perhaps others where there could be local flexibility (e.g., quality assurance, promoting buy-in for secondary users). Another concern for

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State 3 interviewees was that the OYAS Diversion Tool was being conducted and scored after diversion was decided, so staff lost buy-in because they did not feel the impact of the tool for decision-making. To this point, while it is important to emphasize the importance of timing assessments, it is also important to promote the wealth of uses for its information (i.e., not just diversion decisions). Lastly, and similar to State 1 and State 2, the State 3 interviewees expressed the need for more guidance on how to use the information gathered by the OYAS more meaningfully in supervision and case management.

Quality Assurance Measures. Staff were asked if there are any quality assurance (QA) measures in place related to the implementation and use of the OYAS tools at their agencies.[47] These responses are presented in Table 1.14. The variation in response rates is due to the relative prevalence of job roles and/or settings in the interviewee sample. As the majority of interviewees were considered frontline staff and worked within a probation setting, it is possible that they were unaware of background QA processes, or did not identify QA processes as such, but as the regular duties of their supervisor, for example.

Despite over one-third of interviewees indicating that QA measures were in place, most agencies did not appear to engage in formal QA checks for the OYAS. These inconsistencies were somewhat reflective of the written policies for each state. In their written policy, State 2 did not formally mention QA procedures for the OYAS, but State 1 provided in-depth guidance. State 3 fell somewhere in-between, providing non-specific, "big-picture" guidance for agencies to create their own QA processes. At some of the agencies, specific individuals were identified as dedicated QA staff. In these instances, staff noted how helpful it was to have one person they could turn to for assessment related questions.

[47] See Q37 under Youth Assessment Practices in Appendix A.

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Table 1.14. Interview Descriptive Statistics for Quality Assurance Measures

Variable	State 1	State 2	State 3	Combined
Quality Assurance Measures in Place?	*n* (%)	*n* (%)	*n* (%)	*n* (%)
Yes	20 (30.8)	11 (32.4)	31 (44.9)	62 (36.9)
No	30 (46.2)	17 (50.0)	25 (36.2)	72 (42.9)
Unsure	15 (23.1)	6 (17.6)	13 (18.8)	34 (20.2)
Total	65 (100.0)	34 (100.0)	69 (100.0)	168 (100.0)

Due to missing data, totals are less than the reported sample size.

Of 167 responses represented in Table 1.14, only 63 interviewees (36.9%) indicated that quality assurance measures were in place. Follow-up questions revealed that these QA measures were more likely reflective of staff management techniques, meaning that they measured the frequency or timeline of conducting of an OYAS, and not the quality of that assessment process and its outcomes. For example, supervisors mainly monitored whether assessments were completed within a certain time frame.[48] From the interview responses, many sites seemed to have little or no formal QA measures in place for the OYAS, specifically. Some staff indicated that supervisors were not trained or proficient in the OYAS, which presented challenges to monitoring staff on their use of the tools. One standout in this respect comes from one agency in State 3, where local trainers had previously sat in on interviews to monitor the assessment scoring and provide feedback to newly trained staff.

There was a relatively small proportion of affirmative responses for all three states, ranging from about 30 percent in State 1, to 32 percent in State 2, and about 45 percent in State 3. Compared to others, these particular questions drew out the most uncertainty from interviewees, with an average of 12 percent being unsure if there were any OYAS QA processes in place. This uncertainty, combined with the general lack of QA processes, shows that there may be an overall perception that the OYAS has been implemented (i.e., the process is complete), rather than it being

[48] In fact, the automated system automatically reminds supervisors when staff have missed a deadline.

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an ongoing process that needs consistent monitoring and updating. This is consistent with the results in Table 1.11, which showed that the perceived degree of assessment implementation was rated just above a four out of five points for each state.

Overall, the interviews noted some concerning practices that should have been identified in routine QA practices. For example, the research team found that staff were not consistently using the tools as designed. As described above, the longer assessment tools in the system require multiple data sources be used to score a youth's risk and needs level. Namely, collateral information and a face-to-face interview are required, while a youth self-report questionnaire is recommended. During the interviews with juvenile justice personnel, it became clear that some localities used the self-report questionnaire in place of a face-to-face interview. However, the self-report questionnaire was designed as a supplement to—not a replacement of—the interview guide.

State-specific quality assurance measures. Interviewees from all three states described the formal and informal quality assurance (QA) processes that were in place at their respective agencies. As stated previously, interviewees from all three states were quick to name management practices as a form of quality assurance. Examples of this included supervisors reviewing the timing of reassessments to ensure they were conducted at least once every six months, checking the automated system to ensure a case plan was completed, or that overrides were not occurring too frequently. Some of these QA "checks" seemed to foster the feeling among interviewees that the OYAS assessments were being done in order to "check a box" and not for their intended purpose. Aside from these management practices, interviewees were mostly unable to name additional, more formal QA processes that were in place at their agencies, which suggests that such approaches were rare. While rare, staff were able to describe a few of these processes during interviews, and these are highlighted below.

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State 3 interviewees reported that many counties had their own QA systems in place, and were also encouraged by the state to have local trainers and to have supervisors observe OYAS interviews after the staff were trained and give feedback as needed; however, these did not occur with any regularity. Interviewees also described supervisors "signing off" on case plans once reviewing them for their content and assuring that they matched the results of the assessment. Random file checks also occurred for this purpose. Overall, though there was some indication of QA practices, it did not appear to be systematic within the agencies across the state.

State 2 interviewees revealed a somewhat similar pattern to State 3, in that there did not appear to be a systematized process of quality assurance, but a more loosely coupled system of managerial checks. At the state level, audits were run to ensure that each county was conducting the OYAS within the proper time frames. At the local level, agencies were encouraged to create their own quality assurance processes. Some interviewees described supervisors sitting in on OYAS interviews and scoring them simultaneously to check for reliability. One site noted that an annual training allowed their agency to highlight and discuss common scoring problems using case examples and role playing. In another site, a quality assurance position was in the process of being created, but at the time of the site visits, there was not currently any one staff member dedicated to this purpose.

State 1 interviewees also described informal quality assurance processes. For example, staff members were encouraged to track their own timelines for initial assessments and reassessments. In addition, if there were questions about scoring certain items, it was not uncommon that these would be discussed during staff meetings. Lastly, much like State 3 and State 2, State 1 interviewees indicated that supervisors verify that scores are accurately recorded in the automated system and that assessments are completed on time, but there was not a strong,

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consistent focus on the quality of the information gathering process, or decisions in usage or case management.

General Conclusions from the Interview Data. The 217 juvenile justice personnel semi-structured interviews conducted at 22 sites across three states in the current study included staff across many different job settings, titles, and classifications, as well as varying degrees of familiarity with the OYAS. In general, however, a large proportion of interviewees worked in probation settings as "frontline" staff, often tasked with conducting the OYAS and translating its results into case management and supervision decisions. There was also, however, a degree of variation in these job characteristics, as the interview sample was purposive, and contained a larger degree of OYAS "champions" than will be seen in the web-based survey data. These "champions" of the OYAS may have come in the form of state or agency leadership, but also those frontline workers and supervisors who participated in the OYAS training/coordination efforts in their state and/or locality. Regardless of the job characteristics of the interview sample, most individuals worked at their agency for a significant amount of time, with the average job tenure in any given state exceeding 10 years.

There are several key points to reiterate in light of the interview findings outlined in this report. First, there is strong baseline support for the use of JRNA, and its implications for increasing fairness in juvenile justice decision-making and service provision. Interviewees were also in general agreement that the OYAS benefits their agency, the youths with whom they work, and also provides valuable information regarding criminogenic needs. However, differences arose in the level of agreement with these items across job classifications, highlighting the need to be mindful of the impact of different job roles when implementing a risk and needs assessment. Individuals with different job classifications will have unique experiences with JRNA and

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perceptions may diverge, which has implications for buy-in. This resonates with past work on the role that judges' resistance or buy-in plays in effective risk and needs assessment implementation (Vincent et al., 2012).

Second, risk and need assessment results information is being used in important ways, including determining youths supervision level, measuring youths progress, matching youths to services, and assisting in diversion/disposition/release decisions. There is room, however, for this information to be used in other ways (as supported in the risk and needs assessment literature), including matching youths to staff, developing specialized caseloads, or allocating resources within an agency. Using OYAS information in these other ways may bolster the level of support (i.e., buy-in) for its importance in the daily operations of juvenile justice agencies, and sharing OYAS information with outside agencies (for treatment purposes) may improve buy-in from stakeholders. Sharing OYAS information in a systematic way was not a common practice in any of the three states.

Third, there is a strong sense among the interviewees that their agencies/facilities have fully implemented the OYAS. While this item drew the highest degree of consensus among the sample, this "sense of arrival" was contradicted by a lack of systematic quality assurance processes specific to the OYAS. It is essential to note the importance of the ongoing nature of the implementation process, as booster trainings and ongoing formal "quality checks" are necessary in order to maintain and/or improve the accuracy and consistency of scoring a risk and needs assessment. Several effective quality assurance measures and methods to obtain buy-in were outlined in the interviews, and will be highlighted in the implications and recommendations. However, these processes were lacking in all three of the states.

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Fourth, an overwhelming amount of concerns with the OYAS relate to perceptions that the OYAS is not valid or reliable. While the OYAS had been validated in two of the three states at the time of data collection, increasing the validity and reliability of the assessment through continued training and QA processes may be key to promoting buy-in, which may lead to more optimal usage practices. The following section transitions from reporting in-person interview results, to reporting the web-based survey results. Finally, an integrated analyses of the two sets of the results follows.

Web-Based Survey Findings

As stated previously, a 52-question web-based survey was completed by 1,013 juvenile justice personnel. Survey completers included judges, supervisors, probation officers, case managers, and treatment staff across different types of agencies (e.g., secure detention/institution or treatment facilities, probation and parole agencies, and community-based service providers). The four main sections of the survey included: 1) general questions concerning assessment use and practices, 2) implementing the assessment, 3) applying the assessment information, and 4) staff information. For those respondents who indicated that they administer the OYAS, a randomly-allocated vignette was assigned for them to score as a test of reliability. Whereas the results of the interview data alone were presented in the previous sections, the results of the web-based survey data are presented here. At times, these data are analyzed by state to capture the nuanced impact of state context on the broader perceptions of risk and needs assessment and implementation across juvenile justice personnel. Other times, the full survey sample was analyzed across OYAS administrator/non-administrator roles to capture differences in perceptions of these unique relationships to the OYAS. Whereas figures are presented that contain the detailed distribution of frequencies for each of the following items across OYAS user role, state-specific frequencies are only displayed where significant differences were found.

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Overall Satisfaction with the OYAS. Table 1.15 provides the descriptive statistics for respondents' overall satisfaction with the OYAS, separated by those who administer the OYAS (i.e., OYAS administrator) and those who do not (i.e., OYAS non-administrator).[49] The detailed distribution of satisfaction levels by OYAS user-role is also presented in Figure 1.9. This comparison of OYAS administrators and non-administrators is explored within the survey data as these two groups were large enough for a meaningful comparison, despite certain items having lower response rates. This distinction allowed the research team to draw out the potential impact of the OYAS administrators' familiarity with the assessment on their perceptions of it. The item shown in Table 1.15 asked participants to rate their overall satisfaction with the OYAS tool(s) on a scale from 1 (not at all satisfied) to 5 (completely satisfied), and responses spanned this range. Generally, OYAS administrators reported lower average satisfaction levels ($\bar{x}$ = 2.96, *sd* = 1.11) than the non-administrators ($\bar{x}$ = 3.13, *sd* = 1.10); however, Chi-Square analyses indicated no significant difference in ratings between these two groups.

Of the state samples, State 3 had the lowest average overall satisfaction with the OYAS ($\bar{x}$ = 2.93, *sd* = 1.10), and State 1 the highest ($\bar{x}$ = 3.08, *sd* = 1.03). Though the difference was non-significant, it illustrated the potential influence of tool validation on personnel perceptions in a given state, as the OYAS was validated in State 1, and not State 3. State 1 survey respondents may also have been aware that the tool was validated in their state, and therefore perceived it to be a more satisfactory tool. Anecdotally, it was common for State 3 interviewees to mention the lack of OYAS validation as a large concern for personnel in their state. Another potential reason State 1 respondents reported higher overall satisfaction is that they have been using the OYAS the longest of the three states included in this study and respondents may be more accustomed to it.

[49] See Appendix B for the full web-based survey, including the text for all items presented in this section of the report.

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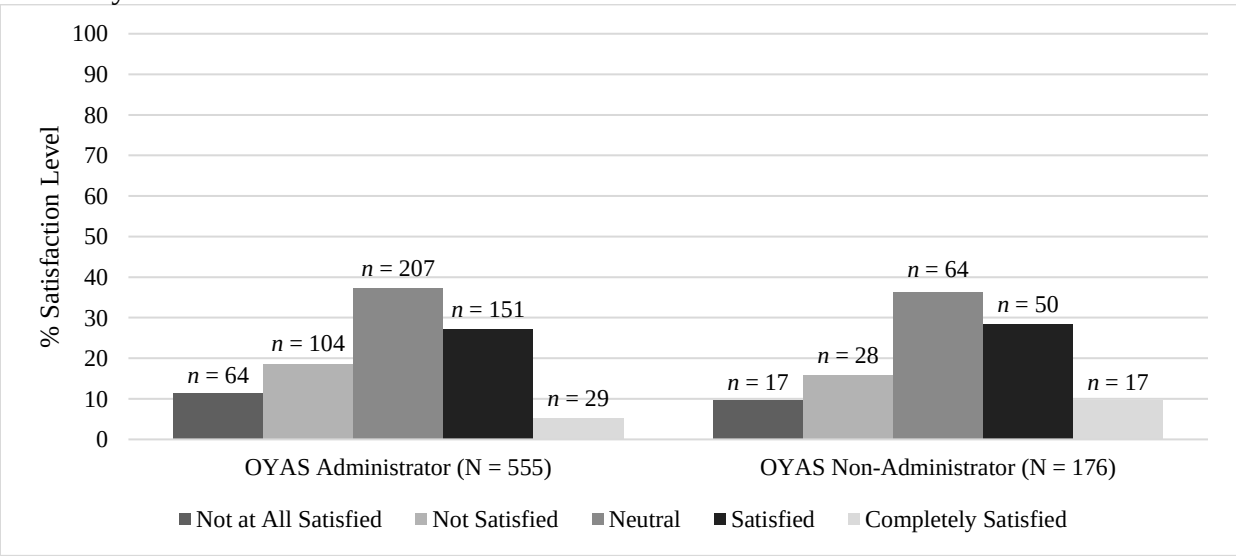
Table 1.15. Survey Descriptive Statistics for the Overall Satisfaction with the OYAS

	Min.	**Max.**	$\bar{x}$	***sd***
Analysis by OYAS User-Role				
OYAS Administrators (N = 555)	1	5	2.96	1.06
OYAS Non-Administrators (N = 176)	1	5	3.13	1.10
Analysis by State				
State 1 (N = 350)	1	5	3.08	1.03
State 2 (N = 283)	1	5	3.00	1.06
State 3 (N = 232)	1	5	2.93	1.10

Due to missing data, totals are less than the reported sample size.

The detailed distribution of OYAS user-role responses to the "Overall Satisfaction" item in Table 1.15 are depicted in Figure 1.9 below. The modal response from OYAS administrators and non-administrators was a three, indicating neutral feelings toward the assessment. A higher proportion of non-administrators rated their level of satisfaction with the OYAS as "satisfied" (28.4%) or "completely satisfied" (9.7%), whereas the OYAS administrators were more likely to indicate some level of dissatisfaction (30.2%). In general, these separate distributions are quite similar, indicating that OYAS administrators did not seem to have meaningfully different levels of satisfaction with the OYAS as non-administrators.

Figure 1.9. Survey Detailed Distribution of Responses for Level of Overall Satisfaction with the OYAS by User Role



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The Perceived Usefulness of the OYAS. Table 1.16 displays the descriptive statistics for staffs' responses to the following statement, "Please indicate your level of agreement with the following statements related to implementing the OYAS in your agency: The use of the OYAS has made my job easier." Responses ranged from 1 (strongly disagree) to 5 (strongly agree). The detailed distribution for this item is also presented in Figures 1.10a-b. Overall, those who do not administer the OYAS reported higher average agreement levels ($\bar{x}$ = 2.92, *sd* = 1.01) than those who do administer the tools ($\bar{x}$ = 2.85, *sd* = 1.06). A Chi-Square test indicated that this difference was significant, with a modest relationship between OYAS user role and whether the OYAS is perceived to make the respondents' job easier ($\chi^2_{(4)} = 17.32$, $p < .05$, Cramer's $V = .16$). Therefore, while both groups tended to disagree or at best had neutral views that the use of the OYAS made their job easier, OYAS administrators were significantly more likely to disagree with that statement.

An analysis by state revealed that, similar to the "Overall Satisfaction" item, State 3 respondents provided the lowest average rating for whether the use of the OYAS makes their jobs easier ($\bar{x}$ = 2.74, *sd* = 1.10). The State 2 sample provided the highest average rating ($\bar{x}$ = 2.96, *sd* = 1.00). Overall, the three state samples leaned toward disagreement with the statement, though the difference between states was significant ($\chi^2_{(8)} = 18.17$, $p < .05$). However, the results of a Chi-Square test indicated a weaker relationship between this item and state membership (Cramer's $V = .11$) than between this item and OYAS user role.

In Figure 1.10a below, it is noteworthy that the modal response for OYAS administrators and non-administrators is different. While OYAS non-administrators tended to indicate a "neutral" response to the "Makes Job Easier" item (38.1%), OYAS administrators tended to indicate that they "agreed" with this statement (32.2%). However, within the administrator category, it was

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more likely, in general, that respondents indicated that they "disagree" (31.6%) or "strongly disagree" (10.2%) with this statement, rather than "agree" (32.2%) or "strongly agree" (2.5%). Overall, OYAS administrators provided more variation in response than their non-administrator counterparts, as evidenced by their respective standard deviations (*sd* = 1.06 and 1.01).

Table 1.16. Survey Descriptive Statistics for the Use of the OYAS & "Makes Job Easier"

	Min.	**Max.**	$\bar{x}$	***sd***
Analysis by OYAS User Role^				
OYAS Administrators (N = 512)	1	5	2.85	1.06
OYAS Non-Administrators (N = 155)	1	5	2.92	1.01
Analysis by State^				
State 1 (N = 318)	1	5	2.91	1.02
State 2 (N = 245)	1	5	2.96	1.00
State 3 (N = 214)	1	5	2.74	1.10

Due to missing data, totals are less than the reported sample size.
^ $p < .05$

Figure 1.10a. Survey Detailed Distribution of Responses for Level of Agreement for the Usefulness of the OYAS by User Role

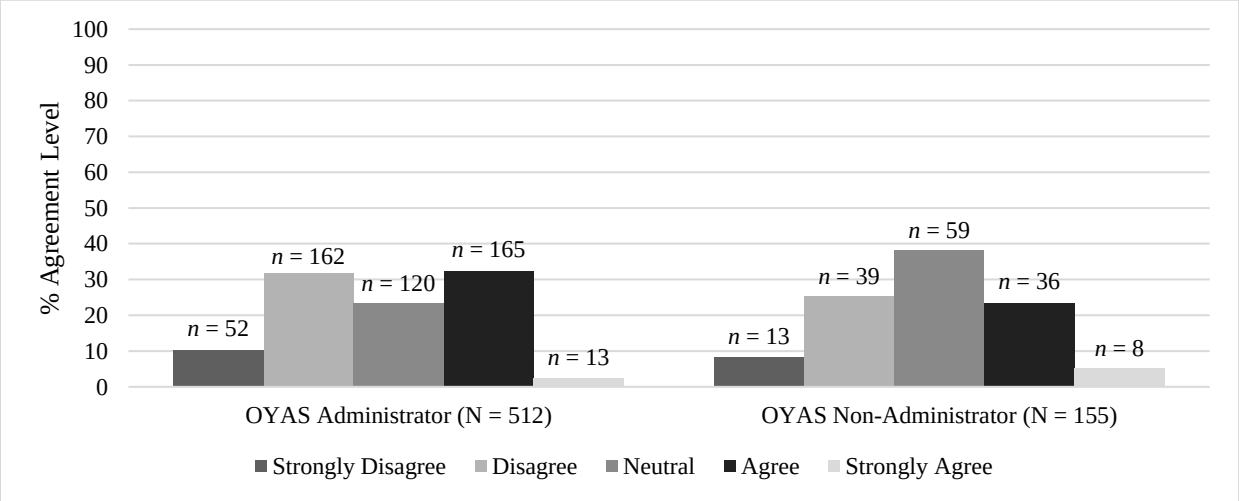

Figure 1.10b below contains the frequencies for the "Makes Job Easier" item across states, as this distinction elicited significantly different responses (see Table 1.16). Here, it is apparent that State 3 respondents expressed stronger disapproval that the OYAS was useful in making their jobs easier, as they were the only state in which "agree" was not the modal response. Curiously,

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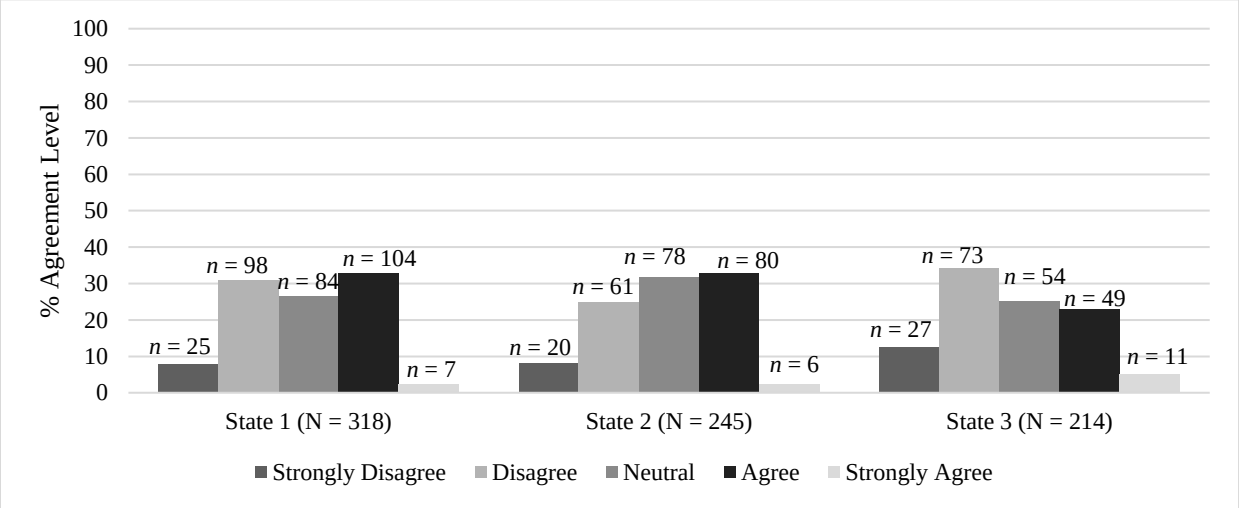
State 3 also had the highest proportion of respondents in the "strongly agree" category. These individuals may be the "champions" of the assessment (i.e., those responsible for planning the assessment implementation, training staff, and/or creating/carrying out OYAS policies).

Figure 1.10b. Survey Detailed Distribution of Responses for Level of Agreement for the Usefulness of the OYAS by State



Perceptions of Benefit to Youths. Table 1.17 contains the descriptive statistics for respondents' levels of agreement, from 1 (strongly disagree) to 5 (strongly agree), concerning whether the OYAS benefits the youths in their agencies. Figure 1.11 provides the detailed distribution of their responses, separated by the two samples of interest: OYAS administrators and non-administrators. Those who administer the OYAS reported a lower average level of agreement with this statement ($\bar{x}$ = 3.20, *sd* = .99) when compared to non-administrators ($\bar{x}$ = 3.42, *sd* = .95); however, this difference was non-significant. More so than the previous two items ("Overall Satisfaction with the OYAS" and "Level of Agreement for the Usefulness of the OYAS"), the two samples generally expressed agreement that the OYAS benefits the youths in their agencies.

Analyzing the item by state, State 3 again provided the lowest average rating, though the difference was non-significant between states. In general, all three state samples leaned toward perceiving the OYAS to be beneficial to the youths in their agency, though State 2 respondents gave the highest average level of agreement with this item.

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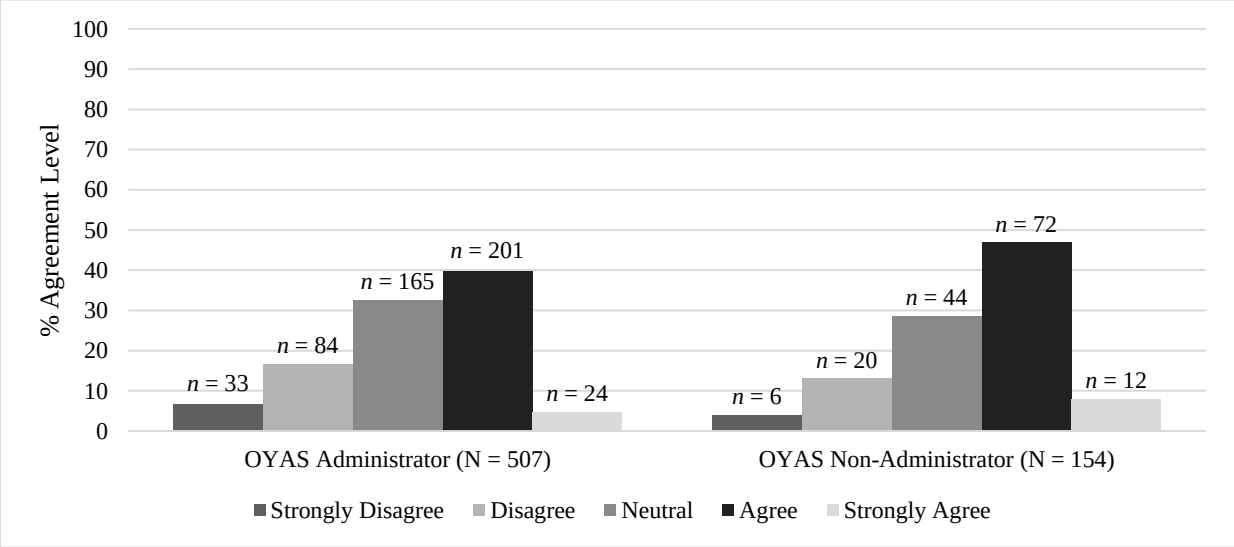
Table 1.17. Survey Descriptive Statistics for the OYAS Benefits Youths in Agency

	Min.	**Max.**	$\bar{x}$	***sd***
Analysis by User Role				
OYAS Administrators (N = 507)	1	5	3.20	.99
OYAS Non-Administrators (N = 154)	1	5	3.42	.95
Analysis by State				
State 1 (N = 316)	1	5	3.27	.95
State 2 (N = 243)	1	5	3.32	.93
State 3 (N = 212)	1	5	3.22	1.04

Due to missing data, totals are less than the reported sample size.

The detailed distribution of responses for the "Benefits Youths" item are displayed by user role in Figure 1.11 below. For both samples, "agree" was the modal response, followed by "neutral". Notably, the non-administrator sample was more likely to "agree" (46.8%) or "strongly agree" (7.8%) with this statement than the OYAS administrator sample, and a larger portion of the administrator sample was more likely to "disagree" (16.6%) or "strongly disagree" (6.5%) than the non-administrator sample. However, as the overall divergence in ratings between samples was non-significant, it is clear that respondents generally agree that the OYAS benefits the youths in their agency.

Figure 1.11. Survey Detailed Distribution of Responses for Level of Agreement for the OYAS Benefits Youths in Agency by User Role



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Perceptions of the OYAS and Consistency. Table 1.18 illustrates the descriptive statistics for the respondents' level of agreement from 1 (strongly disagree) to 5 (strongly agree) regarding whether the OYAS increases consistency in rules, policies, and procedures in assessment practices. Additionally, Figure 1.12 presents the detailed distribution of responses for this item by OYAS user role. While both samples generally agreed with this statement, the non-administrator sample indicated a higher average rating ($\bar{x}$ = 3.57, *sd* = .91) than the OYAS-administrators ($\bar{x}$ = 3.36, *sd* = .97). There was no significant difference in ratings between the user role samples. This "Consistency" item in particular retrieved the highest level of agreement among either sample when compared to the other items. The difference between the state-specific samples was also non-significant, with all three states generating a similar mean score and variation statistic.

Table 1.18. Survey Descriptive Statistics for the OYAS Increases Consistency

	Min.	**Max.**	$\bar{x}$	***sd***
Analysis by User Role				
OYAS Administrators (N = 527)	1	5	3.36	.97
OYAS Non-Administrators (N = 160)	1	5	3.57	.91
Analysis by State				
State 1 (N = 329)	1	5	3.34	.96
State 2 (N = 260)	1	5	3.50	.93
State 3 (N = 218)	1	5	3.49	.98

Due to missing data, totals are less than the reported sample size.

Figure 1.12 displays the detailed distribution of responses by user role for the "Consistency" item in Table 1.18. The two samples shared the same modal category (i.e., agree) and in general shared a very similar distribution of responses. However, OYAS non-administrators did appear to be more enthusiastic in their agreement with this statement (63.1% of cases) than OYAS administrators (51.6%). Similar to the belief that the OYAS benefits the youths,

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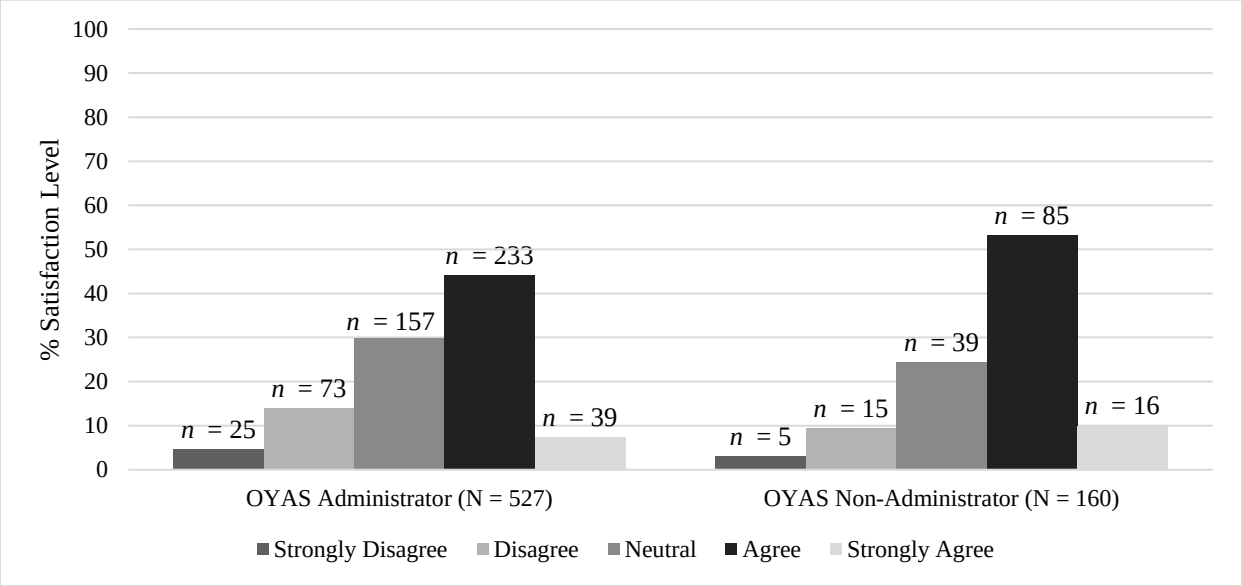
participants were in high agreement that the OYAS increases consistency in rules, policies, and procedures regarding assessment practices.

Figure 1.12. Survey Detailed Distribution of Responses for the Level of Agreement for the OYAS Increases Consistency by User Role



Perceptions of OYAS Implementation. Respondents were asked to rate their level of agreement that there is staff support for the implementation of the OYAS from 1 (strongly disagree) to 5 (strongly agree). The descriptive statistics are displayed in Table 1.19, and the detailed distribution of responses is also depicted in Figure 1.13. Those who administer the OYAS reported slightly lower average levels of agreement ($\bar{x}$ = 3.35, *sd* = 1.00) compared to non-administrators ($\bar{x}$ = 3.39, *sd* = 1.05), but this difference was non-significant. This follows the pattern of some of the previous items, where OYAS administrators provided a slightly lower average score than non-administrators, but in general the samples' perceptions converged. There was also no significant difference when analyzing the responses by state, though State 2 provided the highest average rating and State 3 the lowest.

Though responses in the full sample ranged from 1 (strongly disagree) to 5 (strongly agree), in general it is agreed upon that there is staff support for the implementation of the OYAS, and

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this level of perceived support from staff was higher than the average responses provided in the "Personal Support for the OYAS" item. This is in contrast to the interview data, where personal level of satisfaction with the OYAS was rated higher than the perceived level of staff support for the use of the OYAS. It is possible that this was the result of a "method effect," whereby interviewees, by the nature of being face-to-face with an interviewer, were more apt to frame their own perception of the OYAS more positively (see, e.g., Newman et al., 2002). Additionally, as the interview sample was purposive, it potentially contained more state and local "champions" of the assessment than in the survey sample.

Table 1.19. Survey Descriptive Statistics for Staff Support for Implementing the OYAS

	Min.	**Max.**	$\bar{x}$	***sd***
Analysis by User Role				
OYAS Administrators (N = 509)	1	5	3.35	1.00
OYAS Non-Administrators (N = 155)	1	5	3.39	1.05
Analysis by State				
State 1 (N = 314)	1	5	3.39	.99
State 2 (N = 245)	1	5	3.46	.91
State 3 (N = 215)	1	5	3.27	1.08

Due to missing data, totals are less than the reported sample size.

Figure 1.13 below contains the detailed distribution of responses from the "Staff Support" item in Table 1.19 by OYAS user role. It reveals a relatively similar distribution of responses between the OYAS administrator and non-administrator samples for this item. The largest difference was in the "strongly agree" category, where non-administrators expressed a higher level of enthusiasm (9%) than OYAS administrators (5.7%). Less than one-quarter of either sample disagreed that there is staff support for the implementation of the OYAS.

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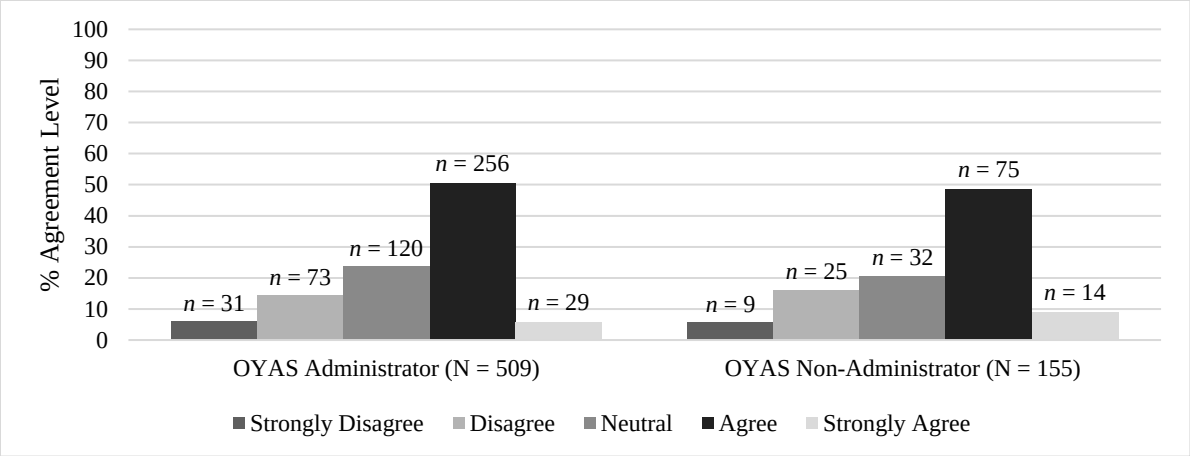
Figure 1.13. Survey Detailed Distribution of Responses for Level of Agreement for Staff Support for Implementing the OYAS by User Role



Broader Attitudes Toward OYAS Implementation. The web-based survey also asked respondents to report their level of agreement with a series of statements regarding the implementation of the OYAS in their agency from 1 (strongly disagree) to 5 (strongly agree). Here, we examine the collective responses of the full sample, and do not separate the results by OYAS administrators and non-administrators. This is in order to gauge overall staff attitudes toward implementation more broadly, with items involving the assessment itself, the policies surrounding the assessment, and the implementation environment both inside and beyond the individual agencies. Significant differences in responses between the states are noted as they occur. Some items target agreement with the presence of empirically-supported implementation practices at respondents' agencies (e.g., a written protocol regarding the OYAS), whereas other target agreement for their absence (e.g., formal training *not* being offered).

Table 1.20 provides the descriptive statistics for the implementation items and Figure 1.14 displays the detailed distribution of responses. The items in Table 1.20 are in order of the highest average level of agreement to the lowest. Respondents had the highest level of agreement that there is a protocol for how to use the OYAS ($\bar{x}$ = 3.96, *sd* = .76), and that there are clear guidelines for when to use the OYAS ($\bar{x}$ = 3.90, *sd* = .80). These two items reflect the preparation level of the

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individual agencies in implementing the OYAS, as written policies and procedures are considered a best practice for implementing a risk and needs assessment (Vincent et al., 2012).

There is also a high level of agreement that the OYAS tools are easy to read, interpret, and use ($\bar{x}$ = 3.59, *sd* = .99). While respondents tend to also agree that finding resources to properly address youths' needs is difficult ($\bar{x}$ = 3.15, *sd* = 1.10) and that achieving staff buy-in is challenging ($\bar{x}$ = 3.14, *sd* = 1.00), respondents tend to disagree that formal OYAS training is *not* routinely offered ($\bar{x}$ = 2.98, *sd* = 1.13), or that there is inconsistency in the implementation of the OYAS ($\bar{x}$ = 2.65, *sd* = 1.05). The "Formal training in the OYAS is *not* routinely offered" item in particular spawned a larger standard deviation (*sd* = 1.13) than any other item, highlighting local level variation in implementation.

Table 1.20. Survey Descriptive Statistics for the Broader Attitudes Toward Implementation

	Min.	**Max.**	$\bar{x}$	***sd***
There is a protocol for how to use the OYAS (N = 772)	1	5	3.96	.76
There are clear guidelines for when to use the OYAS (N = 775)	1	5	3.90	.80
The OYAS tools are easy to read, interpret, and use (N = 775)	1	5	3.59	.99
Finding resources to properly address youths' needs identified from the OYAS is difficult (N = 773)	1	5	3.15	1.10
Staff buy-in is hard to achieve (N = 776)	1	5	3.14	1.00
Formal training in the OYAS is *not* routinely offered (N = 771)	1	5	2.98	1.13
Implementation of the OYAS is *not* consistent (N = 773)	1	5	2.65	1.05

Due to missing data, totals are less than the reported sample size.

When analyzing these data by state, three important differences arise in attitudes toward implementation. First, a Chi-Square test revealed that State 3 respondents were significantly more likely to agree that there is a protocol in place for the OYAS ($\chi^2_{(8)}$ = 18.38, $p < .05$, Cramer's V = .11). This may speak to the importance of not only having a protocol in place, but having one that makes sense to those who will be referring to it and abiding by its contents (i.e., State 3 respondents

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consistently expressed less approval of the OYAS and its uses, yet showed the highest level of agreement that a protocol is in place).

The second important difference in broader attitudes toward implementation between the state samples involved the resources available for treatment. State 3 interviewees were significantly more likely to agree that resources for treatment are difficult to find ($\bar{x}$ = 3.41, *sd* = 1.12, $\chi^2_{(8)}$ = 42.32, p < .001). This item in particular shows the strongest relationship to state membership than any other implementation item (Cramer's *V* = .17). This barrier to treatment may impact personnel perceptions of the implementation and usefulness of any JRNA, and as in this study, specifically the OYAS. State 1 provided the lowest level of agreement with this item ($\bar{x}$ = 2.91, *sd* = 1.04), indicating that these personnel are highly satisfied with the treatment resources available to the youths in their agencies/facilities. This may speak to the efforts mentioned previously in the report in the State Context for Implementation and Usage.

The last major difference in broad attitudes toward implementation involved the availability of training. A Chi-Square test showed a significant difference for this item between the three states ($\chi^2_{(8)}$ = 27.71, *p* < .05, Cramer's *V* = .13), with State 1 providing the highest average rating ($\bar{x}$ = 3.15, *sd* = 1.11), and State 3 the lowest ($\bar{x}$ = 2.75, *sd* = 1.12). As such, State 3 respondents agreed significantly more that formal OYAS training *is* routinely offered. Once more, this suggests the importance of not only providing regular training opportunities, but ensuring their quality or applicability to staff. This is evidenced by State 3's generally low levels of satisfaction for the OYAS and its uses, but yet high level of agreement that training is available.

In order of the highest level of agreement from left to right across the X-axis, Figure 1.14 contains the detailed distribution of responses to the implementation items in Table 1.20. This figure illustrates the unique variation in responses for each implementation item, with "Training"

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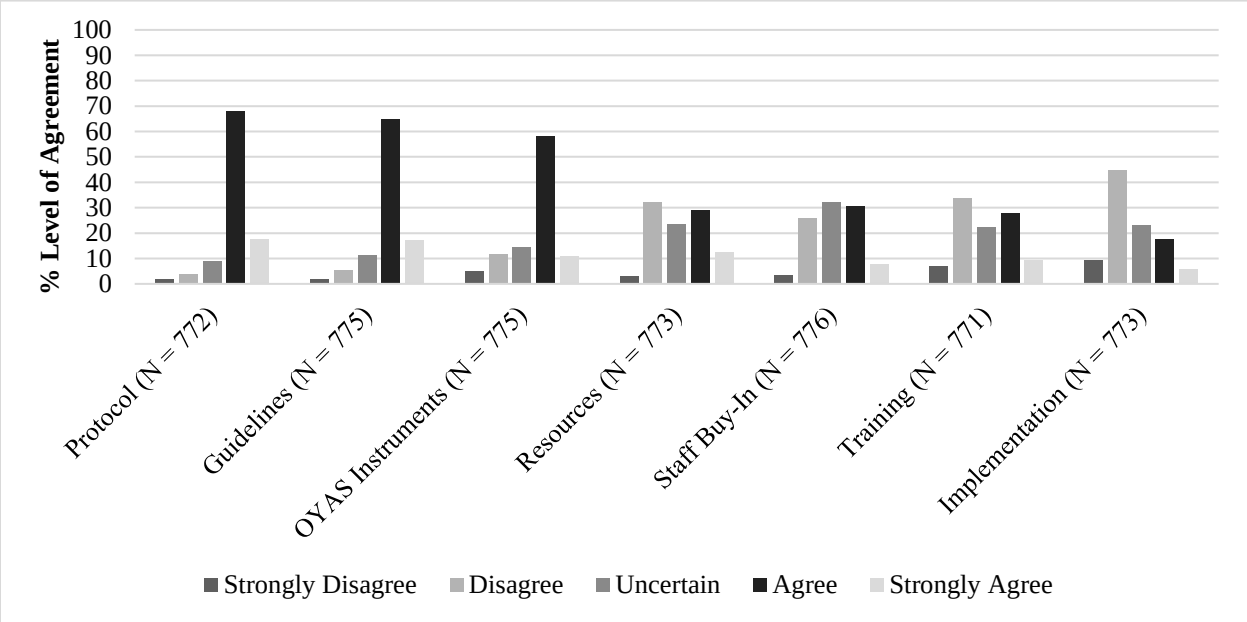
having the largest standard deviation (*sd* = 1.13), and "Protocol" having the smallest (*sd* = .76). "Disagree" was the modal response to the "Resources," "Training," and "Implementation" items, whereas "neutral" was the modal response to the "Staff Buy-In" item. In general, some items reveal an enthusiastic level of agreement (e.g., "Protocol," "Guidelines," and "OYAS Instruments"), while others elicit a more tempered response, and may depend more so on local context.

Figure 1.14. Survey Detailed Distribution of Responses for Level of Agreement for Broader Attitudes toward Implementation Items



Strengths and Limitations of the OYAS. Staff were provided an opportunity to list the strengths and limitations of the OYAS based on how their agency uses the assessment (Tables 1.21a-b). Specifically, respondents were provided with a series of text entry boxes in which they could list up to three strengths and three limitations. This analysis of respondent-generated OYAS strengths and limitations has a different appearance from its corresponding results section within the interview results. This is because the interview strengths and limitations data were analyzed using qualitative data analysis software (QDA Miner). Because of the larger size of the web-based survey sample, strengths and limitations were coded within SPSS using a similar inductive process.

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It is noteworthy that, despite the separate analysis processes, both the interview and survey samples generated many of the same themes, which will be discussed further in the "Integrated Analysis" section.

Of the 1,013 respondents who completed the survey, about 44 percent (*n* = 449) provided at least one strength. A total of 1,029 strengths were provided by these 449 respondents across the three items. Therefore, those who chose to answer the question by providing a strength of the OYAS tended to provide two or three strengths. There was wide variability across those responses, with the most frequently cited strengths detailed in Table 24a. Some of these strengths involved the content and structure of the tools, the usefulness of its completed product, or implementation process.

Included in the Table 1.21a is any strength that was named by five percent or more of the sample that provided at least one strength (N = 449). A review of the responses for the strengths suggests the OYAS provides overall system fairness, consistency, and objectivity (*n* = 180); is helpful with case/treatment planning (*n* = 121); determines risk level and supervision level (*n* = 118); provides useful/comprehensive information (*n* = 110); and identifies youths' needs (i.e., risk factors) (*n* = 84). Additionally, the respondents identified that the OYAS is easy, clear, and/or quick to administer (*n* = 62); aids in juvenile justice and service provision decision-making (*n* = 57); provides valid (i.e., accurate) results (*n* = 25); helps to monitor youths progress (*n* = 24); or has some sort of other strength that is not otherwise specified (NOS) (*n* = 61). NOS strengths often included positive, yet non-specific sentiments toward the OYAS (e.g., "It is a good tool"). This list of common strengths reveals that the OYAS is seen by many to provide useful information that guides treatment and court decision-making, and increases consistency/reduces bias in those decisions.

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Table 1.21a does not depict the less common strengths reported, including: the OYAS helps to improve resource allocation through the respondents' agencies (*n* = 19); the OYAS training/implementation/support was of high quality (*n* = 17); the OYAS provides valuable information regarding both risk *and* needs (*n* = 11); and that there is a high level of buy-in from the staff (*n* = 10). Notably, many of these strengths, particularly those that are less common, are seen by other respondents as limitations, as evidenced in Table 1.21b.

Table 1.21a. Survey Descriptive Statistics for Respondent-Generated OYAS Strengths

Strength (*n* = # of cases)	**% of Survey Completers Who Named Strength(s) (N = 449)**	**% of All Survey Completers (N = 1,013)**
Fair/consistent/objective (*n* = 180)	40.1	17.8
Case/treatment planning (*n* =121)	26.9	11.9
Risk/supervision level (*n* = 118)	26.3	11.6
Useful/comprehensive information (*n* = 110)	24.5	10.9
Identifies needs (*n* = 84)	18.7	8.3
Easy/clear/quick to administer (*n* = 62)	13.8	6.2
Helpful (not otherwise specified) (*n* = 61)	13.6	6.0
Decision-making/service provision (*n* = 57)	12.7	5.6
Valid results (*n* = 25)	5.6	2.5
Monitor youths progress (*n* = 24)	5.3	2.4

Of the 1,013 survey completers, about 42 percent provided at least one limitation of the OYAS, and many provided more (N = 427). This is less than, but also similar to, the proportion of the sample that provided at least one strength. These responses yielded a total of 840 limitations across the three items (Table 1.21b), indicating that most respondents provided more than one limitation, and these limitations are concentrated among a smaller pool of concerns than the strengths. Respondent-generated limitations represent concerns about the tool itself, its associated

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implementation processes, and even some concerns that may lie beyond the scope of the tools and the agency entirely (e.g., a lack of local resources to refer youths for treatment).

The most commonly named limitations included: the OYAS fails to provide comprehensive information in areas such as family and education issues, mental health needs, and/or substance abuse issues (*n* = 122); inaccurate or invalid results regarding risk level (*n* = 95); there is inconsistent administration and scoring of the tools (i.e., low reliability) (*n* = 94); the tools are too time-consuming to administer and complete (*n* = 52); the agency has poor usage practices (*n* = 50); a lack of staff buy-in (*n* = 50); inadequate training and written policies (*n* = 47); a lack of resources available for treatment (*n* = 33); youths or family score manipulation (i.e., dishonesty) during the information gathering process (*n* = 31); the OYAS is inaccurate for sex offenders (*n* = 27); difficulties in using the OYAS information for case planning (*n* = 23); and other not otherwise specified (NOS) limitations (*n* = 87). NOS limitations often included negative, yet non-specific sentiments towards the OYAS, such as "it is not good."

As mentioned above, some of these items were listed as both a strength and a limitation of the OYAS. For example, consistency across the system and determining risk level and supervision levels was cited as a strength. However, some staff indicated that there were inconsistencies across how probation officers administer the OYAS, conduct overrides, or calculate risk scores, as well as inconsistencies in administrative policies. Additionally, a similar number of respondents named the scope of information provided by the OYAS as a strength (*n* = 110) and a limitation (*n* = 112). This highlights the importance of considering local context in the implementation process, as this may contribute to staff perceptions of the tool.

Some less common concerns (i.e., not endorsed by 5% or more of the limited sample) emerged alongside those just mentioned, including a lack of quality assurance processes (*n* = 18);

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concerns about reassessments being too time-consuming, or done improperly or too infrequently (*n* = 15); there is an overreliance on the tool's results relative to professional discretion (*n* = 11); and the improper use of overrides (*n* = 8).

Table 1.21b. Survey Descriptive Statistics for Respondent-Generated OYAS Limitations

Limitation (*n* = # of cases)	**% of Survey Completers Who Named Limitation(s) (N = 427)**	**% of All Survey Completers (N = 1,013)**
Incomprehensive information (*n* = 112)	26.2	11.1
Lack of validity (*n* = 95)	22.2	9.4
Inconsistent administration and scoring (i.e., low reliability) (*n* = 94)	22.0	9.3
Other limitation (NOS) (*n* = 87)	20.4	8.6
Time-consuming (*n* = 52)	12.2	5.1
Poor usage practices (*n* = 50)	11.7	4.9
Lack of staff buy-in (*n* = 50)	11.7	4.9
Inadequate training and written policies (*n* = 47)	11.0	4.6
Lack of resources available for treatment (*n* = 33)	7.7	3.3
Youths/family manipulate scores (*n* = 31)	7.3	3.1
Inaccurate for sex offenders (*n* = 27)	6.3	2.7
Difficulty in case planning (*n* = 23)	5.4	2.3

Staff were also asked to provide any specific suggestions for improving the OYAS and/or processes in their agency. Of the 1,013 survey participants, only 145 individuals provided feedback for improving the OYAS and/or procedures concerning the OYAS. Common suggestions included: making the automated system more user-friendly and integrated into other online systems; allowing more room for professional judgment to change the risk level of a youth in instances where that is necessary (i.e., many staff feel that the OYAS "under classifies" many youths); including more mental health and sexual offending indicators in the assessment; providing

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more frequent training and certification on the tools; designating certain staff to be OYAS administrators to ensure consistency and accuracy in administration; fostering consistency in implementation across counties of a given state; providing more convenient ways for staff to access aggregate OYAS data; and training outside stakeholders on the OYAS (e.g., attorneys, judges, prosecutors).

OYAS Administrator Scoring. Risk and needs assessment can greatly improve case processing, but it needs to be implemented well in order to do so (Vincent et al., 2018). The web-based survey offered an opportunity to test reliability in a basic way (i.e., consistency across administrators) in scoring the survey by virtue of a simulated vignette in the domains of *Juvenile Justice History*, *Peers and Social Support Network*, or *Pro-Social Skills*. The following results pertain only to those individuals who indicated that they administer any of the OYAS tools (n = 626), and the results are presented for the full sample of OYAS administrators (i.e., not divided by state). Those who did not indicate that they administer the OYAS were not asked to answer the vignettes (presented in Tables 1.22, Table 1.23, and Figure 15) as they did not apply. Table 1.22 provides the distribution of respondents who reported they use any of the OYAS tools. The results indicate that the Disposition Tool was by far the most commonly used tool, with 82.9 percent of the sample endorsing its use. The Diversion and Residential Tools were the second most commonly used, with 36.8 percent and 33.9 percent, respectively. The Detention Tool had the lowest frequency of use (n = 94), which is partially explained by the fact that the tool is rarely used in State 3. Additionally, many survey respondents used multiple OYAS tools.

Table 1.22. Survey Descriptive Statistics for the Distribution of OYAS Assessment Tool Use

OYAS Tool	**Frequency**	**Percent**
Diversion	188	36.8
Detention*	94	18.8

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Table 1.22. Survey Descriptive Statistics for the Distribution of OYAS Assessment Tool Use

OYAS Tool	Frequency	Percent
Disposition	494	82.9
Residential	172	33.9
Reentry	99	20.7

Totals in Table 1.22 exceed the total possible sample size of 626 due to some respondents administering more than one assessment tool.
*The Detention Tool is routinely used in State 1 and State 2, but rarely used in State 3.

The descriptive statistics for the scoring of the three possible vignettes given to OYAS administrators are presented in Table 1.23. These reflect vignettes given during OYAS training session and therefore they are benchmarked. Correct scores were determined by the research team by consulting the published OYAS scoring guide. For the *Juvenile Justice History* vignette, the average score was 2.01 (*sd* = .70), which is close to the correct score of 2. The average score for the *Peers & Social Support Networks* vignette ($\bar{x}$ = 5.46, *sd* = 0.62) was also trending towards the correct score (Total = 6). OYAS administrators who received the *Pro-Social Skills* vignette also had an average score close to the correct score of 2 ($\bar{x}$ = 1.81, *sd* = 0.80). In general, average vignette scores revealed that OYAS administrators are able to apply the scoring guide to retrieve a *fairly* accurate risk score for these three domains/vignettes, but also suggest some degree of variability generally in line with the degree to which interpretation was necessary. The juvenile justice history score is very close on average in the degree to which it was scored correctly relative to the others.

Table 1.23. Survey Descriptive Statistics for the OYAS Administrator Vignettes

	Min.	Max.	$\bar{x}$	*sd*	*Correct Score*[50]
Juvenile Justice History (N = 143)	0.0	3.0	2.01	0.70	*2*

[50] The correct score refers to the true total score for each vignette. This is the score that should have been assigned based on the OYAS scoring guide.

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Table 1.23. Survey Descriptive Statistics for the OYAS Administrator Vignettes

	Min.	**Max.**	$\bar{x}$	***sd***	***Correct Score***[50]
Peers & Social Support Networks (N = 149)	3.0	6.0	5.46	0.62	*6*
Pro-Social Skills (N = 143)	0.0	3.0	1.81	0.80	*2*

Due to missing data, totals are less than the reported sample size.

Figure 15 presents descriptive statistics for the distance away from the correct score (i.e., scoring discrepancy) for all three vignettes. Specifically, this represents the difference between what the OYAS administrators scored the vignette and the correct total score. Therefore, those with a difference of -2 suggest that these individuals provided a total score that was two points below the correct score from the manual. Underscoring would indicate less risk for a youth in comparison to over-scoring, which is indicative of more risk.

The results show that only half OYAS administrators scored their assigned vignette correctly (52.2%). The largest proportion of survey respondents scored the *Juvenile Justice History* vignette correctly (60.1%), and no respondents scored the vignette three or more below the total score. It was, however, more common for respondents to score the *Juvenile Justice History* vignette one or more points above the total score (21.7%) than the other two vignettes. For the *Peers & Social Support Networks* vignette, only slightly more than half of the respondents (52.4 %) scored the vignette correctly. For respondents who had a scoring discrepancy, this trended in the direction of "under-scoring" the vignette, indicating that respondents were more likely to assess less risk for the *Peers & Social Support Networks* domain than the other two domains. For the *Pro-Social Skills* vignette, 55.3 percent of the respondents scored this domain incorrectly. These incorrect scores were distributed both above and below the correct score of two. Overall, these

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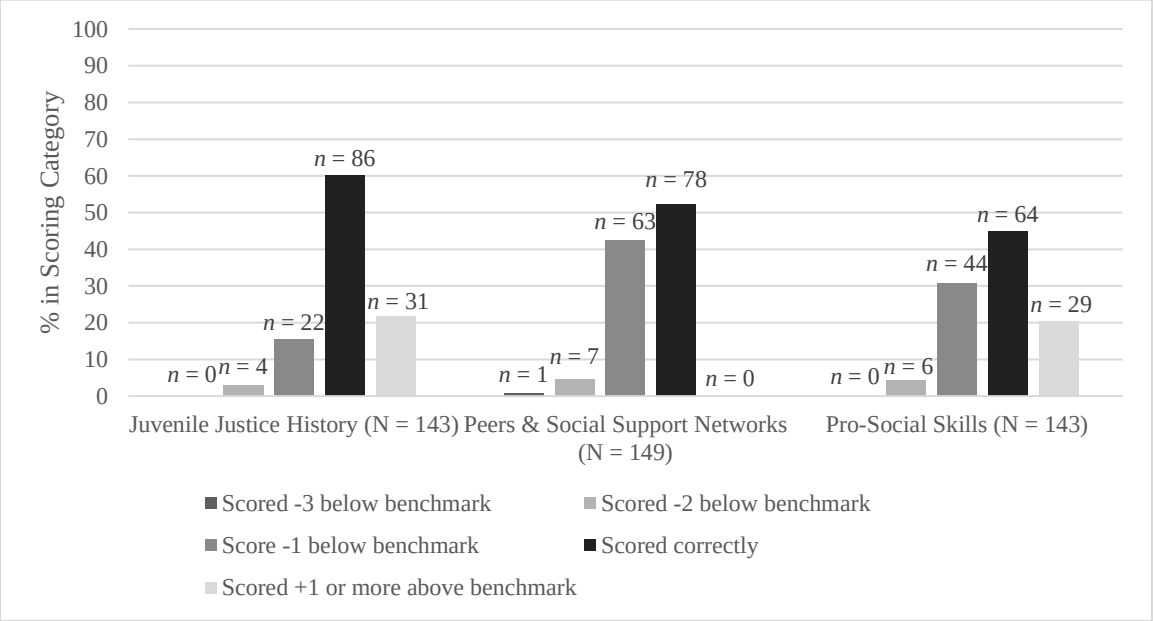
scores suggest that, while there is some correspondence with the manual, there are also some discrepancies that require further attention and which might be addressed in future booster training.

Past research suggests that personnel perceptions of a risk and needs assessment tool can impact its integrity (Vincent et al., 2012). Relevant to the current study, this suggests that those with more supportive attitudes toward the OYAS may score it with more accuracy. In the current section, we have seen that there is some variation in accuracy among the personnel sample when scoring the vignettes. Following the integrated analysis of the juvenile justice personnel interviews and surveys is a substudy entitled "Support for the OYAS and Integrity in the Juvenile Risk and Needs Assessment Process." This section more fully explores the relationship between perception of the OYAS and its integrity.

Figure 15. Survey Detailed Distribution of Vignette Scoring Discrepancies



General Conclusions from the Web-Based Survey Data. The findings presented in this section provided a general sense of attitudes toward the OYAS and general perceptions in key areas concerning the usefulness, benefits, support for, and consistency of the OYAS. Specifically, attitudes and perceptions concerning the OYAS were examined across two groups (i.e., OYAS

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administrators and non-administrators), as well as across the three states. We also explored the consistency of vignette scores among OYAS administrators, as well as respondent-generated strengths and limitations of the OYAS, and suggestions for improving the implementation process.

The results lead to several general conclusions. There is generally a mixed level of agreement/support for all items on the survey, as respondents' answers ranged from 1 (low, completely disagree, or not at all unsatisfied) to 5 (high, completely agree, or completely satisfied). While answers on the extreme ends of this range tended to be outliers when considering the responses of the full sample, it is important to note that individuals with strong feelings toward the OYAS may have more influence over the perceptions of their peers, positive or negative.

When asked to rate their level of personal satisfaction with the OYAS, the average response from OYAS administrators and non-administrators leaned toward being satisfied. OYAS administrators tended to give a lower average response, but this difference was non-significant. The modal response for either group was "neutral." There were also no significant differences for this item between the states, though it was noteworthy that State 3, as the only state that did not have the OYAS validated on their population at the time of data collection, reported the lowest average response for personal satisfaction with the OYAS.

In terms of the perceived usefulness of the OYAS in making personnel jobs "easier," OYAS administrators were significantly more likely to disagree with this statement. Expectedly, OYAS administrators and non-administrators provided a different modal response; the non-administrators more often indicated a "neutral" rating (i.e., 3), and the administrators more often indicated "agreement" (i.e., 4) with the statement. However, OYAS administrators as a group were almost exactly as likely to indicate that they "agreed" with the statement as they were to indicate that they "disagreed" that the OYAS makes their job easier. Across the states, State 3 provided a

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significantly lower average response than the other two states. However, there was a stronger relationship between OYAS user role and this item than state membership.

There was a high level of agreement that the OYAS benefits the youths in respondents' agencies, and no significant difference in ratings between OYAS user roles or between the three states. Similarly, respondents indicated a high level of agreement that the OYAS increases consistency in rules, policies, and procedures regarding assessment practices. This, next to the OYAS benefitting the youths, is the most consistently supported item in the web-based survey results, and was also mentioned as a strength of the OYAS in the open-ended question portion.

There was also a high level of agreement that there is staff support for the implementation of the OYAS, which was rated higher on average than the personal level of satisfaction with the OYAS. This runs in contrast to the interview data, where personal satisfaction was rated higher than perceived staff support. There was no significant difference in scores between OYAS administrators and non-administrators, nor between the state-specific samples. In general, State 3 respondents provide lower average ratings on most items in the web-based survey results, but this difference is rarely statistically significant.

Respondents were in high agreement that there is a written protocol for how to use the OYAS, and that guidelines are in place for when to use the tools. They also tended to agree that the OYAS is easy to read, interpret, and use. Other items drew a more mixed response, which highlighted some differences in local context regarding implementation practices and staff attitudes (e.g., training not being routinely offered or the implementation being inconsistent). These items were analyzed by state to identify the source of these contextual differences.

When analyzing these broader implementation items by state, State 3 respondents were significantly more likely to agree that there is a protocol in place for the OYAS. State 1 respondents

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provided the lowest average level of agreement with this item. State 3 interviewees were also significantly more likely to agree that community resources for treatment are difficult to find. This item in particular showed the strongest relationship to state membership than any other implementation item, again highlighting the importance of local context.

Respondents were asked to list the strengths and limitations of the OYAS. The most common strengths reflected the OYAS itself and its processes, as well as the usefulness of its finished product. They noted that the OYAS increases consistency and reduces bias in the supervision process. Additionally, they noted the usefulness of OYAS information for treatment planning, which is contrasted with the aforementioned concern about a lack of treatment resources in the community. It is possible that as the treatment resources in the community increase, so will the perceived usefulness and overall satisfaction with the assessment system.

Similarly, the most common limitations also involved the OYAS itself, as well as its completed product. Respondents expressed the most concern that the OYAS does not collect the proper/comprehensive information (e.g., mental health, substance use, family factors), which may lead to an inaccurate risk score. This sentiment is relevant to, and impactful for, establishing buy-in among staff and stakeholders. Where there were many respondents who indicated that the OYAS provides good information, there were about the same number who indicated the contrary. In terms of completeness of information, this is where having supplementary need and responsivity assessments in place is important, so as to capture such information that respondents perceived to be lacking in the risk and needs assessment.

The OYAS Diversion Tool was by far the most commonly used tool, and Detention the least. With only approximately half of the survey respondents scoring the randomly-assigned vignettes correctly, OYAS administrators were only moderately accurate in scoring the OYAS.

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There may have also been some selection artifacts, as respondents who decided to complete the vignette may have been more apt to know about the OYAS tools and may have been more confident in their ability to score it well. Depending upon the vignette, there was evidence of both underscoring and overscoring youths. The vignette results revealed the opportunity for ongoing trainings to address the items that users may be inaccurately scoring most often (e.g., the *Pro-Social Skills* vignette was the least likely to be scored correctly, and the majority of respondents scored this domain incorrectly). Difficulty in scoring may also contribute to the feeling that the OYAS provides inaccurate/invalid results, which was one of the respondent-generated limitations provided. Increasing scoring accuracy through improving initial training in key areas and by providing more consistent and frequent ongoing training has the potential to increase buy-in for the tool. The relationship between support for the OYAS and scoring accuracy is explored in the in this section as well, as one potential avenue for variation to enter the scoring process.

Integrated Analysis of the Interview and Web-Based Survey Data

There were 14 questions on the web-based survey that overlapped with those asked in the juvenile justice personnel interviews. These questions involved how the OYAS information is used, respondents' experience with overrides, quality assurance processes, the OYAS automated system and other assessments, as well as respondents' general attitudes about risk and needs assessment, and attitudes specific to the OYAS. Specifically, the interviews and surveys shared six questions on how the agency uses assessment information (i.e., does your agency use the OYAS assessment information to):

1. Allocate resources to particular parts of the agency?
2. Develop specialized caseloads?
3. Determine supervision level?
4. Measure youths progress in reducing risk and needs?

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5. Match youths to appropriate treatment services?

6. Assist in diversion/disposition/release decisions?

There are seven other questions in common. These included:

7. Are there any quality assurance processes that your agency engages in concerning the OYAS?

8. Do you use any additional assessments?

9. Does the agency allow for overrides?

10. On a scale from 1 to 5, with 1 being you are not satisfied and 5 being you are completely satisfied, please rate your overall satisfaction with the assessment system.

11. On a scale from 1 to 5, with 1 meaning it does not at all reduce bias and 5 being it removes all bias, rate of your level of agreement on the statement that risk and needs assessments reduce bias.

12. On a scale from 1 to 5, with 1 meaning it does not benefit youths at all and 5 being it fully benefits youths, rate of your level of agreement on the statement that the OYAS benefits youths.

13. Do you have experience with the automated system?

In the analyses that follow, the interview and survey data are analyzed as two complete, yet, unique groups, and are sometimes combined to draw out the results from the juvenile justice personnel in general, regardless of the source of the information (i.e., survey or interview). Whereas the web-based survey sample was previously analyzed across the OYAS administrator/non-administrator distinction, the sample is analyzed as a whole in the current section so as to compare the results more directly to the interview data.

It should be noted that, in many places where the interviewees were able to indicate they were "unsure" of an answer, the survey respondents did not have this opportunity. Therefore, where applicable, the limited number of "unsure" responses from the interview data were not

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included in these comparative results. Because of this, it is possible that some survey respondents who felt unsure about an answer were not able to express their ambiguity, and answered the questions with a distinct "yes" or a "no" or intentionally skipped the question. Though there is no way to know the exact number of survey respondents who felt ambiguity in response to a given question, it is probable that, like the interview data, this would have been a small percentage of the sample.

Job Characteristics. Though the interviewees and survey respondents were all considered juvenile justice personnel, the characteristics of work responsibilities and titles were somewhat unique across each sub-sample. The descriptive statistics for job characteristics for both samples were presented originally in Table 1.2, separated by state. Below, Table 1.24 outlines the job characteristics for the interview and survey samples as a whole, setting the context in which the average response from interviewees and survey respondents may differ or converge. The top two most frequent job settings for either sample were probation and correctional/secure treatment facility. Conversely, the interview sample had a higher proportion of court, parole, and state agency personnel, whereas the survey sample had a higher proportion of "other" job settings. This is due to the nature of the web-based survey, where job settings were inferred from job titles and some job titles were not specific enough to be able to do so. The interviewee sample provided much more detail in terms of job titles, tasks, and settings, therefore eliminating the need for an "other" category.

In terms of job classification, the interview sample had a higher proportion of administrators/directors, judges/magistrates/attorneys, and supervisors/managers. The survey sample had a higher proportion of frontline staff, as well as "other" job classifications. This revealed the purposive selection of the interview sample, which was meant to include a range of

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job roles, but more so individuals who were familiar with the OYAS and its implementation and use (i.e., those who drove adoption). This included those in leadership positions who led the planning and execution of the OYAS implementation in their state or agency. Therefore, the results from the interview sample were more representative of the opinions of those who have had these experiences. The survey sample was more representative of the juvenile justice practitioner population, which is weighted toward frontline, probation-based staff. Therefore, results from the survey sample were more representative of the opinions of those who were interacting daily with the OYAS and had to translate its results into treatment and supervision decisions. The survey sample had a higher proportion of personnel who administer the OYAS than the interview sample, though use of its automated system is relatively evenly split across the samples. This is possible as even those who do not administer the OYAS may have access to its automated system for supervisory or treatment purposes.

Table 1.24. Descriptive Statistics for Job Characteristics Across Interview and Survey Samples

Variable	**Interviews (N = 217)**	**Surveys (N = 1,013)**	**Total Sample (N = 1,230)**
Job Setting	*n* (%)	*n* (%)	*n* (%)
Court	37 (17.1)	102 (10.2)	139 (11.4)
Probation	105 (48.4)	592 (59.3)	697 (57.4)
Parole	14 (6.5)	7 (0.7)	21 (1.7)
Correctional/Secure Treatment Facility	44 (20.3)	132 (13.2)	176 (14.5)
State	17 (7.8)	8 (0.8)	25 (2.1)
Other	0 (0.0)	157 (15.7)	157 (12.9)
Total	217 (100.0)	998 (100.0)	1,215 (100.0)
Job Classification	*n* (%)	*n* (%)	*n* (%)
Administrator/Director	30 (13.8)	50 (5.7)	80 (7.3)
Judge/Magistrate/Attorney	21 (9.7)	50 (5.7)	71 (6.5)
Frontline Staff	120 (55.3)	626 (71.7)	746 (68.4)
Supervisor/Manager	45 (20.7)	86 (9.9)	131 (12.0)
Other	1 (0.5)	61 (7.0)	62 (5.7)
Total	217 (100.0)	873 (100.0)	1,090 (100.0)
Administer OYAS	*n* (%)	*n* (%)	*n* (%)

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Table 1.24. Descriptive Statistics for Job Characteristics Across Interview and Survey Samples

Variable		**Interviews (N = 217)**	**Surveys (N = 1,013)**	**Total Sample (N = 1,230)**
	Yes	118 (54.4)	626 (74.0)	744 (70.0)
	No	99 (45.6)	220 (26.0)	319 (30.0)
	Total	217 (100.0)	846 (100.0)	1,063 (100.0)
Use Automated System		*n* (%)	*n* (%)	*n* (%)
	Yes	134 (74.9)	453 (75.9)	587 (75.6)
	No	45 (25.1)	144 (24.1)	189 (24.4)
	Total	179 (100.0)	597 (100.0)	776 (100.0)
Job Tenure		$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
		13.26 (8.25)	13.86 (8.47)	13.72 (8.41)

Due to missing data, totals are less than the reported sample size.

Each of these settings may bring a unique set of job tasks and characteristics that both dictate the personnels' daily interactions with the OYAS, as well as their opinions on the usefulness of the tool. For example, juveniles' risk level's (as dictated by the OYAS) may determine their frequency of contact with their probation officer. For probation officers, this may be beneficial or a hindrance to the supervision process. Another example is the "state" employees, whose involvement with the OYAS is largely administrative and oversight-driven. These individuals may have a better sense of the big-picture implementation of the OYAS, but less daily practice in conducting the OYAS assessments and translating the results into case planning decisions. The interviewees and survey respondents also had varying degrees of tenure in the field of juvenile justice, however these did not differ significantly. In general, the average juvenile justice interviewee or respondent had been in the field for over 13 years, and therefore has a great deal of experience. Many of these individuals may have worked in the field prior to the widespread adoption of risk and needs assessment, and could have experienced a major shift in the strategies and methods behind juvenile justice supervision over the years.

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In summary, survey respondents have been working in the field of juvenile justice for slightly longer than interviewees, were more likely to be frontline staff working in a probation setting, and were more likely to personally administer the OYAS to youths. To the contrary, though these same job characteristics were common in the interview sample also, the interviewees were more likely than the survey respondents to be administrators/directors, judges/magistrates/attorneys, or supervisors/managers working in a court, parole, or state agency setting. The two samples taken together, the majority of personnel worked in a probation job setting, were considered frontline staff, administered the OYAS, and used its automated system. Therefore, they have had an intimate familiarity with the OYAS, its processes, and their respective agency's usage practices. They have also worked in the field for a significant amount of time on average, and have likely had to adapt to major shifts in juvenile justice supervision over time, including (but not limited to) the wide adoption of risk and needs assessments.

General Attitudes About Risk and Needs Assessment. Table 1.25 below outlines the general attitudes of the juvenile justice personnel interview and survey samples regarding risk and needs assessment, as well as some that are more specific to the OYAS. Survey respondents gave significantly lower ratings than the interviewees on their personal level of satisfaction with the OYAS, whether risk and needs assessments reduce bias in juvenile justice decision-making, and whether the OYAS specifically benefits the youths. However, it is noteworthy that the average response on all three of these items leaned toward agreement.

In the combined sample, personnel rated their level of agreement that risk and needs assessments reduce bias and that the OYAS benefits the youths higher than their personal level of satisfaction with the OYAS. This mirrors what was presented in the interview and survey results sections of the report thus far. While personnel were able to acknowledge the tool's usefulness in

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creating more equitable and beneficial supervision strategies for the youths they serve, they also expressed a degree of dissatisfaction with the OYAS itself, and/or its associated processes or implementation. A Chi-Square test revealed no significant differences in the items in Table 1.25 when analyzing the combined personnel sample by state. Therefore, the source of the information (i.e., survey or interview) appears to be the more influential factor for these items. As shown in Table 1.25, interviewees rated all three items significantly higher than survey respondents.

Table 1.25. Descriptive Statistics for General Attitudes about Risk and Needs Assessment and the OYAS Across Interview and Survey Samples

Variable	**Min.**	**Max.**	$\bar{x}$	***sd***
Overall Satisfaction with OYAS^				
In-person Interview (N = 200)	1	5	3.56	0.86
Web-based Survey (N = 865)	1	5	3.01	1.06
Combined JJP sample (N = 1,065)	1	5	3.12	1.04
Risk and Needs Assessments Reduce Bias^^				
In-person Interview (N = 208)	1	5	3.80	1.00
Web-based Survey (N = 797)	1	5	3.20	1.04
Combined JJP sample (N = 1,005)	1	5	3.32	1.06
OYAS Benefits the Youths^^^				
In-Person Interview (N = 201)	1	5	3.60	1.01
Web-based Survey (N = 771)	1	5	3.27	0.97
Combined JJP sample (N = 972)	1	5	3.34	0.99

Due to missing data, totals are less than reported sample size.
^ $p < .001$, $\chi^2_{(5)} = 60.71$, Cramer's $V = .24$
^^ $p < .001$, $\chi^2_{(4)} = 84.60$, Cramer's $V = .29$
^^^ $p < .001$, $\chi^2_{(4)} = 48.28$, Cramer's $V = .22$

Figures 1.16a-c outline the detailed distribution of responses for the three items in Table 1.25. Figure 1.16a below shows that there is a degree of neutrality towards the OYAS overall, as this was the modal category for the full sample. However, a higher proportion of interviewees indicated that they were satisfied with the OYAS than survey respondents (roughly 60% vs. 34%, respectively). As mentioned previously, this may be the product of the purposive sampling method used for the interview sample, which contains more of the individuals who championed the use of

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a risk and needs assessment tool in their state, and likely played a role in planning its implementation. It may also be a byproduct of interviewees rating items higher due to the interview format.

Figure 1.16a. Comparison of Interviews and Surveys: Overall Satisfaction with the OYAS (N = 1,065)

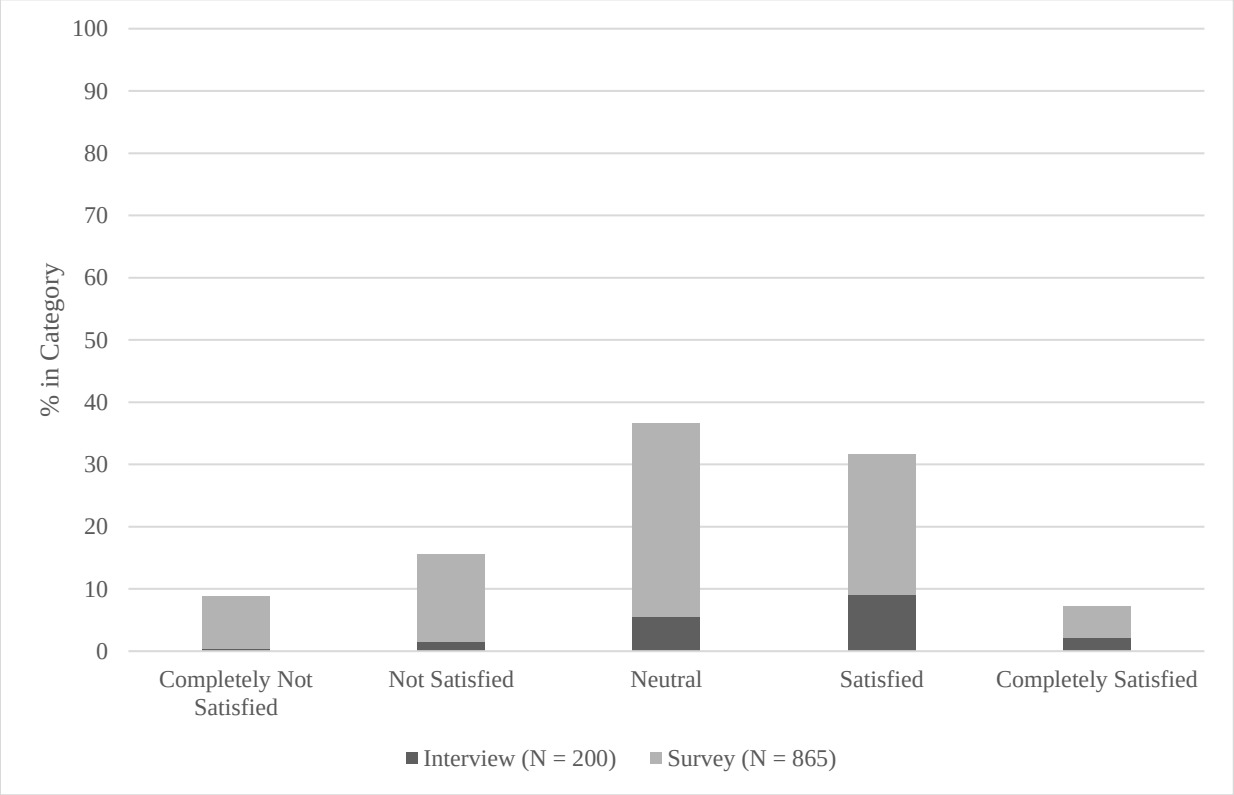

Figure 1.16b below outlines the detailed distribution of juvenile justice personnel responses to whether risk and needs assessments reduce bias in juvenile justice decision-making. Though the modal category for both the interview and survey sample was "agree," a higher proportion of interviewees than survey respondents either "agreed" or "strongly agreed" with this statement (66% vs. 44%). Therefore, though the averages in Table 1.25 revealed that both samples tended to agree with this statement, the frequency distribution below highlights the degree of enthusiasm with which each sample provided their responses. Interviewees tended to agree more strongly that

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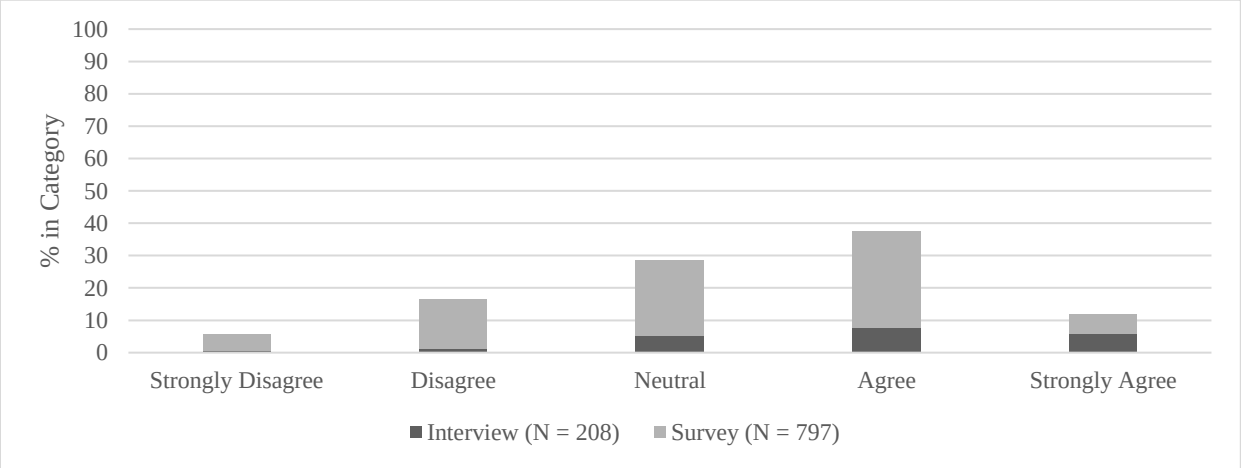
risk and needs assessments reduce bias whereas this may be a slightly weaker belief for survey respondents on average.

Figure 1.16b. Comparison of Interviews and Surveys: Risk and Needs Assessments Reduce Bias (N = 1,005)



Lastly, Figure 1.16c below outlines the detailed distribution of responses as to whether the OYAS benefits the youths in their agency. Once more, the interview sample had a higher proportion indicating agreement with this statement (roughly 66% to 45%), while the survey sample had more disagreement with this statement (26% to 8%). However, based on overall prevalence, both samples leaned toward agreement that the OYAS is beneficial to the youths in their agencies. In all three items depicted in Figures 13a, 13b, and 13c, juvenile justice personnel expressed more positive sentiment regarding the OYAS and risk and needs assessment in general, which lends support to the notion that there is a foundation upon which to build and grow staff buy-in for a risk and needs assessment tool.

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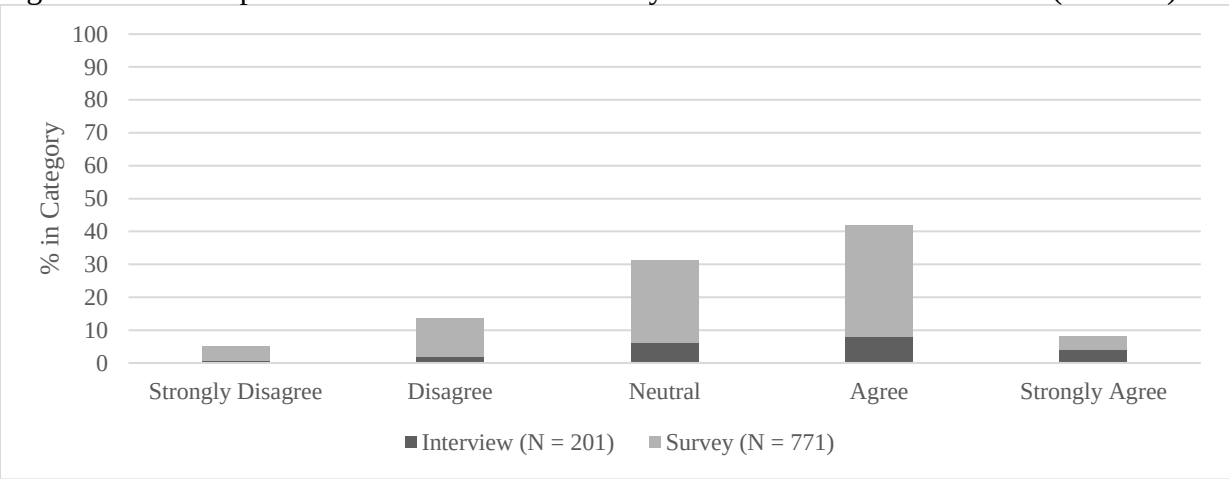
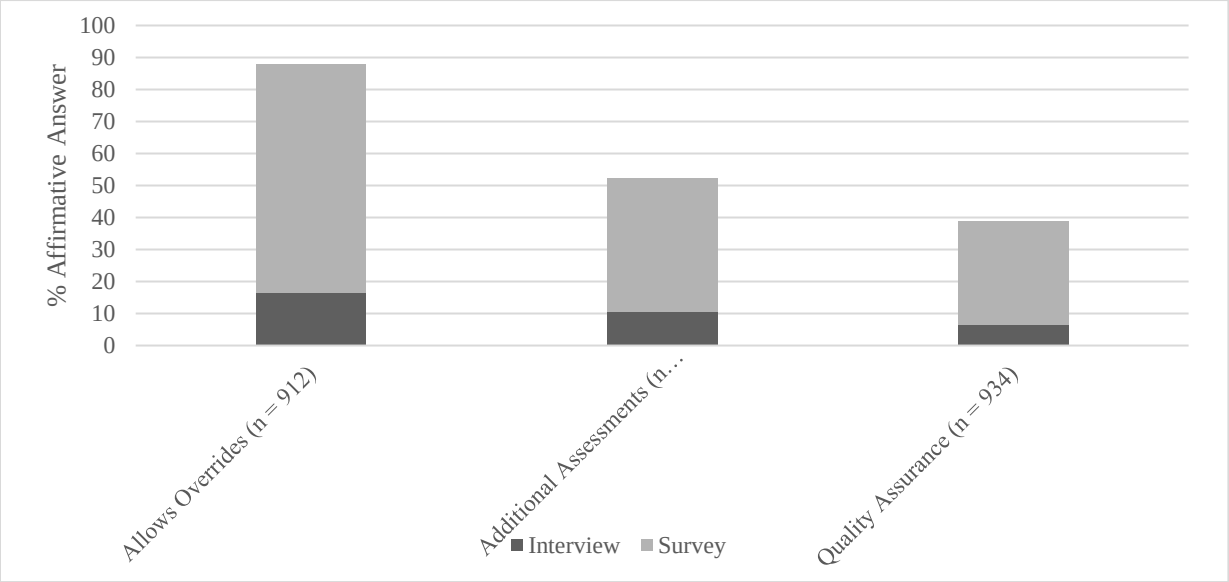
Figure 1.16c. Comparison of Interviews and Surveys: OYAS Benefits the Youths (N = 972)



Agency Assessment Strategies. Figure 1.17 below depicts data regarding juvenile justice personnel perceptions of their respective agency's strategies and practices surrounding the OYAS. Specifically, the samples were asked whether their agencies allow for overrides to the OYAS, use additional assessments, and have formal quality assurance measures in place. While overrides appeared to be allowed in the vast majority of agencies, personnel indicated that additional assessments are used to supplement the OYAS far less frequently.

Figure 1.17. Comparison of Interviews and Surveys: Agency Assessment Strategies



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Even less common were formal quality assurance measures, which only about one-third of the full sample suggested are in place. These results indicate that there are gaps where the implementation literature would support the use of these important strategies, which have their own implications for increasing post-rollout sustainability of a risk and needs assessment. Whereas the use of responsivity assessments helps to tailor interventions to a youth's strengths and barriers, as well as capture information that many of the personnel perceive to be lacking in the OYAS, formal quality assurance measures (examples provided in "Implications and Recommendations") serve as the backbone to the entire implementation process, and should be established in all agencies that adopt a risk and needs assessment.

OYAS Information Usage. The last comparison between the interview and survey data is in how agencies use the assessment information. Figure 1.18 depicts overall responses to a number of items that are common uses of risk and needs assessment information, some of which are supported by the risk and needs assessment literature (Vincent et al., 2012). Four of these items were relatively prevalent in responses across the samples, including using the assessment information to determine supervision level, measure youths progress, match youths to treatment, and assist in juvenile justice decision-making.

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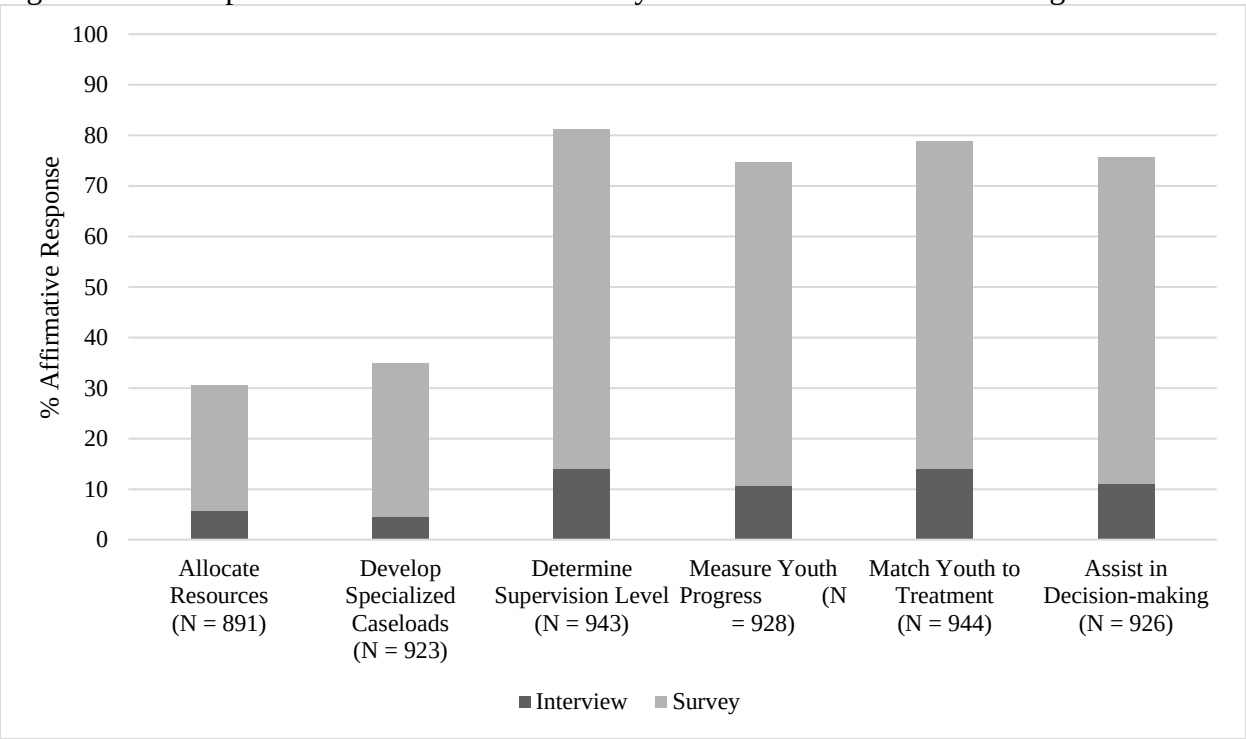
Figure 1.18. Comparison of Interviews and Surveys: Assessment Information Usage Practices



It was far less common that personnel indicated their agencies use the assessment information to allocate resources within the agencies or to develop specialized caseloads. These trends remained relatively stable throughout the responses of the interview and survey samples and across the three states. Therefore, it is clear that OYAS information is being used in the more basic sense of establishing treatment and supervision objectives, but the data may be utilized to a greater extent in overall planning and case management.

OYAS Strengths and Limitations. The personnel-generated strengths and limitations of the OYAS were similar across the interview and survey samples, which illustrates their potency in risk and needs assessment implementation. Many of these themes referenced the OYAS itself, while others pertained to the broader picture of implementation. For strengths, it was clear that personnel sensed that the OYAS increases fairness and encourages objectivity in juvenile justice decision-making. In this way, personnel did not seem to be against the concept of using actuarial

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risk and needs assessment to promote consistency, but rather expressed their concerns regarding the way that JRNAs (and the OYAS) are implemented and used. Personnel in both samples also noted that the OYAS information is helpful in making juvenile justice decisions (e.g., disposition, diversion).

Personnel had more consensus regarding the limitations of the OYAS, most commonly mentioning concerns about specific items on the assessment, the validity of the OYAS, and the reliability with which it is administered and scored. The prevalence of these concerns across the samples has major implications for how personnel perceive and use OYAS information. Increasing the validity and reliability of OYAS assessments (along with personnel perceptions of validity and reliability) is therefore key to promoting optimal usage practices. Lastly, the personnel were in agreement that the OYAS is time-consuming, which speaks to the busy nature of their daily work, and lends itself to "shortcuts" (e.g., cutting assessment questions, overlooking collateral information) that may generate validity and reliability questions. As such, some OYAS limitations are of a somewhat recursive in nature, effectively "snowballing" with other perceived, interrelated, limitations to affect the implementation and use of the tool in practice.

General Conclusions from the Integrated Analysis of the Interview and Survey Data. Analysis of the integrated samples reveals several key conclusions. First, there is a solid foundation upon which to build optimal implementation strategies and practices. Throughout the report, personnel attitudes and perceptions of the OYAS and risk and needs assessment generally highlighted that they agree with the potential benefits of a risk and needs assessment implementation, including its potential to reduce bias and enhance fairness in juvenile justice decision-making. However, the results diverged somewhat when examining some of the more micro-level policies and practices related to risk and needs assessment.

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Second, formal quality assurance measures came up rarely in interview and survey results, which suggests that personnel may be "on their own" in terms of administering the OYAS consistently and acquiring an accurate measure of risk. When these practices go awry, personnel are understandably left to feel that the OYAS is an inaccurate tool, or does not provide information that is useful to them in their daily work with youths. The development of formal and systematic quality assurance at the local- and state-level is therefore of the utmost importance, and will be discussed in the implications and recommendations.

Third, the OYAS information is being used in line with some key system objectives, which juvenile justice personnel believe has helped to streamline and enhance fairness in the treatment of youths. Across the interview and survey samples, OYAS information was consistently used to determine supervision level and match youths to treatment, which are two key elements according to the principles of effective intervention. However, the data suggest that agencies are not taking full advantage of the potential uses of OYAS information, which may also contribute to some personnel sensing of a lack of utility for OYAS information. As OYAS information usage and sharing increases in an agency, it is likely that buy-in for the importance of this information will increase. However, it is important to keep in perspective the purpose and scope of a risk and needs assessment tool, which is only one piece of the "rehabilitation puzzle," and is intended to more broadly affect information gathering and decision making in conjunction with other elements of the juvenile justice implementation context.

Lastly, the results diverged in various places according to state context, as well as sample job characteristics. Several state-level initiatives were outlined in Figure 1.2 that suggested a unique implementation environment in each of the three states included in the current study. Additionally, Table 1.2 outlined the job characteristics for each sample that indicate meaningful

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differences within the counties and agencies in each state. In many cases, these contextual differences impacted the perceptions and usage of the OYAS. This became particularly apparent when examining the perceptions of frontline staff and non-frontline staff. Their unique job roles force them to interact with the tools in different ways, which leads to divergent opinions on its usefulness in supervising youths and promoting fairness throughout that process. Therefore, it is important to strike a balance between honoring local context, and promoting uniformity in a statewide risk and needs assessment implementation.

Usage Study 1: Support for the OYAS and Integrity in the Juvenile Risk and Needs Assessment Process

As mentioned in the beginning of this section of the report, juvenile justice personnel surveys (in this case, web-based surveys) can provide insight regarding perceptions of JRNA usage that can impact the integrity of the tool. The introduction of randomized vignettes and assessment scoring into the web-based survey allowed us to gather some information on the application of the OYAS among the respondents who administer it.

Risk and needs assessment implementation is not only contingent on administrative tasks (i.e., updating policy and procedures, providing training), but also how receptive staff are to using the assessment system. Ultimately, perceptions about risk and needs assessment tools may shape the integrity of their implementation (Vincent et al., 2012). Considering that practitioners play a central role in fostering change, understanding attitudes towards risk and needs assessments is important (Fixsen et al., 2009). A risk and needs assessment tool may be implemented and mandated in an agency; however, if there is little support for the tool's use, the integrity of the tool may be impacted. Negative attitudes towards innovation—in this instance adopting the OYAS in case assessment and management—may hinder their proper use (Corrigan et al., 1998). Negative

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attitudes toward administering assessment tools may lead staff to inappropriately score the tools, which can ultimately impact case management and the allocation of treatment services.

While research assessing perceptions specific to the OYAS is limited, studies have examined attitudes toward risk and needs assessments and how these views impact the utility of the tool. Schneider, Ervin, & Snyder-Joy (1996) assessed a number of articles spanning 15 years, and conducted in-depth interviews with probation officers and supervisors from Oklahoma Department of Corrections. A questionnaire was also sent out to all probation and parole offices in the state (N = 296, responses rate 60%, final N = 179). The goal of the questionnaire was to provide insight from practitioners on specific issues regarding risk and needs assessment tools. Results indicated that there was a strong correlation between the officer's belief that risk and need instruments are useful and perceptions of its effectiveness. This study did not examine *how* perceptions impact the implementation of the tool, however.

Similarly, Shook & Sarri (2007) assessed how the utility of a tool may drive perceptions. The study examined the Structured Decision-Making's (SDM) usefulness at specific decision-making points (e.g., pretrial detention, post-adjudication placement) among court professionals. Survey questions tapped into court professionals' opinions of specific reasons for the implementation of SDM and their perceptions of whether SDM was meeting these goals. Items pertaining to the key reasons for SDM implementation included whether the tool (1) ensured appropriate placement, (2) reserved commitment for most serious offenders, and (3) made placement and decisions consistent. These items spanned both positive and negative perceptions concerning the tool. Overall, support for a tool can also stem from its utility in providing a uniform framework for decision-making and this may impact whether it is used for placement decisions (Shook & Sarri, 2007).

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These prior studies highlight how perceptions of the usefulness of a risk and needs assessment tool may impact views concerning its effectiveness and ultimately, how it is used. We extend this research by looking at whether support for risk and needs assessments and clarity on their usefulness may impact the integrity of their use. We first measure and describe the level of support for the OYAS and understanding of its usefulness. Then, using multinomial logistic regression, we assess whether the level of support is associated with how accurately practitioners score it.

Method. As previously noted, the web-based survey included a sample 1,013 juvenile justice personnel. The present analysis is primarily concerned with those who administer the OYAS tool(s). Therefore, any participants who indicated "yes" to the survey item, "do you administer any of the instruments?" were selected. The final sample of those who administer the OYAS included 626 participants from the three states.

Measures

OYAS Usefulness. A one-factor measure was proposed for OYAS usefulness. First, correlations were examined to assess the relationship between key Likert measures concerned with how personnel view the usefulness of the OYAS. Eight 5-point Likert scale items, ranging from strongly disagree to agree, assessed the usefulness of the OYAS in the general areas of identifying criminogenic needs, determining supervision levels, developing case plans, decision-making, and treatment progress. Table 1.26 provides the descriptive statistics for the Likert items captured by the OYAS usefulness factor. The internal consistency was also examined to determine how closely related the set of items are as a group. Cronbach's alpha was equal to 0.91, which is an acceptable level (Cronbach, 1951; Bland & Altman, 1997).

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Table 1.26. Descriptive Statistics for OYAS Usefulness Items (N = 626)

Variable	Strongly Disagree	Disagree	Uncertain	Agree	Strongly Agree	Total[51]
	n (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)	*n* (%)
OYAS helps identify youths' criminogenic needs	16 (2.6)	46 (7.3)	73 (11.7)	323 (51.6)	69 (11.0)	527 (84.2)
OYAS is useful in determining youths' supervision levels	21 (3.4)	61 (8.1)	55 (8.8)	299 (47.8)	89 (14.2)	515 (82.3)
OYAS is useful in providing information to develop comprehensive case plans	22 (3.5)	55 (8.8)	89 (14.2)	295 (47.1)	56 (8.9)	517 (82.6)
OYAS helps determine appropriate interventions based on youths' risk levels	22 (3.5)	74 (11.8)	72 (11.5)	308 (49.2)	51 (8.1)	527 (84.2)
OYAS is useful in matching youth to appropriate treatment services	20 (3.2)	68 (10.9)	99 (15.8)	283 (45.2)	49 (7.8)	519 (82.9)
OYAS is useful in measuring progress in addressing youths' risks and needs	17 (2.7)	68 (10.9)	91 (14.5)	292 (46.6)	50 (8.0)	518 (82.7)
OYAS is useful in assisting in diversion, disposition, placement, or release decisions	21 (3.4)	74 (11.8)	83 (13.3)	285 (45.5)	55 (8.8)	518 (82.7)
The use of the OYAS has made my job easier	52 (8.3)	162 (25.9)	120 (19.2)	165 (26.2)	13 (2.1)	512 (81.2)

We conducted a confirmatory factor analysis (CFA) in MPlus to further evaluate this usefulness factor (Muthèn & Muthèn, 1998-2018). Overall, the model fit the data well, which is

[51] Totals may not reflect overall sample size (N = 626) due to missing data.

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evidenced by a Kaiser-Meyer-Olkin (KMO) close to 1, comparative fit index (CFI)/Tucker-Lewis index (TLI) greater than the .95 threshold, and a Chi-Square test of model fit that was an improvement over the baseline model ($\chi^2_{(20)} = 97.79$, $p < .01$). The standardized factor loadings range from .76 to .86 and were statistically significant. The root mean squared error of approximation was acceptable (RMSEA = 0.08) (MacCallum, Browne, & Sugawara, 1996). Additionally, the weighted root mean square residual (WRMR) approached a value close to 1 which is indicative of good model fit (Brown, 2006). Generally, these values were in line with conventional cutoffs (e.g., Hu & Bentler, 1999). Full model fit information and individual factor loadings are provided in Appendix E.

Integrity. As described above, case vignettes, which were based on OYAS training processes, were randomly assigned to those who indicated "yes" to the question about whether they administer tool(s). The outcome of interest is consistency with the manualized score for each case. One of three vignettes was randomly assigned to each OYAS administrator within the structure of the survey. These vignettes are based on domains in the Disposition Tool and measure whether administrators can accurately score a hypothetical case. The three OYAS Disposition domains used for the vignettes were the following: (1) *Pro-Social Skills*, (2) *Juvenile Justice History*, and (3) *Peers and Social Support Network.* For each vignette, a link was provided that contained the scoring guide for that domain. OYAS administrators read a hypothetical case and scored their respective domain based upon the provided information. Table 1.27 shows the distribution of respondents across each vignette. Out of the 626 self-reported administrators, only 70 percent completed the vignette portion of the survey (N = 437). The proportion of cases for each vignette were relatively similar at approximately 23 percent of the sample for each vignette.

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Table 1.27. Distribution of Administrators by Vignette (N = 626)

Vignette	Number of OYAS Administrators	% of Total Sample
Juvenile Justice History	145	23.2
Peers and Social Support Network	149	23.8
Pro-Social Skills	143	22.8
Total	437	69.8

Scored Vignette Difference. In order to quantitatively measure integrity, a scored vignette difference measure was created. Measuring movement away from the true score or "scoring errors" is not unique to this study. Van der Knaap et al. (2012) examined the Dutch RISc assessment tool (Recidivism Assessment Scale) (see also Rocque & Plummer-Beale, 2014). Separate assessments by two probation officers were conducted then compared to one another. Their agreements and disagreements were summed together and turned into a proportion. The scale of 0.00 to 1.00 for the proportion of agreement was given cutoffs for comparison: slight (0.00-0.20), fair (0.21-0.40), moderate (0.41-0.60), substantial (0.61-0.80), or almost perfect (0.81-1.00) (based on Landis and Koch, 1977).

Given the three different vignettes, the difference between what the administrators scored the vignette and the true score was created. A scale was created rather than simply looking at whether staff scored the vignette correctly or not since there is a margin of error built into the OYAS tools. In training and for certification to be an OYAS assessor, staff can score within +/- 3 of the benchmark score and still accurately assess the youth. While we are only focusing on one domain of the Disposition Tool, we wanted to follow this logic and allow for room the true score (i.e., benchmark score). First, each vignette was summed based on what score OYAS administrators provided. A benchmark score was also created, which is the correct total for each vignette. The scored vignette difference variable is the difference between the respondent's score and the benchmark score. This variable provides an ordinal scale that captures movement away

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from the benchmark score. A smaller proportion of the sample scored three (n = 1) or two (n = 17) below the benchmark score with the majority scoring one below the benchmark score (n = 130). Given this, those who scored three, two, and one below the benchmark score were combined into one category. Also, underscoring is similar across all vignettes such that scoring under the benchmark indicates less risk for the youth in comparison to over-scoring, which is indicative of more risk. Table 1.28 provides the distribution for scored vignette difference.

Table 1.28. Distribution of Scored Vignette Difference

Scored Vignette Difference	***n***	**%**
Scored -3, -2, or -1 below benchmark score	148	33.9
Scored correctly	229	52.4
Scored +1 above the benchmark score	60	13.7
Total	437	100.0

Control Variables. Some vignettes were longer than others, therefore, 3 dummy variables were created to control for any differences. The *Pro-Social Skills* vignette is the reference category. Gender was also included as a control variable. Other relevant control variables include work experience (in years), highest education level obtained, and whether an administrator was retrained in the OYAS. All of these controls may influence a respondent's familiarity with administering the OYAS such that older individuals with higher education levels and who received retraining may be more likely to score the vignette correctly.

Analytic Plan. A multinomial logistic regression was estimated to assess the impact of staff support on integrity in risk and needs assessment scoring. Before the analysis was conducted, the proportional odds assumption was investigated to assess whether the predictors have the same effect on the odds for each category. In order to meet this assumption, the test of parallel lines in SPSS should be not be significant. The parallel lines test indicated that the full model with controls violated this assumption ($\chi^2 = 33.94_{(8)}$, $p < .001$). The analyses then defaulted to multinomial

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logistic regression due to the violation of the proportional odds assumption. Therefore, separate coefficients are estimated for each category rather than assuming that the regression coefficients are the same for all 4 categories (e.g., -2, -1, 0, 1 under/over benchmark score) (Norusis, 2012). Multinomial logistic regression contains the same assumption as binary logistic regression (i.e., independence among the predictor categories and a categorical dependent variable), but the outcome has more than two categories.

Results

Sample Demographics. The relevant controls used in the multinomial logistic regression models and additional sample descriptors are shown in Appendix F. Probation and parole officers comprised the majority of the sample (73%). A little less than half of the sample is from State 1 (40%). About half of the sample indicated they had a bachelor's degree (50.3%). On average, staff have worked in the field for approximately 15 years ($\bar{x}$ = 14.9, *sd* = 8.4). Females constituted 45 percent of the sample. Also, 43 percent indicated that they had some retraining on the OYAS tool(s) (i.e., booster training or re-certification; see Table 1.29).

Multivariate Model with Support and Controls. The statistically significant -2 log likelihood Chi-Square test indicates that the full model fit the data well ($p < .001$). This model has a Nagelkerke pseudo r-square of .25.[52] OYAS usefulness significantly and negatively predicted the relative risk of scoring below the benchmark score relative to those who scored the vignette correctly. Specifically, as perceived usefulness increases there are lower odds of being in the "underscored" category than in the "correct" group (-28%). Additionally, the model suggests that receiving the *Juvenile Justice History* vignette significantly and negatively predicted the relative

[52] Job title was not included as a control because it was not statistically significant in a bivariate test. Most participants indicated that they were a probation or parole officer leaving little variation in the other job title categories reported. The job title measure was further refined with collapsed categories and dummy variables were also created for each job title. Findings still suggested that job title had no substantive impact on our findings.

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risk of falling into the "-3, -2, or -1 difference" category relative to the "correct score" category. This indicates that those who received the *Pro-Social Skills* vignette were more likely to score -3, -2, or -1 below the benchmark score. In part, this may be due to the fact that items in this domain are more difficult to score (i.e., somewhat more subjective than *Juvenile Justice History*). Only one measure had a significant relationship with the +1 Difference Score Outcome. Education level significantly and negatively predicted the relative likelihood of scoring 1 above the benchmark score compared to those who correctly scored the vignette. Specifically, those with higher levels of education were less likely to score 1 over the benchmark score than correctly compared to those with lower levels of education.

Table 1.29. Multinomial Logistic Regression Predicting Scored Vignette Difference (N = 402)

Variable	**-3, -2, or -1 Difference Score**		**+1 Difference Score**	
Independent Variables	*b*(SE)	OR	*b*(SE)	OR
OYAS Usefulness	-.33(.12)**	.72	.17(.20)	1.19
Control Variables	b(SE)	OR	b(SE)	OR
Peers Vignette	.32(.27)	1.38	-22.56(.00)	
JJ History Vignette	-.97(.32)**	.38	-.30(.33)	.74
Work Experience	.14(.09)	1.15	.07(.12)	1.07
Male	-.17(.24)	.84	.50(.35)	1.65
Education Level	.26(.20)	1.30	-.62(.27)*	.54
Retraining	.06(.24)	1.06	.20(.33)	1.22
Intercept	-1.71(.98)	-	-.31(1.27)	-
Model Fitting Information				
-2 Log Likelihood	681.49			
Chi-Square (df)	$194.47_{(14)}^{***}$			
Nagelkerke R^2	.25***			

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*$p < .05$, **$p < .01$, ***$p < .001$; Odds Ratio for "Peers Vignette" not shown due to sparse cells in difference score category.

Summary of Support for the OYAS and Integrity Usage Study. Overall, the results from the present study suggest that assessment administrators with higher levels of perceived support for utility of the assessment system (i.e., OYAS usefulness) score the domains more accurately than those with lower levels of perceived support. Those who see the utility of the OYAS and believe in its ability to help identify supervision levels, criminogenic needs, and assist in case planning tended to score youth correctly rather than those who have less belief in their usefulness. Taking stock in what the OYAS is designed to do can influence integrity or rather the degree to which a tool is scored accurately, as suggested in the present study. Those who underscore the tool may not see the utility of using it to its full potential and may believe they think they know what is best for a youth. This in turn, may lead staff to not engage in proper information gathering during the interview to effectively score out the tools.

While deviation from the benchmark score is a solid measure of integrity and has been used in other studies, the usefulness measures may have more robust effects if other outcome measures were included, such as the use of overrides. If a PO is continuously overriding a tool (without a specific cause, such as if the youth was a sex offender or had a gun specification) then the integrity of the tool may be impacted such that he or she is using their own judgment to move a youth to a different risk level. This may induce variation within and across agencies. Also, quality assurance practices should also be explored since it is an integrity check on whether staff are accurately scoring the tool and using it to drive decision-making.

There are some limitations in this portion of the study. Only one domain from the Disposition Tool was scored by participants. Having participants score a full assessment may better help us to fully understand perceived support for the usefulness of the tool and its impact on integrity. This

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may allow for a greater margin of error to properly disentangle the effect of usefulness. There was an approximately 30 percent non-response rate (N = 179) for the vignettes. Specifically, these respondents did not answer any of the vignette items. Out of the 179 cases that did not participate in the vignettes, close to 90 percent of these cases (N = 158) did not finish the web-based survey. Upon further examination, approximately 60 percent of those who did not finish the survey failed to go past the scaled items concerning the usefulness of the OYAS, which appear prior to the vignette portion of the survey. It may be that those with more negative attitudes toward the OYAS did not complete this portion, and consequently the vignette portion, which could potentially impact our results. It is likely, however, that such a selection effect would tend to push less enthusiastic OYAS administrators out of our current analytic sample, further depressing the prevalence of correct scoring, which is about 52 percent in the current sample. A small number of cases did not fully complete the vignettes (N = 10). These individuals only partially scored items across the vignette. The usage study in this report focused on those who completed the vignettes in order to further investigate the scoring on the vignette items.

Despite the potential limitations, this report is a first step in unpacking important JRNA implementation and system usage patterns. The analysis of relationships between attitudes toward implementation and general perception of the OYAS and, in turn, the tool's perceived usefulness and administrator performance in these final portions of this first section of the report highlight the complex relationship between implementation processes, juvenile justice personnel perceptions, and assessment usage. It is therefore important that we must look at things comprehensively in order to understand how the different pieces fit together and eventually affect case processing, decision-making, and outcomes. We turn further attention to that task in the next

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sections of the report, which focus heavily on records of what happens to youths in the system as a result of risk and needs assessment and what it means for their outcomes.

Summary of Section I

Section I focused on the first study objective: to describe and assess risk and needs assessment usage and implementation practices at different juvenile justice decision-points. Overall, the interviews and surveys noted some positivity towards the OYAS, but also highlighted numerous ways to improve the use of the tool and ways to improve the implementation process. Our first usage case study also suggested that support for the tool and its usefulness may affect how personnel score it. As such, if sites can increase support for the assessment—especially through thoughtful implementation strategies—the validity and reliability of the assessment may be higher. Another main focus in the first objective was to develop recommendations on best practices in training, monitoring, and usage. We will come back to this topic at the end of the report in Section IV.

Section II of the report moves us toward Study Objectives two and three: (2) assess court and programming decision-making outcomes based on variation in risk and needs assessment usage and implementation practices across agencies and states; and (3) evaluate how the implementation of risk and needs assessments across multiple stages of the juvenile justice system impacts recidivism among juvenile offenders.

Section II. Juvenile Risk and Needs Assessment Usage, Process, and Case Decisions

The perceptions of those in the field are essential in describing and evaluating implementation, as they cannot be easily disentangled from the new practice. Fixsen et al., (2009: 532) note that frequently "the practitioner is the intervention" and this is definitely true in case assessment and decision-making in juvenile justice. The insights of those involved in planning, using assessments, and making decisions offer the context in which other elements of the process

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must be considered. At the same time, that insight is only one step in moving beyond a "black box" understanding of risk and needs assessment in relation to youths' outcomes. This comprehensive study of implementation and use goes beyond practitioner views to focus on the mechanisms through which an initial assessment might affect decision-making at the case and aggregate-level.

We utilize the case record data available for this project to consider several examples of risk and needs assessment usage through five targeted usage studies. Together these two elements offer insight on different elements of usage by first presenting an overview of our study data, and then additional usage cases that help to explore different facets of JRNA and its application in the juvenile justice system. These usage cases include an analysis of geographic and subgroup consistency in decisions (Usage Study #2); measurement and predictive validity of the OYAS in different race/ethnicity groups (Usage Study #3); an assessment of patterns from cases where professional judgment was used to override the result of the OYAS process (Usage Study #4), an analysis of the linkage between overall and domain risk scores and the processing and treatment decisions they are intended to affect—including an emphasis on specific problems like substance abuse and mental health (Usage Study #5); and consideration of primary and second-order uses of the information from the tools and assessment processes (e.g., strengths and barriers; Usage Study #6). Each of these studies draws on the case record data provided by agencies in each of the three state sites with the intent of extending the understanding of applied JRNA. Prior to reviewing each usage study, an overview of the methodology and general description of the composition of the samples of youths is provided.

Methodology

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The research objectives related to assessment usage and youths' outcomes were met using a combination of official record data and interviews with youths. This section describes the sampling, data collection and management, and measures pertinent to those elements of the study. This sets the stage for several different analyses described in the next two sections of this report.

Comprehensive Assessment Sample. Upon the writing of the proposal for this project, existing records indicated that during 2013 over 20,000 assessments were completed in State 1, 25,000 in State 2, and 15,000 in State 3. This gave the research team an estimate for the number of records to expect. Youths assessed with the OYAS in the three participating states during 2013 through 2017 were included in the study. We received two years of data from each state across these four years: 2014 and 2015 in States 1 and 2, and 2013 through 2017 in State 3. This resulted in a sampling frame of over 100,000 cases. The sample of cases spans the five stages at which the OYAS is administered to allow for sufficient power to analyze assessment and outcome data from intake through the back end of the juvenile justice process (Cohen, 1992). Specifically, a greater percentage of disposition and reentry cases were selected and extracted relative to their prevalence in the sampling frame, as proportionately fewer youths reach those stages. In State 2, for example, approximately 11,000 Diversion Tool assessments were completed in 2013 compared to about 8,000 Disposition and roughly 1,600 Reentry Tool assessments.

Two-Stage Sampling Frame. For each state, counties were first selected based on their assessment usage (total assessment use/population size x 100). Counties were split into three strata based on assessment use: 1) low, 2) moderate, and 3) high. For State 1 and State 2, 31 counties were randomly selected from each state based on their total number of counties using a random number generator approach. The 31 counties served as our base to create the final comprehensive assessment sample for each state. From the 31 counties, 24 counties were randomly selected for

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our final sample. The remaining seven counties not selected served as replacement counties if we were unable to obtain data from one of the initially selected counties. The two-stage sampling frame did not apply to State 3 because it has few counties compared to State 1 and State 2, which each have dozens of counties. As a result, all State 3 counties were included in our comprehensive assessment sample.

For all three states, cases were then randomly selected from the chosen counties. Cases were initially proportioned out per state across the different assessment tool types: 1) Diversion – 200 cases, 2) Detention – 200 cases, 3) Disposition – 600 cases, 4) Residential - 500 cases, 6) Reentry – 500 cases. The data were also cross-checked for any duplicate cases to ensure only one case per youth was represented. However, due to the use of replacement counties and the data received from study sites, these totals varied slightly across states. From the sampling frame of over 100,000 for the years indicated above, we selected roughly 2,000 cases per state for a total final sample of 6,222 cases. Table 2.1 presents the distribution of cases across the three study sites.

Table 2.1 Distribution of Cases by OYAS Tool and State

OYAS Tool	**State 1**	**State 2**	**State 3**	**Combined**
	n (%)	*n* (%)	*n* (%)	*n* (%)
Diversion	207 (10.1)	166 (10.0)	840 (34.3)	1,213 (19.5)
Detention	179 (8.8)	181 (10.5)	10 (0.4)	370 (5.9)
Disposition	672 (32.9)	459 (26.5)	1,073 (43.8)	2,204 (35.4)
Residential	479 (23.5)	459 (26.5)	508 (20.7)	1,446 (23.2)
Reentry	505 (24.7)	465 (26.9)	19 (0.8)	989 (15.9)
Total	2,042 (100.0)	1,730 (100.0)	2,450 (100.0)	6,222 (100.0)

For State 1, all seven replacement counties and additional counties from the overall comprehensive assessment sample were used to replace counties that declined to participate

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resulting in a total of 42 potential counties.[53] For State 2, the initial 24 randomly selected counties for the data request process was eventually constrained to 21 counties due to data request agreements. Out of a total pool of 21 potential counties for State 2, we received data for 14 counties. The remaining 7 counties did not participate in the study and replacement counties were not available due to the data sharing agreement with the state.

As noted above, the two-stage sampling frame did not apply to State 3. Cases for State 3 data were received at two different points. Record data were first received from the juvenile court system. This sample included 13 counties, which covered most of the state. The selection process described above was applied to the court record data. A second wave of data was received from the corrections agencies in the state. This sample included cases from all counties in State 3. The corrections sample was reduced to cases with assessment information (N = 680) and then a random subsample of 450 cases was extracted for the comprehensive assessment sample. The random sample of 450 cases represents a similar proportion of corrections cases received from State 1 (N=459) and State 2 (N=650).

Data Collection. Data collection strategies for the comprehensive assessment sample varied somewhat across the three states and agencies. This was often driven by agency preferences around file transfers. In those cases, we prioritized obtaining data for the core measures (outlined below). In most cases we sent requests to local agencies through a main point of contact at each site. These requests included an overview of the study, our institutional review board and state approvals, and data security protocols. In State 1 and State 2, each participating agency was sent a Microsoft Excel worksheet detailing the data requested (see Appendix G). Within these worksheets, the research team provided information for each selected youth (all categories in the

[53] Since we received data from State 1 first, the sample for State 1 went beyond our original sampling intentions as we were unsure of our ability to receive the needed data from State 2 and State 3.

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"youth information" section of Appendix G) from the participating agency, to assist in identifying applicable case records for data extraction. The research team was readily available to answer follow-up questions from contacts at each agency. Data sharing procedures varied across agencies, but generally a secure File Transfer Protocol up/download process was used in which agency contacts placed the data in a secure, encrypted folder as they extracted information from their systems. Agencies completed these data requests at their convenience and finished worksheets were then submitted to the research team. In a few cases, physical data drives or record management system access credentials were provided to research staff to retrieve relevant case data. For State 3, all of the comprehensive assessment sample data (across all counites) was received on a physical data drive. Therefore, the research team did not have to reach out to each county in State 3 and obtain spreadsheets. The data received were then added to the existing data drawn from the assessment system. Table 2.2 provides an overview of record data response rates across sites for each state.

Table 2.2. Site Response Rate for Comprehensive Assessment Sample by State

	State 1	**State 2**	**State 3**[54]
Number Sites that Provided Data	30	14	15
Total Possible Sites	42	21	15
Response Rate (%)	71.4	66.7	100.0

To assist agency staff in selecting the correct information to send to the research team, descriptions were included for each category of data. Appendix G outlines the information originally requested from each agency and the variable definitions provided. Most agencies simply provided the data in the manner requested. However, a small sample of agencies in State 1 and State 2 chose to complete the request by extracting data from their record information system for

[54] Two of the counties in State 3 were only accounted for in the State Corrections agency sample, however.

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a full range of cases. Additionally, all cases for the years requested were obtained in State 3. In cases where agencies provided full data files (i.e., all case record data provided for requested years), we then extracted our requested cases from the larger pool of data.

Agency Data Management and Cleaning. Upon receipt of data from a participating agency, an extensive data cleaning and management procedure was undertaken. To track data cleaning completion and ensure quality control, all data were first preserved in their original form. Changes after this point were only made to working copies. While data were typically received in Microsoft Excel worksheets, they were converted to a data management/analysis file (typically SPSS) soon after for more efficient data management, recoding, duplication checks, and examination of summary statistics to identify potential anomalies. Prior to this conversion, spreadsheets were streamlined by removing any information that would not be part of the final data set (e.g. agency instructions, headers, notes, extra spaces or youth information). Files with substantial missing data were discussed in data management meetings. The research team proceeded on a case-by-case basis, and continually worked to build a protocol for later data sets in the process. In addition to checking for completion, data were screened to ensure agency information was correctly classified. Corrections were then made to any data categorized incorrectly. This sometimes necessitated follow-ups with agencies to ensure clarity in data definitions.

Once converted into SPSS format, data cleaning commenced using a syntax template as a guide. This syntax outlined a variety of data edits meant to standardize the content provided by the agency. Edits included renaming, truncating, and (re)coding agency variables. All string variables were recoded into numeric variables and each numeric category was logged in a state codebook to prevent overlapping codes. Unique numeric codes were assigned chronologically based on the

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information contained in each agency file. As new data arrived, the codebook was consulted during the data cleaning process. Any previously-assigned numeric codes that were relevant were re-used, while new information was assigned a code based on the next number available in the numeric coding sequence. Any acronyms or short-hand information used by sites was also clarified and rectified as part of the cleaning process. The formatting and type (i.e., string, numeric, or date) was also standardized, including variable properties like labels and missing data values, for all data.

After the cleaning process for each file was completed, data from all agencies in each state were merged into one large state file. State-level data were then examined and decisions regarding the content of the final data (e.g. coding, formatting) were made. In some cases, agencies provided additional case or record information that was not originally requested. During data cleaning, this information was preserved until the finalization process, when decisions were made regarding its utility to study objectives. These decisions were based on the data availability and coverage that appeared in the state-level files as a whole and the main research objectives. Once the final changes were carried out, all state-level files were merged together into one large database. That data set was then utilized in the analyses in the next sections of this report.

Overview of Case Record Measures. In order to assess the impact of risk and needs assessment implementation across different stages of the juvenile justice system on relevant youths' outcomes, a number of measures were extracted for the comprehensive assessment sample. Below is an overview of the core measurement areas. For a full description of variables, please see Appendix H for the comprehensive assessment sample codebook.

Demographics. A number of demographics were obtained in the case record including date of birth, age, gender, race, ethnicity, and county of residence. The comprehensive assessment

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sample also has a state identifier variable for youths. The demographic information was obtained through the OYAS database maintained in each state.

Risk and needs assessment data. The crux of the data synthesis involved linking the assessment data from state repositories to focal offense information, treatment, and recidivism outcomes of interest. As noted above, the latter often came from local agencies. The assessment data included an assessment identification number and the assessment date. The data also included an assessment status variable that indicated whether an assessment was completed, in progress, needed review, had not been started, or had a review completed. Only two cases had assessments that were noted as incomplete. Risk assessment scores were obtained for all other youths in the sample. Relevant assessment information represented in the data includes the tool type (i.e., Detention, Disposition, Diversion, Reentry, and Residential), the overall score, risk level, and override risk level. Scores were also provided for each of the OYAS domains for the Disposition, Residential, and Reentry Tools. The domains are the same across the tools, but the items that make up the domains differ based on the tool. The domains are: *Juvenile Justice History*; *Family and Living Arrangements*; *Peers and Social Support Network*; *Education and Employment*; *Pro-Social Skills*; *Substance Abuse, Mental Health, and Personality*; and *Values, Beliefs, and Attitudes*.

Focal offense information. One objective of the present study was to request offense information associated with a youth's assessment. The focal offense information included case number, offense description, and offense level. We also received the following dates: offense date, arrest date, court date, and adjudication date. For the focal offense, the comprehensive assessment sample also outlined the adjudication status for the focal offense, adjudication type, disposition, and youth status. The adjudication status variable is concerned with whether there was an adjudication for the focal offense (yes/no). The adjudication type measure is a categorical indicator

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that includes responses such as "admission of guilt," "dismissed," and "no contest." The most serious disposition was also reported which included being waived to adult court and whether a case was dismissed, terminated, or closed with the former being most serious. Disposition information also indicated whether a youth was placed on probation or residential treatment, house arrest, committed, diverted, or received other sanctions like community service. Youth status details whether a youth's case was active, inactive, suspended, waived, and other relevant focal case information.

Treatment and other referrals information. The treatment information received is concerned with the focal offense. Specifically, it captured whether a youth was referred to specific interventions as dictated by the OYAS or if other sanctions were applied. To varying degrees across sites, the treatment information submitted included provider, program name, and the type of treatment received.[55] The treatment provider information specified supplemental information regarding whether the provider was a rehabilitation center, substance abuse recovery center, mental health facility, and other behavioral healthcare providers. Treatment program names included but were not limited to: Thinking for a Change (T4C), cognitive behavioral therapy, drug education class, Aggression Replacement Therapy (ART), and Functional Family Therapy (FFT). Additionally, the treatment received outlines the type of treatment, such as counseling, educational and employment services, family services, sex offender treatment, religious services, substance abuse, anger management, and treatment for antisocial attitudes. Aside from treatment, we also requested information regarding additional sanctions or program referrals assigned to a youth. These include information such as electronic monitoring, restitution, informal sanctions (e.g.,

[55] No treatment indicators were provided for State 3.

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apology letter, essay, litter pickup), community service, mentoring, and other court ordered sanctions. Those indicators at times overlap with the disposition measures described above.

Recidivism offense information. Four measures of recidivism were extracted for the youths in the comprehensive assessment sample including: (1) new arrests (juvenile and/or adult); (2) new adjudications (juvenile and/or adult); (3) return to custody (juvenile commitment or adult incarceration); and (4) subsequent probation, parole, or technical violation (juvenile and/or adult). Specifics regarding the recidivism offense were also obtained, such as the offense code, offense code description, degree, offense level, count, and offense type. Typically, the analyses in this report are based on new adjudications and/or returns to custody as those measures had the best coverage.

Youth Follow-Up Sample. The youth follow-up sample is a subset of the larger comprehensive assessment sample. The purpose of this sample was to select a smaller proportion of youths to contact to obtain more detailed information through interviews regarding education, employment, family, pro-social skills, substance use, recidivism, and treatment services received. The interviews were researcher-administered over the phone. The youth follow-up sample was originally designed to include 300 total youth interviews. Cases were randomly selected from the comprehensive assessment sample. For each state, 250 cases were selected per year. The intent was to ensure representation of the five tool types. The youth follow-up cases followed similar proportions to the comprehensive assessment sample, which included: 1) Diversion – 50 cases, 2) Detention – 50 cases, 3) Disposition – 150, 4) Residential – 124 cases, and 5) Reentry – 126. This breakdown totals to 500 cases per state.

Development of Youth Follow-up Interview. The research team developed the semi-structured youth follow-up interview in order to extensively study a subset of youths. Generally

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speaking, the youth follow-ups allows for a more detailed understanding of the impact of assessment, treatment, and self-reported system involvement. The youth follow-up interview was drafted during team meetings and then reviewed independently by each research staff member. The drafted protocol was then tested during research team meetings for timing, flow, and to ensure that the main questions sufficiently captured needed information. As noted below, items and subscales were drawn from existing measurement tools where possible.

The youth follow-up interview contained 46 questions and was divided into eight different content areas: (1) education/employment (15 questions); (2) family, living arrangements, and neighborhood (6 questions); (3) peer associations (2 questions); (4) situational awareness (4 questions); (5) beliefs (2 questions); (6) substance use (4 questions); (7) contact with the criminal justice system and OYAS assessment (5 questions); and (8) treatment services (8 questions). The full youth follow-up interview protocol can be found in Appendix H. Responses to items varied and included yes/no responses, statements that corresponded to Likert scales, and open-ended questions. In order to maintain continuity in measurement, the interview items were developed, in part, based upon the OYAS self-report. It not only taps into pertinent criminogenic risks and needs, but also allowed us to follow up with the youths to determine reductions in risk and needs. The interview also provided a collateral source of information regarding the type, frequency, and quality of treatment and supervision. Youths were also able to provide additional insights on some relevant developmental outcomes that were not easily measured with agency record data.

Youth Follow-Up Interview Administration. When contact was made with a prospective participant, several procedures were followed to ensure completion of the interview. For youths under 18, staff established contact with their guardians, who were read the study consent and information form to ensure consent was obtained prior to the interview. All of the consent forms

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for this portion of the study are located in Appendix J. In the event that guardian consent was not needed (or after it was obtained), youths were read the study assent/consent form and given information about the interview using a scripted information sheet. Once the youths' agreement to participate was obtained, they were read a scripted brief of the study and assured that they could stop answering questions and discontinue at any time and did not have to answer any questions if they did not want wish. The interview was then administered via phone and took about 30 minutes on average—but this depended on each youth's level of disclosure and the pertinence of certain areas of the protocol (e.g., interviewees who were not in school or employed would skip a proportion of the questions). Each question was read by a staff member, who then listed all possible answers and recorded the youth's response. Upon completion of the interview, these responses were entered into an SPSS database for later analysis. Youths also chose a $15 restaurant gift card to receive as an expression of appreciation for participating in the study. Gift cards were then sent to the youths along with a hand-written "thank you" note and an informational flyer.

Youth Follow-Up Sample Data Collection. Final totals differ from the initial proportions due to agencies declining to participate or inability to locate contact data for particular youths. Ultimately, a random subsample of 1,402 of cases from the comprehensive assessment sample was targeted for these interviews following the disposition of their focal case or facility release. These cases were stratified across the three states. The number of cases vary by state depending on the number of agencies that provided those data. Table 2.3 provides the distribution of sites that provided contact data for cases.

Table 2.3. Response Rate for Youth Contact Data by State

	State 1	**State 2**	**State 3**[56]
Number of Sites that Provided Contact Data	26	9	13

[56] State 3 data for youth follow-up and interviewing was available for 13 counties. Youth follow-up cases were randomly extracted from this total sample rather than reaching out to each county and requesting contact data.

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Table 2.3. Response Rate for Youth Contact Data by State

	State 1	**State 2**	**State 3**[56]
Number of Sites Asked to Provide Contact Data	33	16	13
Response Rate (%)	78.8	56.3	100.0

For State 1 only, the self-report subsample was bolstered with random sampling with replacement. State 2 and State 3 only involved one data request process, and we were not able to request any additional data or use replacement counties. Additionally, records and contact information were provided by state and local agencies on a rolling basis such that the effective field time for potential interviewees in State 1 was significantly longer than State 2 and State 3, and that State 2 was longer than in State 3. Administrative data available for all cases assessed during the time period of interest were used to evaluate and adjust for non-response and attrition. Table 2.4 provides the response rates for each state.

Table 2.4. Summary of Youth Contacts, Interviews Completed, and Response Rates

	State 1	**State 2**	**State 3**[57]
Number of Youth Interviewed	79	25	27
Total Possible Youth	704	198	500
Response Rate (%)	11.2	12.6	5.4

Youth Follow-Up Training. Interviewers were required to undergo human subjects research training prior to working in the on-campus call center. Staff were required to attend several in-person trainings, during which they were paired with more experienced interviewers. These trainings involved shadowing experienced staff, reviewing calling procedures and codes of conduct, and learning search strategies for contacting unreachable youths. Staff were shown around the call center, conducted practice calls, and discussed record-keeping procedures (e.g.,

[57] State 3 data for youth follow-up and interviewing became available in March 2018 and data collection was closed in August 2018.

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call log, gift card tracking, interview completion). After completing training, new staff entered the call center shift rotation. Call center staff were typically scheduled to conduct interviews between 9am and 9pm Monday-Saturday from April 2016 to August 2018. Call schedules were created each month for interview administrators to optimize the distribution of the calls that were made.

Youth follow-up call center procedures. Interviews were conducted via a University of Cincinnati phone line inside of a private campus office. Approximately 30-35 hours per week were spent making calls when the call center was active. Time not spent making calls was devoted to other follow-up related tasks, like searching public records and social media profiles for prospective participants who were selected for contact but who were unreachable. Additionally, public court records were searched for unreachable youths or for any youths who study staff were told were incarcerated (e.g. during a phone call attempt). Staff recorded all call and search attempts in an electronic and paper call log.

As previously mentioned, individuals were selected for follow-up from a sample of youths who came in contact with participating agencies during the window of time covered by the comprehensive assessment sample. The study team requested contact information (i.e., phone numbers, addresses, and parent/guardian names) on file in each jurisdiction for selected youths. This information was then used in attempts to contact the youths and their parents to obtain assent and consent for completion of the interview. Working phone numbers were called at least once every 2-4 weeks for a period of at least three months. If a response was obtained during that time (i.e. if someone picked up the phone), staff used a script to ask the responder if the individual was interested in participating in the follow-up interview. If a youth was 18 or older, staff sought to talk with the individual in question. However, if a youth was younger than 18, staff sought to talk with their parent or guardian. In the event that a voicemail was reached, staff left a response using

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a voicemail script during every other contact attempt. The record files were used to confirm ages for youths relative to current dates in order to ensure that appropriate protocols were followed for consent/assent.

The overview of contact attempts and associated cases that were/were not reached are provided in Table 2.5. If no response was obtained, the number provided was non-working, or no number was provided or located, youths were deemed "unreachable" and moved to a "search for new information" file. The research team utilized a number of resources to track and identify additional contact information for youths (i.e., VineLink victim notification, county court/jail databases, WhitePages Premium, and Facebook). The general approach taken in this process was modeled on previous descriptions of best practices in locating hard-to-reach youth populations (see, e.g., McCuller, Sussman, Holiday, Craig, & Dent, 2002; Wright, Allen, & Devine, 1995). Public record databases were searched for information on these individuals by cross-checking any prior contact information provided for the youths or their parents/guardians with novel information. If potential new working phone numbers were found, they were recorded, and the youths' files were moved back into the call queue. This process might be carried out multiple times for youths that were challenging to contact (e.g., phone number was changed or disconnected). On some occasions, the call-center staff would locate a valid mobile phone number during the WhitePages Premium search.

Study staff also searched Facebook for any profiles that could be matched to existing information for unreachable youths. If no Facebook profile or updated contact information could be found, youths were moved to "unable to contact" status and no further attempt was made to reach them. However, if a matching profile was found, staff sent a scripted message and a study flyer. This message briefed potential participants on the purpose of the study, provided the study

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contact information, asked about their interest in the study, and encouraged each individual to reach out if they had questions. Youths under the age of 18 were also told that if they wanted to participate, they would need to have a parent or guardian available to give consent prior to participation. Facebook messages were attempted up to three times within a period of at least two weeks between attempted contacts. If youths responded, they were asked if they had any questions or would like to schedule a time to do the interview over the phone. If no response was received after at least two Facebook contact attempts, and no updated contact information was available for the youths at that time, their files were moved to "unable to contact" status and all attempts to reach them ceased.

At the beginning of the study, the team also contacted hard-to-reach youths via text message using Google Voice. A total of 102 messages were sent to the youths and/or their parents with a valid mobile phone number. The majority of these texts were sent to youths from State 1 (82.4%). This method was phased out as the research staff had limited success in accurately identifying valid mobile phone numbers and received relatively few responses from parents and/or youths.

On some occasions, study staff were able to reach family members of selected youths, only to be informed that they were incarcerated. In the event that the youth's case was in juvenile court, no public records existed for the case. Therefore, study staff asked family members for an estimate of when youths would be released and followed up again when the specified dates had passed. Furthermore, when incarcerated youths had cases in adult court, their cases were able to be tracked through public court records until their release. After three weeks in the community, their files were placed back in the call queue and attempts to make contact re-started.

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Youth Follow-Up Sample Contact Attempts. Table 2.5 provides an overview of contact attempts made to youths in the follow-up sample by state. A total of 9,297 phone calls were made to 1,405 youths included in the youth follow-up sample. Research staff made phone contact with either the youths or their guardian(s) during 734 phone calls of the 5,789 call attempts in State 1 (12.7% of call attempts resulted in contact). Each youth in State 1 was called approximately eight times on average. Youths in State 2 were called approximately nine times, on average. Approximately four voicemail messages were left for each youth in State 2. The research team was able to make phone contact with 107 youths and/or their guardian out of the 198 youths in State 2 (54.0%). The fewest calls were made to the sample of 500 youths from State 3 (N = 1,594; 17.1% of all calls).[58] The youths and/or their guardians were reached on 289 of the 1,594 call attempts (18.1%). The research team attempted an average of 3.2 calls per youth and left an average of 1.7 voicemails per youth. Phone contact was made with 209 youths and/or guardians in State 3 (41.8%).

Table 2.5. Descriptive Statistics for Youth Follow-Up Sample – Youth Contact Methods

Variable	**State 1 (N = 707)**	**State 2 (N = 198)**	**State 3 (N = 500)**	**Combined (N = 1,405)**
	n (%)	*n (%)*	*n (%)*	*n (%)*
Calls Attempted	5,879 (63.2)	1,824 (19.6)	1,594 (17.1)	9,297 (100.0)
Voicemails (VM) Left	1,589 (49.8)	747 (23.4)	853 (26.7)	3,189 (100.0)
Phone Contact with Youth	209 (60.4)	53 (15.3)	84 (24.3)	346 (100.0)
Phone Contact with Guardian	587 (57.9)	187 (18.5)	239 (23.6)	1,013 (100.0)
Any Phone Contact	734 (58.9)	224 (18.0)	289 (23.2)	1,247 (100.0)
Any Phone Contact per Case	325 (50.7)	107 (16.7)	209 (32.6)	641 (100.0)
Searched for Additional Contact	817 (66.5)	290 (23.6)	121 (9.9)	1228 (100.0)
Google Voice Text	84 (82.4)	16 (15.7)	2 (1.9)	102 (100.0)

[58] As previously noted, contact information for youths from State 3 was not received until later in the study timeline.

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Table 2.5. Descriptive Statistics for Youth Follow-Up Sample – Youth Contact Methods

Variable	**State 1 (N = 707)**	**State 2 (N = 198)**	**State 3 (N = 500)**	**Combined (N = 1,405)**
Facebook Message[1]	546 (70.4)	177 (22.8)	53 (6.8)	776 (100.0)
	$\bar{x}$ (sd)	*$\bar{x}$ (sd)*	*$\bar{x}$ (sd)*	*$\bar{x}$ (sd)*
Number of Calls per Case	8.3 (7.4)	9.2 (6.6)	3.2 (1.4)	6.6 (6.4)
Number of VM per Case	2.2 (3.1)	3.8 (4.1)	1.7 (1.5)	2.3 (2.9)

[1] Includes: responses and > 2 week follow-up messages.
Notes: *n* = number, $\bar{x}$ = mean, *sd* = standard deviation.

Among youths that were challenging to locate, a total of 1,228 searches were conducted by the call-center staff. During the searches, the research team often located Facebook accounts for the youths. A total of 776 Facebook messages were sent to youths across the three states, which includes: initial messages, follow-up messages to youths at least 2 weeks after the initial message, and responses to messages sent from the youths. The use of Facebook resulted in the completion of 12 additional interviews (9.2% of the total number of interviews).

Table 2.6 provides the response rates for each state. The combined response rate for completed interviews across the three states was 9.3% (N = 131). The response rate was the highest among youths in State 2 (12.6%). A relatively similar percentage of youths from State 1 completed the phone interview (11.2%). The response rate was the lowest for youths in State 3 (5.4%). Of the 1,405 youths in the follow-up sample, 204 youths declined to participate in the interview (14.5%). A small percentage of youths in the overall follow-up sample were identified as being in a detention center or secure confinement facility during the follow-up period (6.2%). Adjusting the response rate to account for whether any phone contact was made with the youths and/or their parents yields a higher response rate (20.4%) compared to the rate presented in Table 2.4.

Table 2.6. Descriptive Statistics for Youth Follow-Up Sample – Interview Response

Variable	**State 1 (N = 707)**	**State 2 (N = 198)**	**State 3 (N = 500)**	**Combined (N = 1,405)**
	n (%)	*n (%)*	*n (%)*	*n (%)*

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Table 2.6. Descriptive Statistics for Youth Follow-Up Sample – Interview Response

Variable	State 1 (N = 707)	State 2 (N = 198)	State 3 (N = 500)	Combined (N = 1,405)
Completed Interview	79 (11.2)	25 (12.6)	27 (5.4)	131 (9.3)
Declined to Participate	107 (15.1)	28 (14.1)	69 (13.8)	204 (14.5)
Detention/Incarceration	66 (9.3)	7 (3.5)	14 (2.8)	87 (6.2)
Adjusted Response Rate[1]	(24.3)	(23.4)	(12.9)	(20.4)

[1] Accounts for whether any phone contact was made with youths and/or their parents.

Overview of follow-up interview measures. We draw in part from the measures from the CAS case record data described above in analyses with the 131 youth whom we interviewed and so this section identifies the key measures from the youth follow-up tool that we developed and utilized in the study.

Summary scales and indices. We created a series of summary measures that reflect youths' different attitudes and beliefs at the point at which they were interviewed. In some cases, these measures reflected elements of the OYAS self-report tool in order to establish some sense of whether youths had changed between the time of their assessments and the point at which they were interviewed. In other cases, however, they simply reflect relevant dimensions of development that might be affected by youths' experiences in the system (which in turn may have been influenced by the risk and needs assessment process).

The *Prosocial Family* measure is an average of items coded such that higher scores suggest more positive family relationships and lower scores suggest less positive relationships with family.[59] The scale comprises five items, such as "my family is important to me," "I feel safe with my family," and "my family wants me to stay out of trouble." A single factor solution explained 55 percent of the variance among the items, which loaded from 0.51 to 0.81 in exploratory factor

[59] Unless noted otherwise, possible responses ranged from 1 (strongly disagree) to 5 (strongly agree) on the items that comprise these composite measures.

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analysis (EFA) with Principal Axis Factoring. The Cronbach's alpha for the measure was 0.75. Both of these values exceed their respective cut-offs of 0.40 (factor loadings) and 0.70 (Cronbach's alpha). Similarly, a four-item *Prosocial Peer* score was developed based on Likert-scale responses to questions such as, "my friends are good role models" and "my friends want me to stay out of trouble." This measure had a Cronbach's alpha score of 0.77 and a single factor accounted for 59 percent of the variance/covariance in these items with item loadings from 0.50 to 0.77.

A mean scale was computed to capture youths' *Attitudes toward the Juvenile Justice System* and the services that they may have received during the course of their involvement. This measure comprised four items with a Cronbach's alpha of 0.87. A single factor explained 71 percent of the variance/covariance of the included items, which had individual loadings from 0.60 to 0.93 on an underlying latent variable. The items in the measure included, "I am receiving (or received) the kind of help I need," "juvenile justice personnel have helped me get the services I need," and "the services I have received helped me to stay out of trouble with the law."

We also developed an average score (k = 5 items) that reflected youths' *Attitudes toward Work and School.* This was only computed for the 99 interviewees who responded that they were involved in either of the two at the time of the interview. The two scales had alphas of 0.86 and 0.77, respectively, and their loadings were generally above .40. The underlying factors in each explained 65 and 53 percent of item variance, respectively. Where a youth was involved in both work and school, we prioritized the latter score given the age range of the sample. The items included "my school[work] is worthwhile," "I feel committed to school[work]," and "Even though school[work] can be difficult, it's worth it in the long run."

The *Procriminal Attitudes* measure includes nine items such as "people should be allowed to use illegal drugs without any legal consequences," "there are some good things about gangs,"

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and "you have to get even with people who do not respect you." The Cronbach's alpha was 0.77 and a single factor explained about 36 percent of the variance in EFA. Single item loadings ranged from 0.37 to 0.66.

The mean of seven items from the *Texas Christian University (TCU) Adolescent Thinking* scale was used to measure interviewees' thinking styles and thinking errors, situational control, and efficacy in problem solving (Knight, Becan, Landrum, Joe, & Flynn, 2014). Example items included, "I am confident that I can walk away from a fight" and "I am confident that I can resist pressure from friends to do things that may get me in trouble." The measure had a Cronbach's alpha of 0.83 and a single factor explained 55 percent of the variance in the pool of items. The individual factor loadings ranged from 0.40 to 0.80.

Employment and school. We utilized two dichotomous measures (0 = "No," 1 = "Yes") to capture whether the youth was employed or attending school at the time of the interview. This measure was merged in analyses to reflect whether the interviewee was involved in either (or both) of the two.

Justice involvement. During the interview, youths were also asked a number of questions about their behavior and experiences in the past year (or termination from the court or release if that was a shorter time period). These measures tapped into the frequency with which they had been "stopped by police," "arrested," "adjudicated delinquent or convicted," "placed on probation," or "recommitted to detention or an institution." These variables were measured as counts initially, but collapsed into dichotomous (0 = "No", 1 = "Yes") measures for the purposes of the reported analyses.

Substance use. The interview included several questions on youths' recent substance use during the follow-up period. These included "alcohol use," "marijuana use," and "harder drug

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use" (e.g., cocaine, heroin). Item responses were generally coded as frequencies, but were collapsed into dichotomous categories (0 = "No", 1 = "Yes") for these analyses.

Self-reported treatment and programming. Several items were utilized to capture whether the youths received any treatment and programming in the juvenile justice process (0 = "No", 1 = "Yes"). As in the case record data, categories included, "substance use," "anger management," "cognitive behavioral therapy (CBT)," "counseling," "family treatment," or "mental health treatment." We also collapsed these measures to reflect whether the youth received "any" of these treatments during juvenile justice involvement or in the follow-up period.

Overview of analyses. We utilize varying analytic methods in this section and the next to answer key questions of interest under each of the study Research Objectives using these follow-up data and the case records described above. Those are described in more depth at each relevant point in the report below. Generally, we draw from basic descriptive methods to convey information about our samples and subsamples utilized in particular analyses. We also isolate important relationships with bivariate hypothesis tests (i.e., t, F, and χ^2) and related measures of association in order to highlight key points and also to set up further multivariate modeling. The analytic plan comprises several types of multivariate analyses, usually based on multivariate logistic regression given the nature of our measures. These models allow us to assess relevant questions related to Research Objectives 3 and 4 while conditioning on other factors that could plausibly impact the estimates and inferences from those analyses. We also utilize path and causal mediation and measurement models that allow us to understand usage and outcome processes wherever possible.

Results

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Description of Comprehensive Assessment Sample. The descriptive statistics for the youths and case characteristics for the comprehensive assessment sample are displayed in Table 2.7. The largest proportion of youths in the sample were from State 3 (39.3%), followed by State 1 (32.8%), with the smallest proportion selected from State 2 (27.8%). Approximately three-fourths of the sample (76%) were male, and the majority of youths in the combined sample were Caucasian (55.5%). African Americans made up a sizeable portion of the sample as well at 31.1 percent, and were the dominant racial category in the State 1 subsample. The remaining youths were identified as other races or multiracial. On average, youths were approximately 16 years-old at the time they were assessed. The most common offense types in the combined sample were violent or sexual offenses (28%), followed by property crimes (23.9%). Drug or alcohol offenses were also common (15%), and were the most frequently reported offense type in the State 3 subsample. The majority of youths were adjudicated for a felony (37%) or misdemeanor (34.4%).

Table 2.7. Descriptive Statistics for Comprehensive Assessment Sample – Youth and Case Characteristics

Variable	**State 1 (N = 2,042)**	**State 2 (N = 1,730)**	**State 3 (N = 2,450)**	**Combined (N = 6,222)**
Gender	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Male	1,609 (78.8)	1,342 (77.6)	1,776 (72.5)	4,727 (76.0)
Female	433 (21.2)	388 (22.4)	674 (27.5)	1,495 (24.0)
Race	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Caucasian	871 (42.7)	940 (54.3)	1,641 (67.0)	3,452 (55.5)
African American	1,087 (53.2)	669 (38.7)	176 (7.2)	1,932 (31.1)
Asian	3 (0.1)	2 (0.1)	7 (0.3)	12 (0.2)
Hispanic	0 (0.0)	0 (0.0)	211 (8.6)	211 (3.4)
Native American	4 (0.2)	3 (0.2)	191 (7.8)	198 (3.2)
Native Hawaiian or Pacific Islander	2 (0.1)	1 (0.1)	4 (0.2)	7 (0.1)
Multi-racial (Caucasian and African American)	35 (1.7)	0 (0.0)	0 (0.0)	35 (0.6)
Multi-racial (Caucasian and Asian)	1 (0.0)	0 (0.0)	0 (0.0)	1 (0.0)

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Table 2.7. Descriptive Statistics for Comprehensive Assessment Sample – Youth and Case Characteristics

Variable	**State 1 (N = 2,042)**	**State 2 (N = 1,730)**	**State 3 (N = 2,450)**	**Combined (N = 6,222)**
Multi-racial (Unknown)	6 (0.3)	0 (0.0)	0 (0.0)	6 (0.1)
Other	33 (1.6)	114 (6.6)	21 (0.9)	168 (2.7)
Missing	0 (0.0)	1 (0.1)	199 (8.1)	200 (3.2)
Ethnicity	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Hispanic	75 (3.7)	121 (7.0)	211 (8.6)	407 (6.5)
Non-Hispanic	1,901 (93.1)	1,544 (89.2)	239 (9.8)	3684 (59.2)
Missing	66 (3.2)	65 (3.8)	2,000 (81.6)	2,131 (34.2)
Age	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
	16.06 (1.74)	15.64 (1.43)	15.77 (1.71)	15.83 (1.66)
Offense Type	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Violent/Sex	753 (36.9)	623 (36.0)	369 (15.1)	1,745 (28.0)
Property	497 (24.3)	617 (35.7)	371 (15.1)	1,485 (23.9)
Weapon	61 (3.0)	71 (4.1)	50 (2.0)	182 (2.9)
Drug/Alcohol	65 (3.2)	201 (11.6)	669 (27.3)	935 (15.0)
VOC, PV, or Probation	8 (0.4)	69 (4.0)	46 (1.9)	123 (2.0)
Other	111 (5.4)	22 (1.3)	109 (4.4)	242 (3.9)
Status/Unruly/DC	243 (11.9)	127 (7.3)	96 (3.9)	466 (7.5)
Missing	304 (14.9)	0 (0.0)	740 (30.2)	1,044 (16.8)
Offense Level	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Felony	918 (45.0)	844 (48.8)	539 (22.0)	2,301 (37.0)
Misdemeanor	630 (30.9)	790 (45.7)	718 (29.3)	2,138 (34.4)
Traffic/Civil	6 (0.3)	0 (0.0)	37 (1.5)	43 (0.7)
Status/Unruly	69 (3.4)	96 (5.5)	390 (15.9)	555 (8.9)
Missing	419 (20.5)	0 (0.0)	766 (31.3)	1,185 (19.0)

Table 2.8 provides the descriptive statistics pertaining to the dispositions the youths received for their offenses. In the combined sample, approximately 28 percent of youths were committed to a state facility upon adjudication. Electronic monitoring and intensive supervision were used less frequently with 8.1% and 1.7% receiving these dispositions, respectively. Probation was used with some regularity; a little more than a quarter of the youths (26.4%) in the combined sample were placed on probation. Diversion was used in 12.8 percent of cases, and 6.2 percent of

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cases were dismissed. The frequency with which each disposition is observed in the sample may not fully align with the prevalence that the dispositions are used in each state. For example, Table 2.8 below shows that Diversion Tool assessments make up a lower proportion of cases than they typically do in the juvenile justice system (see, e.g., Furdella & Puzzanchera, 2015). The sampling strategies employed in this study were intended to ensure various stages of the juvenile justice system were adequately represented in the final sample, and some dispositions may be relied upon more or less frequently as individuals penetrate deeper into the juvenile justice system.

Table 2.8. Descriptive Statistics for Comprehensive Assessment Sample – Dispositions

Variable		**State 1 (N = 2,042)**	**State 2 (N = 1,730)**	**State 3 (N = 2,450)**	**Combined (N = 6,222)**
State Commitment		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	No	1,478 (72.4)	953 (55.1)	1,668 (68.1)	4,099 (65.9)
	Yes	564 (27.6)	688 (39.8)	466 (19.0)	1,718 (27.6)
	Missing	0 (0.0)	89 (5.1)	316 (12.9)	405 (6.5)
Electronic Monitoring		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	No	1,891 (92.6)	1,378 (79.7)	2,000 (81.6)	5,269 (84.7)
	Yes	151 (7.4)	353 (20.3)	0 (0.0)	503 (8.1)
	Missing	0 (0.0)	0 (0.0)	450 (18.4)	450 (7.2)
Intensive Supervision		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	No	2,034 (99.6)	1,640 (94.8)	1,585 (64.7)	5,259 (84.5)
	Yes	8 (0.4)	1 (0.1)	99 (4.0)	108 (1.7)
	Missing	0 (0.0)	89 (5.1)	766 (31.3)	855 (13.7)
Probation		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	No	1,452 (71.1)	923 (53.4)	1,348 (55.0)	3,723 (59.8)
	Yes	590 (28.9)	718 (41.5)	336 (13.7)	1,644 (26.4)
	Missing	0 (0.0)	89 (5.1)	766 (31.3)	855 (13.7)
Diversion		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	No	1,864 (91.3)	1,497 (86.5)	1,211 (49.4)	4,572 (73.5)
	Yes	178 (8.7)	144 (8.3)	473 (19.3)	795 (12.8)
	Missing	0 (0.0)	89 (5.1)	766 (31.3)	855 (13.7)
Dismissed		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	No	1,976 (96.8)	1,591 (92.0)	1,416 (57.8)	4,983 (80.1)
	Yes	66 (3.2)	50 (2.9)	268 (10.9)	384 (6.2)
	Missing	0 (0.0)	89 (5.1)	766 (31.3)	855 (13.7)

Table 2.9 provides an overview of the treatment youths received during the processing of their cases. The values reported in the table reflect the number of youths who received the type of

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treatment listed. It is important to note that treatment information was not provided for any youths in State 3. Among youths in State 1 and State 2, approximately 37 percent received some form of treatment intervention. The most frequently reported treatment type was mental health services (21.6%), and about 17 percent of youths received substance abuse treatment. Between 10 and 12 percent of youths received cognitive behavioral treatment, other behavioral treatment, or family services. Less than five percent of youth in the sample had a record indicating that they received specific services for anger/aggression, education or employment, sexual offending, or some other forms of treatment.

Variable	**State 1 (N = 2,042)**	**State 2 (N = 1,730)**	**Combined (N = 3,772)**
	n (%)	*n (%)*	*n (%)*
Cognitive Behavioral	379 (18.6)	72 (4.2)	451 (12.0)
Anger/Aggression	134 (6.6)	29 (1.7)	163 (4.3)
Education/Employment	52 (2.5)	89 (5.1)	141 (3.7)
Family Services	266 (13.0)	150 (8.7)	416 (11.0)
Mental Health Services	421 (20.6)	396 (22.9)	817 (21.6)
Other Behavioral Treatment	410 (20.1)	0 (0.0)	410 (10.9)
Residential Treatment	99 (4.8)	292 (16.9)	391 (10.4)
Substance Abuse Treatment	413 (20.2)	219 (12.7)	632 (16.7)
Sex Offender Treatment	70 (3.4)	58 (3.4)	128 (3.4)
Other Treatment	32 (1.6)	6 (0.3)	38 (1.0)
Any Treatment	841 (41.2)	552 (31.9)	1,393 (36.9)

Risk and needs assessment information for the sample is displayed in Table 2.10. Assessment years spanned 2013 to 2017 in State 3, and are limited to 2014 and 2015 in State 1 and State 2.[60] As a result, the bulk of assessments were carried out in 2014 (34.1%) and 2015 (31.2%) for the combined sample. The Disposition Tool was used to assess the largest proportion of youths in the sample at 35.4 percent. The Residential Tool was used in slightly less than one quarter of cases (23.2%), and the Diversion Tool was used in approximately one fifth of cases

[60] The year range for that state reflects the fact that the corrections and court records were drawn from different systems by the agencies involved and record availability did not overlap precisely.

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(19.5%). The Reentry Tool was used to assess risk and need in about 16 percent of cases, and the Detention Tool was used the least (5.9%). The most common classification was moderate risk (43.8%), followed closely by low risk (39.5%). A smaller portion of youths were classified as high risk (16.2%), and less than 1 percent were classified as being at a very high risk for recidivating.[61] Although these values are based on possible overrides, instances of practitioners overriding risk levels based on raw scores was low overall, with just 4.1 percent of youths' risk levels being adjusted.

Table 2.10. Descriptive Statistics for Comprehensive Assessment Sample – Assessment Years, Numbers, and Results

Variable		**State 1 (N = 2,042)**	**State 2 (N = 1,730)**	**State 3 (N = 2,450)**	**Combined (N = 6,222)**
Assessment Year		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	2013	0 (0.0)	0 (0.0)	159 (6.5)	159 (2.6)
	2014	896 (43.9)	1,008 (58.3)	219 (8.9)	2,123 (34.1)
	2015	1,146 (56.1)	722 (41.7)	72 (2.9)	1,940 (31.2)
	2016	0 (0.0)	0 (0.0)	1,040 (42.4)	1,040 (16.7)
	2017	0 (0.0)	0 (0.0)	960 (39.2)	960 (15.4)
Assessment Type		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	Detention	179 (8.8)	181 (10.5)	10 (0.4)	370 (5.9)
	Diversion	207 (10.1)	166 (9.6)	840 (34.3)	1,213 (19.5)
	Disposition	672 (32.9)	459 (26.5)	1,073 (43.8)	2,204 (35.4)
	Residential	479 (23.5)	459 (26.5)	508 (20.7)	1,446 (23.2)
	Reentry	505 (24.7)	465 (26.9)	19 (0.8)	989 (15.9)
Risk Level		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	Low	770 (37.7)	630 (36.4)	1,057 (43.1)	2,457 (39.5)
	Moderate	824 (40.4)	863 (49.9)	1,036 (42.3)	2,723 (43.8)
	High	446 (21.8)	237 (13.7)	322 (13.1)	1,005 (16.2)
	Very High	0 (0.0)	0 (0.0)	35 (1.4)	35 (0.6)
Risk Level Override		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	Yes	108 (5.3)	25 (1.4)	119 (4.9)	252 (4.1)

Table 2.11 displays the average domain scores for youths who were assessed with the Disposition, Residential, and Reentry Tools in the comprehensive assessment sample. Each tool is comprised of some overlapping and some unique items. Although the domains are consistent

[61] This is a byproduct of one state adding a category of cases believed to be at especially high risk of recidivism. This is considered an override of the overall OYAS risk levels.

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across tools, the number of items within each domain varies based on the tool used. These differences in the ranges of scores should be considered when reviewing the averages. Among those who were assessed with the Disposition Tool, scores in the peers and social support domain tended to be the highest ($\bar{x}$ = 1.93, *sd* = 1.57). This was also observed in each of the three states. Average domain scores were similar for *Education and Employment* ($\bar{x}$ = 1.68, *sd* = 1.07) and *Family and Living Arrangements* ($\bar{x}$ = 1.70, *sd* = 1.51). Average scores were also very similar for the *Substance Abuse, Mental Health, and Personality* ($\bar{x}$ = 1.33, *sd* = 1.23) and *Pro-Social Skills* ($\bar{x}$ = 1.31, *sd* = 1.20) domains. Scores were lowest in the *Juvenile Justice History* ($\bar{x}$ = 0.96, *sd* = 1.03) and *Values, Beliefs, and Attitudes* ($\bar{x}$ = 0.70, *sd* = 0.96) domains. Comparing scores across the three states, average scores tended to be highest in State 2 and lowest in State 3 with one exception—scores in the *Juvenile Justice History* domain were highest in State 1 and lowest in State 3.

A slightly different pattern was observed among average domain scores for youths assessed with the Residential Tool. The highest domain scores were observed for the *Substance Abuse, Mental Health, and Personality* domain ($\bar{x}$ = 4.44, *sd* = 1.98). Scores in the *Peers and Social Support* domain were also high ($\bar{x}$ = 3.16, *sd* = 1.68) relative to the other domains. The average score in the *Pro-Social Skills* domain was 2.80 (*sd* = 1.08), which is somewhat high considering the range of possible scores includes a maximum of 4. A similar pattern was observed for the *Juvenile Justice History* domain where the average score was 2.50 (*sd* = 1.31) on a scale of 0 to 3. Scores in the *Values, Beliefs, and Attitudes* domain were slightly lower at 2.22 (*sd* = 1.38), and lower still in the *Education and Employment* domain ($\bar{x}$ = 1.01, *sd* = 0.82). The lowest domain

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scores among youths assessed with the Residential Tool were observed in the *Family and Living Arrangements* domain ($\bar{x}$ = 0.51, *sd* = 0.85).[62]

Table 2.11. Descriptive Statistics for Comprehensive Sample – Average Risk and Needs Assessment Domain Scores

Variable		**State 1**	**State 2**	**State 3**	**Combined**
Disposition Tool Domain Scores		N = 672	N = 459	N = 1,073	N = 2,204
	Range	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
Juvenile Justice History	0-3	1.22 (1.11)	0.91 (0.99)	0.83 (0.97)	0.96 (1.03)
Education and Employment	0-4	1.90 (1.09)	2.05 (1.08)	1.41 (0.98)	1.68 (1.07)
Peers and Social Support	0-6	1.95 (1.59)	2.57 (1.67)	1.64 (1.43)	1.93 (1.57)
Family and Living Arrangements	0-6	1.80 (1.53)	2.01 (1.49)	1.51 (1.49)	1.70 (1.51)
Values, Beliefs, and Attitudes	0-6	0.75 (1.00)	1.03 (1.10)	0.54 (0.84)	0.70 (0.96)
Substance Abuse, Mental Health, and Personality	0-6	1.47 (1.31)	1.49 (1.21)	1.19 (1.17)	1.33 (1.23)
Pro-Social Skills	0-3	1.34 (1.18)	1.72 (1.14)	1.11 (1.18)	1.31 (1.20)
Residential Tool Domain Scores		N = 479	N = 459	N = 508	N = 1,446
	Range	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
Juvenile Justice History	0-3	2.40 (1.30)	2.16 (1.33)	2.90 (1.21)	2.50 (1.31)
Education and Employment	0-3	1.11 (0.89)	1.06 (0.76)	0.91 (0.79)	1.02 (0.82)
Peers and Social Support	0-7	3.25 (1.70)	2.92 (1.57)	3.30 (1.74)	3.16 (1.68)
Family and Living Arrangements	0-3	0.67 (0.94)	0.42 (0.75)	0.43 (0.83)	0.51 (0.85)
Values, Beliefs, and Attitudes	0-5	2.36 (1.48)	1.91 (1.23)	2.39 (1.37)	2.22 (1.38)
Substance Abuse, Mental Health, and Personality	0-8	4.01 (1.92)	4.29 (2.01)	4.97 (1.88)	4.44 (1.98)
Pro-Social Skills	0-4	3.13 (1.10)	2.71 (1.03)	2.59 (1.05)	2.80 (1.08)

[62] Previous analyses with a portion of these data suggest that some domains may have differential pertinence to the population covered by the OYAS-Residential tool (McCafferty, Newsome, & Sullivan, 2018). Specifically, the *Education and Employment* and *Family and Living Arrangements* items may have differential salience for youths in custody as compared to those at other stages of the juvenile justice process.

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Table 2.11. Descriptive Statistics for Comprehensive Sample – Average Risk and Needs Assessment Domain Scores

Variable		**State 1**	**State 2**	**State 3**	**Combined**
Reentry Tool Domain Scores		N = 505	N = 465	N = 19	N = 989
	Range	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
Juvenile Justice History	0-7	2.96 (1.57)	2.95 (1.51)	2.00 (1.49)	2.94 (1.54)
Education and Employment	0-4	1.19 (1.03)	1.27 (0.98)	0.84 (1.21)	1.22 (1.01)
Peers and Social Support	0-9	3.29 (2.24)	3.58 (2.08)	1.74 (1.70)	3.40 (2.17)
Family and Living Arrangements	0-4	1.21 (0.91)	1.20 (0.75)	1.26 (1.15)	1.21 (0.84)
Values, Beliefs, and Attitudes	0-7	2.27 (1.87)	1.80 (1.65)	1.05 (1.31)	2.02 (1.77)
Substance Abuse, Mental Health, and Personality	0-7	2.51 (1.73)	2.94 (1.65)	2.47 (1.39)	2.71 (1.70)
Pro-Social Skills	0-4	1.60 (1.48)	1.40 (1.38)	1.37 (1.34)	1.50 (1.43)

As noted previously, the number of youths assessed with the Reentry Tool in the sample is lower relative to the Disposition and Reentry Tools. Of the 989 youths assessed with the Reentry Tool, only 19 were from State 3. Therefore, the average scores for the combined sample are largely a reflection of youths in State 1 and State 2 where scores were very similar between the two states. Like the Disposition Tool, average scores were highest in the peers and social support domain ($\bar{x}$ = 3.40, *sd* = 2.17). Scores in the *Juvenile Justice History* ($\bar{x}$ = 2.94, *sd* = 1.54) and *Substance Abuse, Mental Health, and Personality* ($\bar{x}$ = 2.71, *sd* = 1.70) were also high relative to the other domains in the tool. The average domain score for *Values, Beliefs, and Attitudes* was 2.02 (*sd* = 1.77), which was slightly higher than scores in the *Pro-Social Skills* domain ($\bar{x}$ = 1.50, *sd* = 1.43). In the *Education and Employment* and *Family and Living Arrangements* domains, scores were very similar at 1.22 (*sd* = 1.01) and 1.21 (*sd* = 0.84), respectively.

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Descriptive Statistics for Youth Follow-Up Interviews. Of the 1,402 cases targeted for intensive phone interviews following the disposition of their focal case or facility release, 131 youths completed the initial phone interviews. The descriptive statistics for the completed youth interviews are provided in Table 2.12. Males made up the majority of youths who completed an interview (n=95; 72.5%). A similar percentage of males completed a phone interview in State 1 and State 2 (70.9% and 72%, respectively). A slightly higher percentage of males completed the interview in State 3 (77.8%). The final sample was racially mixed with 55% of respondents reported as White. Approximately 52% of the respondents in States 1 and 2 were White. The majority of non-white respondents from these states were African American (43% and 44%, respectively). In State 3 a greater percentage of the respondents were White compared to States 1 and 2 (66.7%). The race of approximately 15% of the respondents from State 3 is missing. A relatively small proportion of the youths were identified as being from a Hispanic origin in States 1 and 2 (8.9% and 8%, respectively). State 3 did not provide those data. The overall average age of youths in the final sample is 15.7 years old (*sd*=1.9). The average age of youths ranges from 15.6 years old (*sd*=1.0) in State 2 to 15.9 years old (*sd*=1.8) in State 3.

Table 2.12. Descriptive Statistics for Youth Follow-Up Sample – Youth and Case Characteristics

Variable	**State 1 (N = 79)**	**State 2 (N = 25)**	**State 3 (N = 27)**	**Combined (N = 131)**
Gender	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Male	56 (70.9)	18 (72.0)	21 (77.8)	95 (72.5)
Female	23 (29.1)	7 (28.0)	6 (22.2)	36 (27.5)
Race	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Caucasian	41 (51.9)	13 (52.0)	18 (66.7)	72 (55.0)
African American	34 (43)	11 (44.0)	3 (11.1)	48 (36.6)
Native American	1 (1.3)	0 (0.0)	2 (7.4)	3 (2.3)
Multi-racial (Caucasian and African American)	1 (1.3)	0 (0.0)	0 (0.0)	1 (0.8)

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Table 2.12. Descriptive Statistics for Youth Follow-Up Sample – Youth and Case Characteristics

Variable	**State 1 (N = 79)**	**State 2 (N = 25)**	**State 3 (N = 27)**	**Combined (N = 131)**
Other/Unlisted	2 (2.5)	1 (4.0)	0 (0.0)	3 (2.3)
Missing	0 (0.0)	0 (0.0)	4 (14.8)	4 (3.1)
Ethnicity	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Hispanic	7 (8.9)	2 (8.0)	0 (0.0)	9 (6.9)
Non-Hispanic	68 (86.1)	23 (92.0)	0 (0.0)	91 (69.5)
Missing	4 (5.1)	0 (0.0)	27 (100.0)	31 (23.7)
Age	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*
	15.65 (2.16)	15.56 (1.04)	15.93 (1.77)	15.69 (1.91)
Offense Type	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Violent/Sex	23 (29.1)	13 (52.0)	5 (18.5)	41 (31.3)
Property	13 (16.5)	5 (20.0)	7 (25.9)	25 (19.1)
Weapon	0 (0.0)	0 (0.0)	1 (3.7)	1 (0.8)
Drug/Alcohol	3 (3.8)	4 (16.0)	10 (37.0)	17 (13.0)
VOC, PV, or Probation	0 (0.0)	2 (8.0)	0 (0.0)	2 (1.5)
Other	4 (5.1)	0 (0.0)	0 (0.0)	4 (3.1)
Status/Unruly/DC	17 (21.5)	1 (4.0)	1 (3.7)	19 (14.5)
Missing	19 (24.1)	0 (0.0)	3 (11.1)	22 (16.8)
Offense Level	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Felony	22 (27.8)	12 (48.0)	6 (22.2)	40 (30.5)
Misdemeanor	23 (29.1)	12 (48.0)	16 (59.3)	51 (38.9)
Status/Unruly	7 (8.9)	1 (4.0)	2 (7.4)	10 (7.6)
Missing	27 (34.2)	0 (0.0)	3 (11.1)	30 (22.9)

Table 2.12 also displays the focal offense characteristics for the follow-up sample, which differs across the three states. Fifty-two percent of the respondents in State 2 were adjudicated for a violent or sex offense compared to only 29% and 18.5% in States 1 and 3, respectively. The majority of youths who completed the interview in State 3 were adjudicated for a drug or alcohol offense (37%). Smaller proportions of youths were adjudicated for drug or alcohol offense in State 1 (3.8%) and State 2 (16%). A greater percentage of youths in State 1 were adjudicated for a status or disorderly conduct offense (21.5%) relative to State 2 (4%) and State 3 (3.7%). Across the three states, the offense level of the most serious focal offense is quite varied. The distribution of felony-

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and misdemeanor-level offenses is evenly split in State 1 (27.8% and 29.1%, respectively) and State 2 (48.0% and 48%, respectively). In State 3, however, the majority of youths in the final sample were adjudicated for a misdemeanor (59.3%) compared to a felony (22.2%). A relatively small proportion of the sample was adjudicated for a status offense in each state (ranging from 4.0% in State 2 to 8.9% in State 1).

Table 2.13 provides an overview of the most serious dispositions for youths' focal cases. A large proportion of youths from State 2 were placed in a secure state commitment facility (28%) or a residential treatment facility (28%). A bigger percentage of youths from States 1 and 3 were sanctioned to probation (26.6% and 40.7%, respectively) relative to State 2 (16%). A greater percentage of the youths from State 1 were diverted (20.3%) compared to States 2 (8%) and 3 (7.4%). A relatively large percentage of youths from State 3 had their cases dismissed or terminated (25.9%) in comparison to youths from States 1 and 2.

Table 2.13. Descriptive Statistics for Youth Follow-Up Sample – Most Serious Disposition

Variable	**State 1 (N = 79)**	**State 2 (N = 25)**	**State 3 (N = 27)**	**Combined (N = 131)**
Most Serious Disposition	*n (%)*	*n (%)*	*n (%)*	*n (%)*
State Commitment	10 (12.7)	7 (28.0)	0 (0.0)	17 (13.0)
CCF/Residential	3 (3.8)	7 (28.0)	0 (0.0)	10 (7.6)
Electronic Monitoring[1]	3 (3.8)	1 (4.0)	0 (0.0)	4 (3.1)
Intensive Probation	1 (1.3)	0 (0.0)	2 (7.4)	3 (2.3)
Probation	20 (25.3)	4 (16.0)	9 (33.3)	33 (25.2)
Diversion	16 (20.3)	2 (8.0)	2 (7.4)	20 (15.3)
Penalties[2]	0 (0.0)	1 (4.0)	0 (0.0)	1 (0.8)
Dismissed/Terminated	4 (5.1)	3 (12.0)	7 (25.9)	14 (10.7)
Missing	22 (27.8)	0 (0.0)	7 (25.9)	29 (22.1)

[1] Includes House Arrest
[2] Includes: Restitution; Court Costs; License Suspension; or Community Service

Table 2.14 shows each disposition or placement across the three states. Probation was one of the most common dispositions across the three states (29.8%). In State 3, however, a slightly higher proportion of cases were more likely to be dismissed (22.2%) than receive probation

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(18.5%). Although the dispositions were quite varied between states, they are somewhat expected given the offense-level characteristics described above. Respondents in State 2, for example, were more likely to be adjudicated for a violent or sex offense in comparison to the youths from State 1 and 3. Youths from State 2 were also more likely to receive a more serious disposition compared to youths from States 1 and 3.

Table 2.14. Descriptive Statistics for Youth Follow-Up Sample – Dispositions and Placement

Variable	**State 1 (N = 79)**	**State 2 (N = 25)**	**State 3 (N = 27)**	**Combined (N = 131)**
State Commitment	*n (%)*	*n (%)*	*n (%)*	*n (%)*
No	65 (82.3)	17 (68.0)	24 (88.9)	106 (80.9)
Yes	10 (12.7)	7 (28.0)	0 (0.0)	17 (13.0)
Missing	4 (5.1)	1 (4.0)	3 (11.1)	8 (6.1)
Electronic Monitoring[1]	*n (%)*	*n (%)*	*n (%)*	*n (%)*
No	70 (88.6)	21 (84.0)	27 (100.0)	118 (90.1)
Yes	5 (6.3)	4 (16.0)	0 (0.0)	9 (6.9)
Missing	4 (5.1)	0 (0.0)	0 (0.0)	4 (3.1)
Intensive Supervision	*n (%)*	*n (%)*	*n (%)*	*n (%)*
No	74 (93.7)	24 (96.0)	22 (81.5)	120 (91.6)
Yes	1 (1.3)	0 (0.0)	2 (7.4)	3 (2.3)
Missing	4 (5.1)	1 (4.0)	3 (11.1)	8 (6.1)
Probation	*n (%)*	*n (%)*	*n (%)*	*n (%)*
No	53 (67.1)	12 (48.0)	19 (70.4)	84 (64.1)
Yes	22 (27.8)	12 (48.0)	5 (18.5)	39 (29.8)
Missing	4 (5.1)	1 (4.0)	3 (11.1)	8 (6.1)
Diversion	*n (%)*	*n (%)*	*n (%)*	*n (%)*
No	59 (74.7)	23 (92.0)	22 (81.5)	104 (79.4)
Yes	16 (20.3)	1 (4.0)	2 (7.4)	19 (14.5)
Missing	4 (5.1)	1 (4.0)	3 (11.1)	8 (6.1)
Dismissed	*n (%)*	*n (%)*	*n (%)*	*n (%)*
No	72 (91.1)	23 (92.0)	18 (66.7)	113 (86.3)
Yes	3 (3.8)	1 (4.0)	6 (22.2)	10 (7.6)
Missing	4 (5.1)	1 (4.0)	3 (11.1)	8 (6.1)

[1] Includes House Arrest

Table 2.15 breaks down the various treatment program types received by youths in the follow-up sample. State 3 did not provide treatment-related data and therefore those cases are not included in these analyses. Approximately 37 percent of youths from State 1 received a treatment

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referral compared to 28 percent of youths in State 2. Of the 28 youths referred to treatment services in State 1, larger proportions of them received family-related services (50%), treatment for mental health issues (39.2%), and substance abuse treatment (46.4%). Similar to State 1, a large percentage of youths from State 2 were referred to family treatment (e.g., Functional Family Therapy) (57.1%), mental health treatment (57.1%), and substance abuse treatment (57.1%).

Table 2.15. Descriptive Statistics for Youth Follow-Up Sample – Treatment Received

Variable	**State 1 (N = 75)**	**State 2 (N = 25)**	**Combined (N = 100)**
Type of Treatment	*n (%)*	*n (%)*	*n (%)*
Cognitive Behavioral	8 (10.7)	1 (4.0)	9 (9.0)
Anger/Aggression	1 (1.3)	1 (4.0)	2 (2.0)
Education/Employment	3 (4.0)	2 (8.0)	5 (3.8)
Family Services	14 (18.7)	4 (16.0)	18 (18.0)
Mental Health Services	11 (14.7)	4 (16.0)	15 (15.0)
Other Behavioral Treatment	16 (21.3)	0 (0.0)	16 (16.0)
Residential Treatment	4 (5.3)	7 (28.0)	11 (11.0)
Substance Abuse Treatment	13 (17.3)	4 (16.0)	17 (17.0)
Sex Offender Treatment	1 (1.3)	2 (8.0)	3 (3.0)
Other Treatment	1 (1.3)	0 (0.0)	1 (1.0)
Any Treatment	28 (37.3)	7 (28.0)	35 (35.0)

Risk and need assessment information for the youth follow-up sample is displayed in Table 2.16. Youths from State 1 and State 2 were assessed in 2014 and 2015. State 3 cases came from 2016 and 2017. Relatively few cases from each state were assessed with the Detention Tool (6.9%). A relatively large percentage of youths from State 1 and State 3 were assessed with the Diversion Tool (24.1% and 25.9%, respectively). Conversely, a small proportion of youths from State 2 received the Diversion Tool (8%). A greater percentage of youths from State 3 were assessed with the Disposition Tool (51.9%) relative to youths from States 1 (29.1%) and 2 (28%). The majority

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of youths from State 2 were assessed at later phases of the juvenile justice process (52%); whereas, approximately 39 percent of youths from State 1 and 22.2 percent of youths from State 3 were assessed with either the Residential or Reentry Tool.

In regard to risk level, youths were more likely to be classified as low or moderate risk than high risk. This pattern holds true when examining risk level across the three states. However, a higher percentage of youths from State 1 were assessed as high risk (22.8%) compared to youths from State 2 (13.7%) and State 3 (13.1%). In comparison to States 1 and 3, youths from State 2 were more likely to be classified as moderate risk. Additionally, the majority of youths from State 3 were assessed as low risk (55.6%), which is somewhat higher than youths from States 1 (39.2%) and 2 (44%). The table also reports the domain scores by state. Inclusion of each domain varies by assessment type—meaning that the coverage is somewhat varied across the states based on the percentage of youths assessed with each tool. The most pronounced differences in domain scores involves the *Values, Beliefs, and Attitudes* score and the *Pro-Social Skills* score. In both instances, the average scores of youths from State 3 were much lower than youths from States 1 and 2. For example, the average score for the *Values, Beliefs, and Attitudes* domain was 0.40 for youths from State 3 compared to 1.67 for youths from State 1 and 1.35 for youths from State 2.

Table 2.16. Descriptive Statistics for Youth Follow-Up Sample – Assessment Year, Type, Risk Level, and Domain Scores

Variable		**State 1 (N = 79)**	**State 2 (N = 25)**	**State 3 (N = 27)**	**Combined (N = 131)**
Assessment Year		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	2014	45 (57.0)	14 (56.0)	0 (0.0)	59 (45.0)
	2015	34 (43.0)	11 (44.0)	0 (0.0)	45 (34.4)
	2016	0 (0.0)	0 (0.0)	17 (63.0)	17 (13.0)
	2017	0 (0.0)	0 (0.0)	10 (37.0)	10 (7.6)
Assessment Type		*n (%)*	*n (%)*	*n (%)*	*n (%)*
	Detention	6 (7.6)	3 (12.0)	0 (0.0)	9 (6.9)
	Diversion	19 (24.1)	2 (8.0)	7 (25.9)	28 (21.4)
	Disposition	23 (29.1)	7 (28.0)	14 (51.9)	44 (33.6)
	Residential	16 (20.3)	5 (20.0)	3 (11.1)	24 (18.3)

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Table 2.16. Descriptive Statistics for Youth Follow-Up Sample – Assessment Year, Type, Risk Level, and Domain Scores

Variable	**State 1 (N = 79)**	**State 2 (N = 25)**	**State 3 (N = 27)**	**Combined (N = 131)**
Reentry	15 (19.0)	8 (32.0)	3 (11.1)	26 (19.8)
Risk Level	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Low	31 (39.2)	11 (44.0)	15 (55.6)	57 (43.5)
Moderate	29 (36.7)	11 (44.0)	8 (29.6)	48 (36.6)
High	18 (22.8)	3 (13.7)	4 (13.1)	25 (19.1)
Missing	1 (1.3)	0 (0.0)	0 (0.0)	1 (0.8)
Risk Level Override	*n (%)*	*n (%)*	*n (%)*	*n (%)*
Yes	2 (2.5)	0 (0.0)	3 (11.1)	5 (3.8)
OYAS Domain Scores	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*
Juvenile Justice History	2.02 (1.33)	1.91 (1.93)	1.40 (1.35)	1.86(1.50)
Education and Employment	1.46 (1.05)	1.25 (1.12)	1.05 (0.89)	1.32 (1.03)
Peers and Social Support	2.63 (2.24)	3.05 (1.64)	1.85 (1.73)	2.55 (2.03)
Family and Living Arrangements	1.16 (1.26)	1.05 (1.25)	1.05 (1.15)	1.11 (1.22)
Values, Beliefs, and Attitudes	1.67 (1.58)	1.35 (1.46)	0.40 (0.75)	1.31 (1.48)
Substance Abuse, Mental Health, and Personality	2.65 (2.13)	3.00 (2.05)	2.00 (1.69)	2.58 (2.03)
Pro-Social Skills	1.90 (1.51)	2.20 (1.47)	1.20 (1.28)	1.81 (1.48)

Alignment of Youth Follow-up and Comprehensive Assessment Samples. The representativeness of the youth follow-up sample is by nature tied into the degree to which it corresponds with key properties of the comprehensive assessment sample, which was randomly drawn from state record keeping systems. Very clearly, the state representation differed across the two samples in part due to the timing of data retrieval and number of potential cases provided for each of the respective states. Whereas State 1 cases make up approximately one-third of the comprehensive assessment sample, they make up 60 percent of the youth follow-up group. This is an important difference, but we also assessed whether other important measures described here differed significantly between the 131 youths in the follow-up sample and those that were not.

Those analyses of pre-interview measures are summarized in Table 2.17. These comparisons included basic sociodemographics, OYAS risk score and level, and key case disposition and treatment indicators. With one exception, there were no significant differences on

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bivariate comparisons between the small sample of youths who participated in the youth follow-up interview and the cases in the larger comprehensive assessment sample that were not followed up. The youth follow-up sample comprised proportionally less than half as many youths with a state commitment disposition than the larger comprehensive assessment sample. A Cramer's *V* statistic indicated that this relationship was relatively small—0.05 on a scale from 0 to 1.0—but that nevertheless should contextualize the results from the youth follow-up interview analyses. This likely stems in part from the fact that we did not obtain community contact information for youths in the State 3 corrections sample as well as the difficulty of interviewing those in custody in the other two states.[63] Overall, the two groups look fairly similar across these different measures and therefore—with appropriate qualification for the state commitment difference—we analyze the youth follow-up sample as if it is a reasonably representative, but small, subgroup of the comprehensive assessment sample.

Table 2.17. Comparison of Pre-Interview Variables for Youth Follow-Up and Comprehensive Assessment Samples

Variable	**Youth Follow-Up (N = 131)**	**Comprehensive Assessment Sample (N = 6,094)**	**Bivariate Comparison**
Gender	%	%	$\chi^2_{(df)}$
Male	73.4	76.0	$\chi^2_{(1)} = 0.46$
Race/Ethnicity	%	%	$\chi^2_{(df)}$
Caucasian	56.5	57.3	$\chi^2_{(9)} = 6.80$
African American	37.9	32.0	
Hispanic	0.0	3.6	
Native American	2.4	3.3	
Multi-racial (Caucasian, African American)	0.8	0.6	
Other/Unlisted	2.4	2.9	

[63] Hyland (2018) found that cases with such placements make up about 26 percent of those formally petitioned in the juvenile court. That prevalence drops to roughly nine percent when factoring in non-petitioned cases that have informal probation supervision or other sanctions. So, while this is a concern in its reflection of the comprehensive assessment sample, for the purposes of broader generalization this is not the largest proportion of cases processed in the juvenile justice system in terms of disposition and placement.

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Table 2.17. Comparison of Pre-Interview Variables for Youth Follow-Up and Comprehensive Assessment Samples

Variable	**Youth Follow-Up (N = 131)**	**Comprehensive Assessment Sample (N = 6,094)**	**Bivariate Comparison**
Age	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$t_{(df)}$
	15.7 (1.93)	15.8 (1.65)	$t_{(131)} = 0.80$
Offense Type	%	%	$\chi^2_{(df)}$
Violent/Sex	37.3	33.6	$\chi^2_{(1)} = 0.64$
Offense Level	%	%	$\chi^2_{(df)}$
Felony	40.2	45.8	$\chi^2_{(1)} = 1.26$
OYAS Score	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$t_{(df)}$
	9.6 (7.5)	10.4 (7.3)	$t_{(6,218)} = 1.15$
OYAS Risk Level	%	%	$\chi^2_{(df)}$
Low	43.3	39.4	$\chi^2_{(2)} = 2.51$
Moderate	37.0	43.9	
High	19.7	16.7	
Case Disposition and Treatment	%	%	$\chi^2_{(df)}$
State Commitment	13.7	29.9	$\chi^2_{(1)} = 15.25$***
Probation	31.5	30.6	$\chi^2_{(1)} = 0.04$
Diversion	15.3	14.8	$\chi^2_{(1)} = 0.03$
Dismissal	8.1	7.1	$\chi^2_{(1)} = 0.16$
Any Treatment	34.7	37.0	$\chi^2_{(1)} = 0.16$

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

Given the breadth of the youths' case record data, the research team pursued several substudies to help shed light on important questions surrounding JRNA usage. Five different usage studies draw on these data and their results are presented below. These studies allow us to explore the contexts in which the OYAS is implemented and consider the impact that JRNA has on justice involved-youths and their cases. We first present these studies before transitioning to broader analysis of case-level processes and outcomes.

Usage Study 2: Youth Appraisals by Race and Geography

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This analysis considers potential variation in use of risk assessment that can affect how different groups of youths experience it and what it means for their case. A large body of research has examined racial inequities in the context of justice system contact and juvenile court processing. National-level estimates reveal that minority youths are vastly overrepresented at most phases of the juvenile justice system ranging from arrests through secure placements (Puzzanchera, 2018; Davis & Sorensen, 2013). While there have been noticeable reduction in the number of juvenile arrests and placements nationally in recent decades, the disparity between Black and White ratios of those contacts are still pervasive in studies examining race and juvenile arrests and court processing (see, e.g., Pope & Leiber, 2005; Sullivan et al., 2016). Case factors, such as offense severity, have been identified as the strongest predictors of juvenile court outcomes and as important predictors in studies examining recidivism (Pope & Leiber, 2005; Cottle, Lee, & Heilbrun, 2001). Although these systematic reviews have pointed to the importance of offense-level characteristics, race generally holds as a significant predictor of case processing decisions. Few studies, however, have attempted to examine whether race effects on juvenile court outcomes vary by geographic location or organizational features of juvenile courts (Bray, Sample, & Kempf-Leonard, 2005; Bishop, Leiber, & Johnson, 2010).

JRNA has been identified as one possible avenue to reducing observed disparities. Schwalbe and colleagues (2006: 306) note that reducing race/ethnicity disparities are among the reasons for adopting these tools and that "in practice, the result should be an increase in the reliability or consistency of case decisions made by juvenile justice officials." Research indicates that assessment tools have varying degrees of success predicting recidivism among different populations and types of offenders, and across geographic regions (McCafferty, 2013). Research also demonstrates that a standardized risk instrument score partially mediates the relationship

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between race/ethnicity and recidivism (Schwalbe et al., 2006). Ideally, the risk score would account for a large proportion of the variance in recidivism; however, the researchers found that race/ethnicity remained a statistically significant predictor of recidivism. Therefore, risk and need assessments have the potential to introduce systematic biases if assessment results and its relationship with recidivism varies by race subgroups.

Risk assessment tools have been shown to have varying degrees of success in predicting recidivism in a number of different contexts (e.g., geographic regions and different populations of offenders). Research has suggested that it is important to study the performance of juvenile risk and need assessments across geographic locations (Johnson, Wagner, & Matthews, 2002; McCafferty, 2013; Vose, Cullen, & Smith, 2008). For example, Johnson et al. (2002) examined recidivism outcomes for a sample of 2,911 youths assessed with the Missouri Juvenile Risk Assessment. The researchers included an analysis to examine whether there were differences in risk-level classification among rural and urban youths. Johnson et al. (2002) found that a greater percentage of rural youths were classified as low risk compared to urban youth. Conversely, they found that urban youths were more likely to be assessed as high risk compared to rural youths.

Although there is limited research examining court-level differences in applying risk and need assessments for decision making, there are several hypotheses as to why risk assessment tools can vary across settings. Researchers have raised concerns about the predictive validity of risk assessments on the basis that they may be specific to the data/sample used to create it. Therefore, the risk factors for recidivism may only be associated with the original sample. Even with the inclusion of risk factors identified as being the strongest predictors of recidivism (e.g., Cottle et al., 2001), there is the concern that differences in base rates of recidivism within the sample that

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was used to develop the instrument will heavily influence the predictive validity of the tool (Gottfredson & Moriarty, 2006).

Method

This substudy has two primary objectives. First, we assess the potential variation in the distribution of youths' risk levels across juvenile court jurisdictions. Second, we investigate whether race accounts for any of the variation in risk-level classification between juvenile court jurisdictions. The data come from juvenile court case records obtained from three states. Cases were randomly selected from the assessment database sample frame. The final sample consisted of 4,663 juveniles across 55 juvenile court jurisdictions. There are two key dependent variables in this sub-study. First, we examine final risk level as a dependent variable (i.e., low-, moderate-, and high risk). We dummy coded the risk level categories and set low risk as the reference group. Additionally, the risk level variables take into account any overrides. Our main predictor variable is a dichotomous measure of race (1=Non-White). In the final model we account for the youths' most serious offense type for their focal case. This is captured in a series of dummy coded variables (violent/sex; property; drug/alcohol; other [e.g., weapon, parole violations]; and status). We also control for gender (1 = female) and age at time of interview.

Analytic Plan

In order to answer the research questions, we used multinomial logistic regression analysis both in individual- and multi-level models (Raudenbush & Bryk, 2002). The analysis comprised three main stages for each outcome. First, we estimate an unconditional multilevel model. The purpose in this first step is to identify whether there is any variance in our outcome at the court-level (i.e., between court differences). Second, we assess whether our outcomes differ across race groups both in individual- and multi-level models. In the multi-level models, we assessed whether

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the predictors varied randomly across counties. For example, the slope of race on our outcome was not statistically significant; therefore, we fixed the effects. This indicates that the slope of race on risk-level remains constant across counties. Additionally, we grand mean centered our predictors. The intercept now represents the mean for risk level adjusted for between-county differences in the distributions of the predictors. Lastly, we examine whether race accounts for any variation in our dependent variable across juvenile court jurisdictions and whether the strength of that effect differs when we account for additional control variables (i.e., gender, age, and focal offense type). We explored random effects for these variables – some of which had statistically significant slopes. Therefore, we used a mixed model.

Results

The analyses include a total of 4,663 youths from 55 counties across 3 states. State 1 has the most counties in the sample (n = 29). Both States 2 and 3 have the same number of counties represented in the sample (n = 13 each). On average, there are approximately 85 youths from each county. A similar percentage of youths were classified as either low or moderate risk (43% and 44%, respectively). A relatively small percentage of youths were assessed as high risk. The majority of youths in the sample are White (63%).

As discussed in the analytic plan, the first step to the analysis is to estimate the unconditional model. This allows us to examine the average likelihood of risk-level classification across juvenile court jurisdictions. The statistically significant variance component estimates indicate that there is county-level variation in the odds of being classified high risk relative to low risk and moderate risk to low risk. There is notably less between court variation in being assessed as moderate risk to low risk than there is in high risk to low risk. The average odds of being assessed as high risk relative to low risk is 0.32 and is statistically significant (Table 2.18).

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Table 2.18. Unconditional Multilevel Models: Final Risk Level by County

	Coefficient	Standard Error	Exp(B)
Mean log odds (High Risk)	-1.15*	0.13	0.32
Mean log odds (Mod. Risk)	-0.02	0.08	0.98
	Variance Component	X^2**(df)**	
Mean log odds (High Risk)	0.58*	275.63(54)	
Mean log odds (Mod. Risk)	0.23*	239.53(54)	

* p <0.05

Next, we assess whether risk-level varies by the race of youths at the individual level. The initial findings indicate that Non-White youths are significantly more likely to be assessed as high risk relative to low risk and moderate risk relative to low risk. Furthermore, the direction and magnitude of the relationship indicates that Non-White youths are much more likely to be classified at a higher risk-level category than their White counterparts. For example, the odds of being assessed as high risk compared to low risk is 2.12 times higher for Non-White youths compared to Whites. We also estimate whether risk-level varies by race accounting in a fixed effects multi-level model (Table 2.19 below). When comparing the variance component in this model to the unconditional model, there is a noticeable decrease in the estimates. This indicates that race accounts for a portion of the unexplained variation in risk-level classification between counties. The race coefficients are also statistically significant and in the positive direction. This indicates that Non-White youths are more likely to be classified as a higher risk level classification than White youths. For example, the odds of being assessed as high risk relative to low risk is 1.5 times higher for Non-White youths compared to White youths.

Table 2.19. Multilevel Model: Risk Level by Race

	Coefficient	Standard Error	Exp(B)

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Mean log odds (High Risk)	-1.11*	0.13	0.33
Race	0.40*	0.10	1.50
Mean log odds (Mod. Risk)	0.01	0.08	1.02
Race	0.33*	0.07	1.39
	Variance Component	***X^2*(df)**	
Mean log odds (High Risk)	0.55*	235.98(54)	
Mean log odds (Mod. Risk)	0.19*	198.21(54)	

* p <0.05

In the final step of the analysis, we introduce demographic controls and offense type category into the model (Table 2.20 below). The variance component estimates for the intercept indicate that there is a fair amount of unexplained variation left in risk-level classification between counties. Race remains a statistically significant predictor of risk-level classification (i.e., high to low; and moderate to low) when accounting for focal offense type and the demographic controls. The odds of being classified as high risk relative to low risk is 1.39 times higher for Non-White youths compared to White youths. Gender and age are also statistically significant. Females and youths that were older at the time of assessment were less likely to receive a higher risk level. In the main effects model that compares high risk relative to low risk, status offense is also statistically significant and in the negative direction. This indicates that the odds of being assessed as high risk relative to low risk is 0.55 for youths that were adjudicated for a status offense compared to those that were adjudicated for a violent or sex offense.

Table 2.20 Multilevel Model: Main Effects of High Relative to Low Risk with Race

	Coefficient	**Standard Error**	**Exp(B)**
Mean log odds (High Risk)	-1.22*	0.15	0.30
Race	0.33*	0.11	1.39
Gender	-0.58*	0.18	0.56

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Table 2.20 Multilevel Model: Main Effects of High Relative to Low Risk with Race

	Coefficient	Standard Error	Exp(B)
Age	-0.12*	0.04	0.88
Offense Type[1]			
Property	0.14	0.18	1.15
Drug	-0.32	0.24	0.73
Other	-0.11	0.22	0.89
Status	-0.60*	0.18	0.55
	Variance Component	X^2**(df)**	
Mean log odds	0.78*	118.54(39)	

* p <0.05; [1] Reference category is violent/sex offense

Summary of Youth Appraisals by Race and Geography. Several important findings emerged from this risk assessment substudy. First, risk assessment classifications varied significantly among sites in our sample of juvenile court jurisdictions. This suggests that the distribution of youths that fall into the risk classification categories differ across the courts. For example, one county may have a high proportion of high risk and moderate risk youths whereas another county might have a greater proportion of low risk youths. This finding runs somewhat counter to our expectations based on the design and structure of actuarial risk and needs instruments in that similar distributions across sites would generally be expected. Non-White youths were significantly more likely to receive a higher risk classification than their White counterparts. Although race helps to explain the variation in the distribution of risk-level across courts, we found no evidence that these effects are stronger or weaker between the different court jurisdictions. However, the effect of race on risk classification remained statistically significant when we accounted for the youths' focal offense type and demographic characteristics.

Taken together, the neutrality of risk and needs assessment tools needs further examination. It might be that items included in this instrument are correlated with race. For example, the *Juvenile*

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Justice History domain, which potentially captures differential offending, could be accounting for some differences in risk classification. Another potential explanation for the race differences, is that juvenile justice personnel that administer the tool may carry implicit biases that could impact the overall risk score/level. These findings have implications for case management, court processing, treatment-related decisions, and potential disparities in each as the risk assessment information may be impacting those decisions. Risk and needs assessment are valuable tools that help to guide a number of decision making points in the juvenile justice system, but researchers and practitioners should also carefully consider the degree to which practices may affect differential juvenile justice experiences among youths of different race and ethnic groups. While there have been a number of studies that examine the predictive validity of risk and need assessment instruments—even some across race—relatively few have examined their usage in the context of potential court-level differences in the juvenile justice system and also in terms of the context of disproportionate minority contact (DMC) trends that have been a subject of much discussion in recent decades (Pope & Leiber, 2005). In that way, it is an important lens into how JRNA usage may be tied into or help to ameliorate broader concerns in juvenile justice.

Usage Study 3: Race, Ethnicity, and Validity of the Residential OYAS Tool

The previous usage study shows that it is possible that the court location or place matters in the results of risk and needs assessment. Additionally, it is possible that elements of an assessment tool work differently for certain subgroups. The efficacy of evidence-based practice across place and population subgroups raise important questions for transporting knowledge from one setting to another (Welsh, Sullivan, & Olds, 2010), and implementation research must assess questions of transportability in order to balance the relationship between adherence and adaptation (Blakely et al., 1987). As the adoption of actuarial risk and need assessments has increasingly

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become standard practice across agencies in the juvenile justice system, there has also been a growing recognition of the importance of validating the tools for the populations on which they are used. As described above, assessing the predictive validity of juvenile risk and need assessments has been the subject of extensive research and the overall conclusion seems to be that modern risk and need assessments are capable of differentiating between offenders who will re-offend and those who will not. Concerns remain, however, regarding possible biases among offender sub-groups (Angwin, Larson, Mattu, & Kirchner, 2016; Dressel & Farid, 2018), and results from prior research examining the general performance of juvenile risk and need assessments among racial and ethnic subgroups are mixed.

Several studies have found that the predictive validity of risk assessment scores do not differ across racial groups (Baglivio & Jackowski, 2013; Barnes et al., 2016; McCafferty, 2016; Perrault, Vincent, & Guy, 2017). For example, McCafferty (2016) found that effect sizes (e.g., correlations and area under the curve [AUC] estimates) of the OYAS were similar across a subsample of Caucasian youths (r_{pb} = .31; AUC = .68) and African American youths (r_{pb} = .33; AUC = .69) when predicting general recidivism. However, other studies have found differences in predictive validity across racial groups (Rembert, Henderson, & Pirtle, 2014; Schwalbe et al., 2006; Vincent, Chapman, & Cook, 2011). For example, Rembert and colleagues (2014) examined the predictive validity of the Los Angeles County Needs Assessment Instrument (LAC) on 480 African American and Hispanic youths. Scores from the tool were significant predictors of recidivism for Hispanic youths, but the same measures were not significant predictors of recidivism for African American youths.

Research examining racial and ethnic differences in predictive validity across individual risk items or domains has also produced mixed findings. Baglivio and Jackowski (2013) noted

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several differences across racial and gender subgroups in their analyses. For instance, alcohol and drug measures were significantly weaker predictors of recidivism for females than for males. Similarly, attitudes and behaviors were significantly weaker for females than for Caucasian and Hispanic males. Next, family history risk factors were significantly stronger predictors of recidivism for Hispanic females than for the rest of the sample. This finding is mirrored by another study conducted by Onifade and colleagues (2009), who also noted differences in prediction by domains across race and gender subgroups. In their study, they found that offense history was only significant for Caucasian males and not for Caucasian females nor males and females of African-American descent. Risk factors related to peer groups were significant for both groups of males but neither group of females. If there are differences between key subgroups that influence risk for recidivism and these are not accounted for in risk and need assessment tools designed for general populations, the measurement of risk may be compromised. In turn, this can limit the predictive validity of the tools. Such questions of variance/invariance in measurement and tool performance across populations are essential in understanding effective usage in practice.

Analysis of subgroup invariance in OYAS. Existing literature is currently limited in at least two respects. First, the measurement properties of tools are not routinely examined after their initial development. As a result, the insights gleaned from prior research rest on the assumption that the measurement of risk with a given tool holds across populations. This assumption applies both in general populations defined by geographic regions, as well as across subgroups within a given population (e.g., Caucasian and Hispanic youths). Second, research on the predictive validity of risk and need assessment tools also tends to focus on general populations, and less often examines potential differences across subgroups within them. Although some have investigated potential differences in predictive validity across subgroups based on characteristics such as

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gender or race, the available research is limited. The current study builds upon earlier research to conduct a preliminary analysis of whether there are differences in both the measurement properties and the predictive validity of the OYAS Residential Tool when used to assess youths of differing racial/ethnic backgrounds in State 3.

Method

Sample. Between 2015 and 2017, the state corrections agency in State 3 provided official data for 984 youth who had previously been released from state custody.[64] The data included key demographic information, risk assessment scores, and recidivism information. Recidivism was tracked at 12-months for a subsample of 688 youths, which forms the main analytic sample for this substudy.

Measures. Three sociodemographic variables were provided that are used to contextualize key findings, as well as consider potential differences in the capacity of the assessment to adequately capture risk and need and predict recidivism across subgroups. Age reflects the age of the youths at intake ($\bar{x}$ = 16.05), gender was coded as male (89%) or female (11%), and race/ethnicity included Caucasian (29%), Hispanic (47%), African American (15%), and other racial groups (9%). Risk and need were assessed in the sample with the OYAS Residential Tool and scores for individual items, domains, and overall totals were examined. Consistent with the scoring guide, total scores were also collapsed into low risk (14%), moderate risk (42%), and high risk (44%) categories. Recidivism at each wave was measured dichotomously and is defined as any return to custody or any new commitment. Recidivism rates were 38% at the one-year mark.

Analytic Plan. Confirmatory factor analysis (CFA) in Mplus was used in order to determine whether the presumed measurement of risk for recidivism based on the tool is observed

[64] The data for this usage study come from corrections agencies in State 3 and were obtained separately from court records in that state. Consequently, there are some differences in data and measure coverage across the two.

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in the full sample of youth (Muthén & Muthén, 1998-2018). A second-order CFA permits the specification of a model that aligns with the structure of the tool in that individual items are loaded onto domains that are then loaded onto an overall measure of risk. After assessing the measurement properties of the tool, analyses were conducted for the full sample and racial subgroups to compare the extent to which the tool improved prediction among different groups. Predictive validity was examined through various statistical approaches including calculating correlations between risk scores and recidivism and conducting receiver operating characteristic (ROC) analyses. Finally, where significant differences in predictive validity were observed between racial subgroups, the measurement properties of the tool were examined separately for each group to investigate the extent to which the measurement model differed across subgroups.

Results

Measurement analysis. The results of the second order CFA for the full sample are shown in Table 2.21. The model that was fit to the data specified seven factors (i.e., each of the risk domains) to be extracted, which were loaded onto a measure of risk (i.e., the total risk score). A model is considered to provide an acceptable fit to the data when fit statistics produce a non-significant Chi-Square value, the comparative fit index (CFI) and the Tucker-Lewis index (TLI) are greater than .90, the root mean square estimation of approximation (RMSEA) is less than .05, and the weighted root mean square residual (WRMR) is less than 1 (Hu & Benter, 1999; Muthén & Muthén, 1998-2018). These fit statistics did not reach these thresholds in this sample. Specifically, the CFI and TLI both fell short of the .90 threshold at .87 and .86, respectively. Additionally, the RMSEA was .05 and the WRMR was 1.69.

Table 2.21. Confirmatory Factor Analysis and Model Fit for OYAS Measurement Structure

Chi-Square (χ^2, df)	1421.39 (488)***
Comparative Fit Index (CFI)	.87

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Tucker-Lewis Index (TLI)	.86
Root Mean Square Error of Approximation (RMSEA)	.05
Weighted Root Mean Square Residual (WRMR)	1.69

***$p < .001$

Inspection of factor loadings is useful in determining whether particular items load onto the domains as expected, and whether each domain loads onto the overall measure of risk. Standardized loadings range from 0 to 1, and values that are low (< .30) or notably different from the pattern of loadings for a given measure can be used to identify potential threats to the validity of the measures. Of the 33 items included in the risk and need assessment, eight had standardized loadings that were lower than .30 including two of the three items in the *Education and Employment* domain. Beyond those weak item loadings, the *Family and Living Arrangements* domain score did not load onto the overall risk measure as evidenced by a standardized factor loading of .00. Together with the model fit statistics, these findings suggest room for improving the measurement of risk in this general population sample.

Subgroup comparisons and predictive validity. Average total and domain scores are shown in Table 2.22 by racial group. The table also displays the results of tests that were employed to determine whether differences in scores across groups were statistically significant (i.e., analysis of variance). As the Caucasian and Hispanic subgroups are the largest and of primary interest for this study, key observations pertaining to these groups are highlighted here. Specifically, total risk scores were significantly higher ($F = 11.41$, $p < .001$) among Hispanic youths at 18.28 compared to Caucasians whose scores were 16.63 on average. Similarly, in the *Peers and Social Support* domain, Hispanic youths had significantly ($F = 20.84$, $p < .001$) higher average scores ($\bar{x} = 3.70$) relative to Caucasian youths ($\bar{x} = 2.76$). Though average scores were somewhat low in the *Education and Employment* domain across all groups, the observed differences were significant ($F = 5.66$, $p < .01$) for Caucasian and Hispanic youths whose average scores were 0.80 and 1.07,

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respectively. These two groups also differed in average scores on the *Values, Beliefs, and Attitudes* domain (F = 15.38, p < .001) where Hispanics had an average score of 2.67 compared to the average of 2.00 among Caucasian youths.

Table 2.22. Comparison of Average OYAS Score and Domain Scores by Race/Ethnicity

Variable	**African-American N = 96**	**Caucasian N = 199**	**Hispanic N = 316**	**Other N = 69**	**Key Differences**
	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$F_{(DF)}$
Overall Risk Score	19.51 (4.5)	16.63 (5.1)	18.28 (4.9)	15.63 (6.1)	$11.41_{(3, 614)}$*** C, O< H, AA^
Juvenile Justice History	2.94 (1.0)	3.07 (1.1)	2.98 (1.1)	2.21 (1.5)	$10.51_{(3, 677)}$*** O<AA, H, C
Family and Living Arrangements	0.40 (0.76)	0.44 (0.83)	0.43 (0.82)	0.31 (0.77)	$0.46_{(3, 676)}$
Peers and Social Support Network	4.10 (1.4)	2.76 (1.7)	3.70 (1.7)	2.97 (1.8)	$20.84_{(3, 677)}$*** C, O <H, AA
Education and Employment	1.03 (0.84)	0.80 (0.80)	1.07 (0.77)	0.84 (0.75)	$5.66_{(3, 677)}$** C< H
Pro-Social Skills	2.84 (1.1)	2.43 (1.0)	2.68 (1.0)	2.61 (0.94)	$4.15_{(3, 676)}$** C< AA
Substance Use, Mental Health, and Personality	5.43 (1.5)	4.79 (2.1)	4.94 (1.7)	4.61 (2.1)	$3.30_{(3, 676)}$* C, O < AA
Values, Beliefs, and Attitudes	2.91 (1.4)	2.00 (1.3)	2.67 (1.3)	2.20 (1.2)	$15.38_{(3, 676)}$*** C< H, AA

* p < .05 , ** p < .01, *** p < .001
^AA = African American, C = Caucasian, H = Hispanic, O = Other

As an initial step to assessing the predictive validity in this population, point-biserial correlations (r_{pb}) were calculated for the overall sample, as well as the Caucasian and Hispanic subsamples for the overall risk score and each domain score and recidivism at 12-months. As shown in Table 2.23, a significant association was observed between the overall risk score and

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recidivism in the full sample (r_{pb} = .26, p < .001), as well as for the Caucasian (r_{pb} = .22, p < .01) and Hispanic (r_{pb} = .28, p < .001) subsamples. The correlation was slightly stronger among Hispanic youths, however, which was the general pattern across the domain scores as well. In the full sample, correlations between *Juvenile Justice History* (r_{pb} = .21, p < .001); *Peers and Social Support* (r_{pb} = .23, p < .001); and *Values, Beliefs, and Attitudes* (r_{pb} = .21, p < .001) domains and recidivism were significant, which also held for the Caucasian and Hispanic subsamples. Two domains did not appear to be related to recidivism in the full sample— *Family and Living Arrangements* (r_{pb} = -.00) and *Education and Employment* (r_{pb} = .02)—nor were they significant in the subsamples. Two notable inconsistencies emerged between the Caucasian and Hispanic groups. The relationships between recidivism and the domains assessing *Pro-Social Skills* and *Substance Abuse, Mental Health, and Personality* were significant in the Hispanic subgroup at .17 and .16, respectively. Among Caucasian youths, however, the relationships were slightly weaker and non-significant.

Table 2.23. Associations Between OYAS Score, Domain Scores, and Recidivism

Variable	Full Sample (N = 680)	Caucasian (N = 199)	Hispanic (N = 316)
Overall Risk Score	.26***	.22**	.28***
Juvenile Justice History	.21***	.20**	.17**
Family and Living Arrangements	-.00	-.02	.05
Peers and Social Support	.23***	.19**	.26***
Education and Employment	.02	.03	-.00
Pro-Social Skills	.14***	.10	.17**
Substance Use, Mental Health, and Personality	.16***	.14	.16**
Values, Beliefs, and Attitudes	.21***	.17**	.22***

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

ROC analyses were also carried out to estimate the improvement in predicting risk using scores from the risk and needs assessment tool relative to chance (Rice & Harris, 2005). The

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estimates presented in Table 2.24 quantify the area under the curve (AUC) and 95 percent confidence intervals. Scores over .50 reflect a relative improvement in predicting recidivism over random assignment of risk. The overall risk score provides some improvement in predicting recidivism (AUC = .65. Domain scores generally appear to enhance prediction as well, except for scores in the *Family and Living Arrangements* (AUC = .50) and *Education and Employment* (AUC = .51) domains. Similar patterns were observed in the Caucasian and Hispanic subgroups, though the estimates tended to be slightly higher or lower among Hispanic youths.

Table 2.24. Area Under the Curve Estimates and 95% Confidence Intervals for OYAS Score, Domain Scores, and Recidivism at 12-Months

Variable	**Full Sample (N = 680)**	**Caucasian (N = 199)**	**Hispanic (N = 316)**
	AUC (95% CI)	AUC (95% CI)	AUC (95% CI)
Overall Risk Score	.65 (.60 - .69)	.61 (.53 - .69)	.66 (.60 - .72)
Juvenile Justice History	.61 (.57 - .65)	.61 (.54 - .69)	.58 (.52 - .64)
Family and Living Arrangements	.50 (.47 - .54)	.50 (.43 - .56)	.53 (.47 - .58)
Peers and Social Support	.63 (.59 - .67)	.62 (.54 - .70)	.64 (.58 - .70)
Education and Employment	.51 (.47 - .54)	.51 (.44 - .59)	.49 (.43 - .55)
Pro-Social Skills	.59 (.54 - .63)	.55 (.47 - .63)	.60 (.54 - .66)
Substance Use, Mental Health, and Personality	.58 (.54 - .62)	.57 (.49 - .65)	.59 (.53 - .65)
Values, Beliefs, and Attitudes	.62 (.58 - .66)	.58 (.50 - .67)	.63 (.57 - .69)

To summarize, the results of the comparative and predictive validity analyses presented here suggest scores in the *Family and Living Arrangements* domain and the *Education and Employment* domain were low for all groups in the sample and do not appear to be related to recidivism in this context. The scores in other domains, and the overall risk score, generally are higher for Hispanic youths relative to Caucasian youths. Moreover, the relationships between risk

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and need assessment scores and recidivism appear to be stronger for Hispanics. Understanding the source of these differences offers an opportunity to further improve the use of these assessment tools in the juvenile justice system. The next stage of the analysis investigates potential differences in the measurement properties of the Residential Tool across the Hispanic and Caucasian subgroups.

Measurement invariance. Second-order CFAs were carried out for separately for Caucasian and Hispanic subgroups. Table 2.25 displays the model fit statistics for the two models. Among Caucasian youths, the theoretically specified measurement structure provides an adequate fit to the data. The CFI and TLI are both above the .90 threshold, and the RMSEA is .05. Among Hispanic youths, however, the model does not appear to fit the data as well. The CFI and TLI are below the .90 threshold and χ^2 = 848.39, which is higher than that observed in the Caucasian subsample.

Table 2.25. Confirmatory Factor Analysis Model Fit Statistics

	Caucasian	**Hispanic**
Chi-Square (χ^2, df)	682.20 (488)***	848.39 (488)***
Comparative Fit Index (CFI)	.95	.84
Tucker-Lewis Index (TLI)	.94	.82
Root Mean Square Error of Approximation (RMSEA)	.05	.05

***p < .001

Similar to the process used in the full sample, the factor loadings were inspected to identify potential threats to the validity of the measures and differences that may exist between the two subgroups. Although there was variation in the factor loadings throughout different items on the tool, the most notable difference between the subgroups was observed in the *Education and Employment* domain. Factor loadings among the Caucasian youths ranged from .32 to .59, all of which are above the .30 threshold employed in the original measurement model with the full sample. In contrast, the loadings ranged from .02 to .05 on the three items in this domain in the

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model estimated with the Hispanic subsample. These results provide some evidence to suggest that measurement invariance cannot be assumed within these subgroups.

Summary of Race, Ethnicity, and Validity of the OYAS Residential Tool. The findings of this study highlight the importance of examining key subgroups within a given population, both in terms of the measurement properties of risk and need assessments and the extent to which they can be useful in enhancing the prediction of recidivism. The results suggest that the measurement of risk for recidivism with this tool could be improved in this population. In terms of the predictive validity of the tool in the full sample, the AUC estimate of .65 is consistent with prior research (Schwalbe, 2008; 2009); however, when racial subgroups were examined separately the tool appeared to be a stronger predictor of recidivism among Hispanic youths relative to Caucasians.

This study inspected the measurement properties of the OYAS Residential tool by subgroup to investigate whether these differences could be explained in part by differences in the measurement properties of the tool across groups. The results suggested the measurement structure of the tool fit better among Caucasian youths relative to Hispanics. Patterns such as these can be indicative of individual items working differently in the two groups (e.g., more or less prevalent in one relative to the other), including items that do not contribute to the measurement of risk for one or both groups, or failing to include items that have a meaningful impact on risk. These complex relationships, which in some case reflect potential threats to the validity of the measures, warrant further investigation.

Modern risk and need assessment tools are intended to be used beyond classifying youths in low, moderate, or high risk categories (Lovins & Latessa, 2013). Practitioners are instructed to use domain scores to manage cases more effectively by identifying high criminogenic need areas and making treatment decisions that align with the assessment results. Toward this end, more

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detailed investigations into the capacity of risk and need assessment tools to aid users in case management in practice is a worthy endeavor. Such detailed investigations of risk and need assessment tools require a high degree of planning and collaboration between researchers, practitioners, and policymakers. Validation studies are often designed with the general population in mind, and as a result rarely have adequate representation of minority groups to allow for analysis of some questions examined in this study. Such studies are essential, however, in better understanding how the theory of risk and needs assessment plays out in practice.

Usage Study 4: Professional Override of Assessment Level

Building from the question of whether there is measurement invariance across groups, the notion of systematic risk and needs assessment is to move toward uniformity – or at least consistency – in how youth are assessed and then classified. Actuarial risk and needs assessment tools still allow for a degree of professional discretion in the form of professional overrides so override decisions are a fruitful place to look more specifically at how tools are used by practitioners. Professional overrides occur when the administrators of a risk and needs assessment tool, or their supervisors, use their professional judgment to change a youth's risk levels. In essence, if upon completion of an actuarial risk and needs assessment tool a youth gets classified as low risk, but the professional believes he or she is at a higher risk for recidivism, the professional can upward override the youth to either moderate or high risk. Conversely, if an actuarial tool classifies a youth as high risk but the administrator believes that the tool overstates his or her propensity for future delinquent behavior, the administrator can downward override the youth to either moderate or low risk. In practice, upward overrides are more prevalent than downward overrides (Wormith, Hogg, & Guzzo, 2012).

Assessment tools consider youths in the aggregate, making it illogical to expect a risk and needs assessment to accurately predict the risk for each specific youth (Silver & Miller, 2002).

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Therefore, a degree of professional discretion exists in the OYAS in the form of professional override, but it should be used sparingly (Latessa et al., 2009). According to the RNR framework, professional overrides should be used in less than 10 percent of assessments (Andrews et al., 1990). Proponents of professional override argue overrides are necessary to increase the accuracy of risk classifications because the tool does not account for all theoretical factors that can impact recidivism (i.e., history of abuse). However, there are concerns with the utility of professional overrides as they have the potential to be harmful. For example, if low risk youths are moved to high risk, they may receive more treatment dosage than they need and be in treatment with other high risk youths. Past scholarly work on treatment indicates that placing a low risk youth in treatment for/with high risk youths can increase his or her propensity for future criminal conduct (Latessa, Listwan, & Koetzle, 2014). Similarly, downward overrides have the ability to undermine public safety and deny youths the treatment they need. Recent research supports this caution. For example, Vaswani and Merone (2014) found the predictive validity of the YLS/CMI decreased in cases where professional override of a youth's risk level occurred.

Method and Analytic Plan. Little empirical research has been devoted to understanding professional overrides in risk and needs assessment. As part of this larger study, this substudy explores override usage in JRNA by answering two main questions. First, what is the prevalence of professional override in JRNA? Second, what is the nature of these override decisions? That is, in what direction (upward/downward) do these overridden primarily occur, what are some common characteristics of the cases that are overrides, and what are administrator attitudes toward their use? This substudy uses two sources of data: 1) youths' case record data to examine the amount of professional overrides; and 2) data from the juvenile justice personnel interviews and

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web-based surveys. These data sources allow us to triangulate what personnel indicate about their use of professional overrides with what actually occurs.

Results

Case Record Data. As previously noted, the comprehensive assessment sample for this study includes case record data for 6,222 youths assessed by the OYAS across the three states studied. A professional override occurred in 213 of the assessments (3.4%). Of the 213 cases where an override occurred, 210 of them – roughly 98.5 percent – were upward overrides (see Table 2.26 for the distribution by state). Across all upward override cases, 85 percent were male, 66 percent were white, and the average age of youth was approximately 16 years old (*sd* = 1.8). These profiles did not differ substantially from the overall sample, suggesting that there were relatively minor differences in sociodemographics between cases with/without override decisions.

Table 2.26. Prevalence and Direction of Overrides – Case Record Data

Variable	State 1	State 2	State 3	Total
	n (%)	*n* (%)	*n* (%)	*n* (%)
No Override	1,803 (88.2)	1,705 (98.6)	1,929 (96.5)	5,437 (96.6)
Downward Override	2 (0.1)	0 (0.0)	1 (0.1)	3 (0.1)
Upward Override	106 (5.2)	25 (1.5)	79 (3.2)	210 (3.4)
Missing	131 (6.4)	0 (0.0)	441 (18.0)	572 (9.2)
Total	2,042 (100.0)	1,730 (100.0)	2,450 (100.0)	6,222 (100.0)

The two cases with downward overrides in State 1 involved incarcerated youths. The downward override in State 3 involved a 10-year-old white male who was moved from moderate to low risk. This youth was charged with misdemeanor disorderly conduct and diverted from the system. State 1 was the only state that provided a field for a statement of reasons for overrides. Among the most common reasons for overrides were sex offenses, the need for more services, offense severity, and criminal history (see Figure 2.1). Sex offense, the most common reason for override, was noted in 34 percent of override cases. Services was the second most common reason

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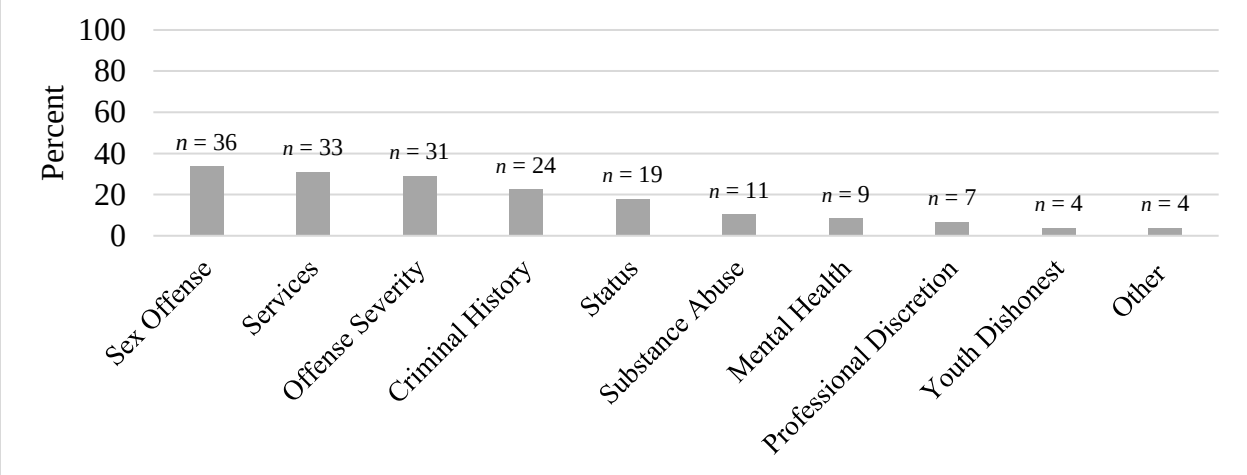
for override (31%), followed by offense severity (29%), and criminal history (22%). State 2 did not provide statements of reason for override decisions; however, similar trends emerged. Among the 25 cases with overrides in State 2, 64 percent included a youth charged with a sex offense, 76 percent were classified as a felony, and 92 percent received at least one treatment program. The most common disposition for override cases in State 2 was probation (76%).

Though a statement of reason for override decisions was not provided in State 3, offense type information was available. Of the upward overrides in State 3 (*n* = 79), 42 percent had a focal offense categorized as a crime against a person and 55 percent had a focal offense categorized as a felony. No treatment information was available for State 3 cases; however, of the upward override cases with disposition information (*n* = 56), 16 percent (9 juveniles) were placed in a state facility, 34 percent (19 juveniles) received intensive probation, 25 percent (14 juveniles) received probation, and 20 percent (11 juveniles) had their cases dismissed.

Figure 2.1. Reason for Overrides, State 1 Statement of Reasons (N = 107)



In addition to the prevalence and reasons for overrides, we examined the point of the juvenile justice process at which overrides typically occur (See Table 2.27). They occurred almost exclusively in post-adjudication tools (i.e. Disposition, Residential, and Reentry). Only 5 of the 213 overrides – or 2.3 percent – occurred in pre-adjudication tools (i.e. Detention and Diversion).

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This is noteworthy, given that roughly 25 percent of the overall sample was assessed using pre-adjudication tools. It does, however, reflect the less expansive nature of those tools as well as the nature of the decision and expectations around the assessment at those stages. In interviews for a previous study, a detention facility superintendent reported that his/her staff rely more heavily on the seriousness of the current offense and likelihood to appear for court hearings in making decisions about youths' risk.[65]

Table 2.27. Override by Assessment Type

Tool	**Overall**	**% of Total**	**Override**	**% of Override**
Detention	370	5.95	3	1.41
Disposition	2,204	35.42	102	47.89
Diversion	1,213	19.51	2	0.94
Reentry	989	15.90	39	18.31
Residential	1,446	23.24	67	31.46
Total	6,222		213	

In short, of the 6,222 cases, 213 cases were overrides. That is, across the three states only approximately three percent of cases were overrides. Of the 213 override cases, 210 overrides were upward overrides and three were downward overrides. The most common override was from low-to-moderate risk (*n* = 112 cases) (see Table 2.28). In an initial analysis of case outcomes, we found that the odds for recidivism (new adjudication) for those cases with override decisions about risk level were roughly 7 percent lower than those that were not overrides, but that relationship was not statistically significant.[66]

Table 2.28. Cross-tabulation of Original Risk Level and Override Risk Level

	Assessed Risk Level *n* (%)			
Override Risk Level	Low	Mod	High	Total

[65] Citation omitted for confidentiality reasons, but results and raw transcript available from first author upon request.
[66] A full assessment of the processing and outcomes of these cases is beyond the scope of the current report, but will be investigated in future research.

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Low	—	2 (3.6)	1 (100.0)	3
Mod	112 (71.3)	—	--	112
High/Very High	45 (28.7)	53 (96.3)	—	98
Total	157	55	1	213

Personnel Interviews and Surveys. As outlined in Section I: Implementation of JRNA: Views from Juvenile Justice Personnel, juvenile justice personnel were asked a series of questions about the utility, process, and prevalence of professional override. Both the interviewees and survey respondents were asked to estimate the percent of assessments that result in an override (see Table 2.29). Interviewees indicated that about 10.5 percent (*sd* = 18.17) of assessments at their agencies result in professional override. However, there was some variation in that estimate as two interviewees, both with sex offender caseloads, reported that 100 percent of assessments are overrides in their respective agencies. In light of the two outliers, the median (6%) is a more accurate measure of central tendency.

Table 2.29. Perceptions of Override Prevalence Among Juvenile Justice Personnel

	n	**Median**	$\bar{x}$	***sd***	**Min.-Max.**
Interview	64	6%	10.5%	18.2	0-100
Survey - General	99	5%	8.3%	11.6	0-95
Survey - Self	496	2%	6.9%	15.1	0-100

In the web-based survey, juvenile justice personnel who do not personally administer risk and needs assessments were asked what percent of assessments they perceived were overrides in their agencies. Like the interview data, there was some variation in response. In particular, one respondent signified his or her agency overrides 95 percent of assessments. However, this respondent works in a sex offender unit and specified that unit – not the agency as a whole. With this in mind, the median is the better measure of central tendency to describe the trends. The median response was 5 percent (29% of the sample gave this exact estimate). Meanwhile, if the

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juvenile justice personnel personally administer the assessment, they were asked what percentage of cases they personally override. On average, respondents reported they override 6.89 percent (*sd* = 15.05) of assessments. However, there was some variation in responses, as 76 percent of the sample indicated overriding five percent or less of their assessments. Likewise, with this in mind, the median is the better measure of central tendency, which was two percent.

In short, we found evidence that risk and needs assessment administrators use professional overrides less often than non-administrators perceive overrides to occur in their agencies. Data from both of these self-report sources are roughly consistent with those identified in the case records above. Less than four percent of cases in the case record data were overrides, and across all three different self-report scenarios the median percent of cases perceived to be overrides ranged from two to six percent.

Interviewees were asked to signal their level of agreement, on a five-point Likert scale, with the following statement: "Is there anything specific in the OYAS that you perceive as a limitation that lead to these overrides." The majority of interviewees responded affirmatively, saying the OYAS does have limitations that lead to overrides (Strongly Agree/Agree = 51.6%; Strongly Disagree/Disagree = 39.8%; Unsure = 8.6%). Aligning with the reasons for override identified in State 1 (i.e. sex offenses and offense severity), examples of open-ended responses to this statement include: "Question[s] could be a bit clearer. Better definitions;" "Family section not capturing reality;" and "Not taking into consideration the offense itself is the main thing (e.g. sex offenders)." Both interview and survey respondents were asked whether their agencies allow overrides. Among interviewees, 87.8 percent indicated their agencies allows them, 9.3 percent indicated their agencies did not (2.9% were unsure). Web-based survey respondents were not given

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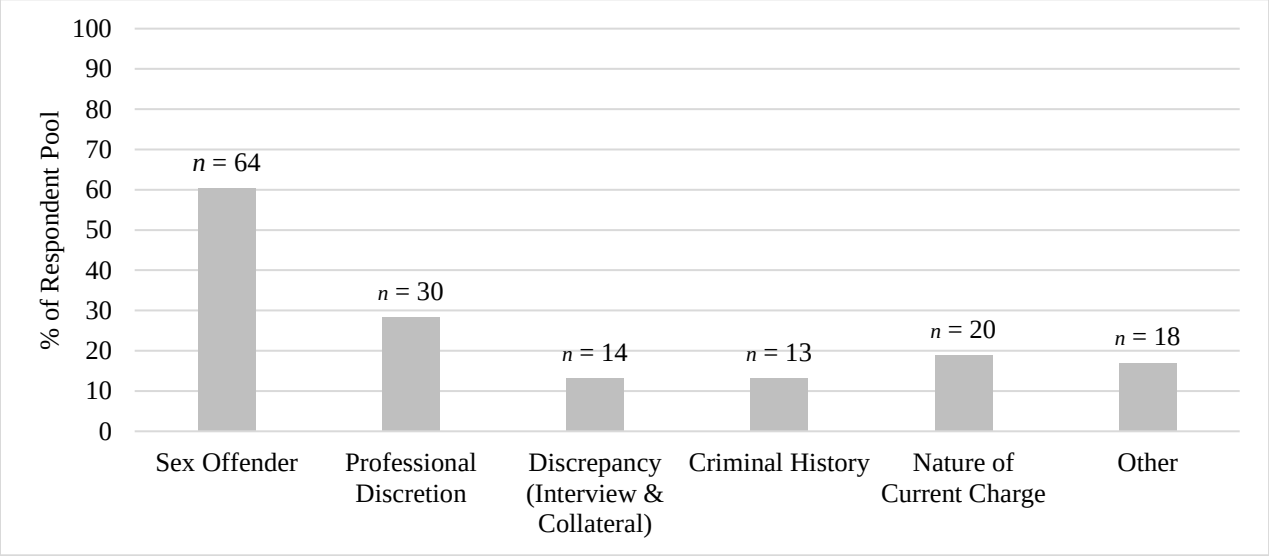
the option to respond "Unsure." Among web-based survey respondents, 87.4 percent said their agencies allow for overrides; 12.6 percent said their agencies did not.

Interviewees were asked to provide common reasons for overrides (Figure 2.2). Their responses show that the most common reason for override was sex offender/offenses (60.4%), aligning with the statement of reasons provided in the State 1 case record data. The second most common reason for override recorded by interviewees was professional discretion (28.3%). For example, one interviewee said that relying on self-reporting by juveniles is insufficient to understanding their risk – in other words, the professional believed OYAS administrators should not rely on answers from the youths. Other common reasons for overrides listed by interviewees were discrepancy between the interview and collateral information, criminal history, and nature of the current charge.

Figure 2.2. Juvenile Justice Personnel Interviews – Common Reasons for Overrides (N = 105)



Note: Interview respondents were able to indicate more than one common reason for overrides. Therefore, percent responding affirmatively is greater than 100%.

Web-based survey respondents were asked to list the type of cases that are typically overridden (Figure 2.3). Of the 398 valid responses to this question, 305 respondents (77%) said that sex offenses were typically overridden, 119 respondents (30%) said cases with severe offenses

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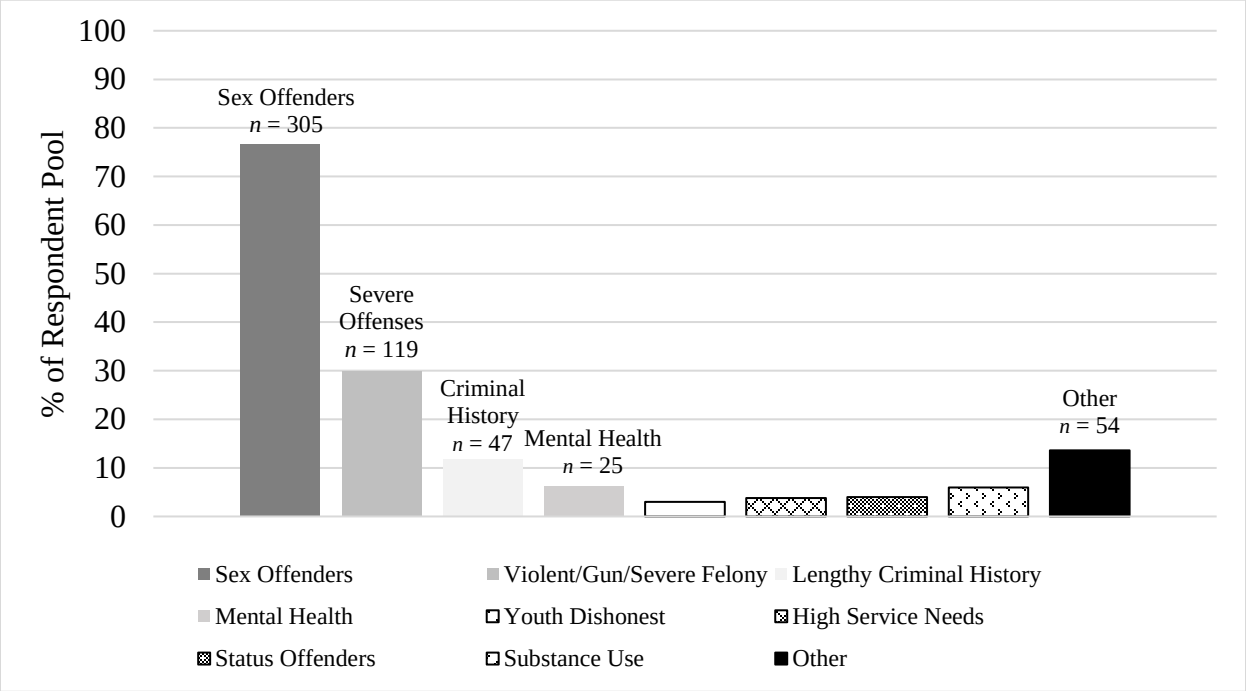
(e.g. violent, firearm) are typically overridden, and 47 respondents (12%) listed extensive criminal history as a typical reason for an override (see Figure 2.3). All three of these responses were also listed above in the case record and interview data as common reasons for overrides.

The majority of interviewees said there were no offenses that carried a mandatory override decision in their agencies (48.2%). Meanwhile, 38.2 percent of interviewees said there were some cases which must be overridden because of the offense committed. Of these 38.2 percent, 30.9 percent indicated that cases with a sex offense must be overridden, 3.6 percent said cases with a gun/violent/severe offense must be overridden,[67] and 5.5 percent said some cases must be overridden but did not specify the types of cases. The remaining 12.7 percent of interviewees said they were unsure.

Figure 2.3. Web-based Survey – Common Reasons for Overrides (N = 398)



Note: Survey respondents were able to signify more than one common reason for overrides. Therefore, percent responding affirmative is greater than 100%.

[67] All four interviewees who said cases with a gun/violent/severe offense were from in State 1.

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Summary of Override Substudy. We draw four key findings from these analyses. First, the majority of cases are not overridden. Of the 6,220 assessments in the comprehensive assessment sample, 213 assessments (i.e., less than four percent) resulted in an override. Thus, across all three states, agencies tended to rely on the youth assessment tool for classification of youths and diverged from it relatively rarely, at least in terms of final risk level designations.

Second, overrides were primarily used to increase youths' risk levels. One potential explanation for this is that upward overrides are used when there is a perceived threat to community safety. In both the case record and interview/survey data, sex offenses (which are typically viewed as a threat to the community), were the most common reason for overrides. Another potential explanation is increasing risk levels results in more opportunity for services. Some programs have eligibility requirements that limit the pool of offenders who can participate. In essence, if an administrator thinks that a youth should enroll in a program, but the program has a risk-level eligibility requirement (e.g., youths must be high risk to participate), the administrator may use an override in order to render them eligible. This suggests the importance of understanding the implementation context, especially local political pressures and resource constraints, that can affect full adherence to assessment protocols (see Aarons et al., 2011; Fixsen et al., 2009). It also echoes findings from the interviews and survey results presented in Section I. A preliminary bivariate analysis found a small, nonsignificant negative relationship between override—which again was almost always upward—and new adjudication.

Third, among the most common reasons for overrides were sex offenses, offense seriousness, and criminal history. Interviewees and survey respondents provided context to this finding. One respondent said about the OYAS, "It doesn't capture sex offenders, [and] doesn't address [the] youth who doesn't attend school. This is a problem and should be scored better."

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Another respondent said, “It doesn’t pick up offense seriousness.” Thus, doubts about the validity of the OYAS with certain juvenile justice personnel populations may be driving the rate of overrides.

Last, the use of overrides tends to be heterogenous across agencies. For example, when we asked interviewees about the process for administering an override, 48 percent said there was no formal process or that they were unsure about the process. Meanwhile, 46 percent said that supervisor approval must be obtained before an override can occur. In addition, 52 percent of interviewees said that certain offense categories mandate an override at their agency, while 48 percent said that no offenses carry a mandatory override.

Usage Study 5: Mental Health and Substance Use Information and Treatment Matching

As noted in Usage Study #5, overrides were not often conducted. Now, we turn to examining the particular usage case of mental health and substance abuse screening and subsequent treatment decisions in order to further evaluate the ways in which OYAS was being used in our research sites. This is a useful substudy because it considers a very specific focus in matching interventions to potential needs, which is an intended use in the logic of JRNA. The number of agencies and facilities screening youths for service needs has increased from 2000 to 2016. However, despite the prevalence of substance use and psychiatric disorders in youth populations, mental health and substance use needs continue to be screened for the least (Puzzanchera & Hockenberry, 2018). Several studies have found that between 60 percent and 70 percent of youths in the juvenile justice system meet criteria for at least one psychiatric condition (Abram et. al, 2003; Atkins et. al, 1999; Shufelt & Cocozza, 2006; Wasserman et. al, 2002). McClelland, Teplin, & Abram (2004) utilized data from the Northwestern Juvenile Project to examine the prevalence of substance use in 1,829 juvenile detainees. Analysis of self-report data showed that 77 percent of the detained youths reported substance use in the past six months and

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90 percent reported lifetime usage (McClelland, Teplin, & Abram, 2004). Rates of substance use and mental illness in juvenile justice populations are concerning as—in addition to their impact on youths—these needs may be barriers to effective treatment and successful completion of court requirements.

Effective screening and assessment is a necessary first step in addressing those issues, but there are also outstanding questions about how to carry out such procedures (Grisso, Vincent, & Seagrave, 2005). For instance, Grisso and Vincent (2005) mention that time and resources may factor into the decision on the length of screening and assessment for mental health issues. Numerous interviewees and survey respondents note that mental health and substance use issues are concerns in screening and assessing youths (see e.g., Section I, pp. 54). As such, we study the linkage between substance use and mental health information included in the OYAS and subsequent treatment in one of the study states as a way to characterize potential uses of the tool. Specifically, we answer research questions about whether youths are appropriately matched with services based on specific domain and item information. In turn, this helps give insight as to whether the mental health and substance use indicators typically included on risk assessments are enough to actually inform treatment referral.

Method and Analytic Plan. Case record data were obtained from four juvenile courts in State 2. These courts were utilized in this study because they had the most complete data for treatment received as well as item-level OYAS data necessary to precisely measure substance use and mental health needs. In order to address the above research questions, the current study had two objectives: (1) examine indicators of substance use and mental health problems based on the OYAS, and (2) assess the links between these indicators and the services received.

Measures (Independent Variables)

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Mental health indicator. The mental health indicator found in the OYAS Disposition Tool was used to measure mental health need. Several questions are asked regarding mental health, but these responses are then condensed into a single indictor. Mental health need is indicated by affirmative response(s) to, or evidence of, any significant mental health issues that have not been stabilized; prescribed medication; or previously seen by a mental health professional (excluding ADHD and any victimization). This item is scored dichotomously as "0" (no mental health issues or is stabilized on medication) or "1" (youth demonstrated significant untreated mental health issues).

Substance use indicators. Substance use need was measured using the items in the substance use domains of the OYAS Disposition, Residential, and Reentry Tools. Substance use indicators vary in assessment by type of question, scoring, and quantity of questions (see Appendix I for question variations). Because there are additional personality indicators in the substance use domain, we created a summed substance use index score (e.g., 0 = a youth did not indicate any substance use need, 1 = the youth indicated substance use need on 1 item). This step ensured that the personality indicator did not play a role in the total substance use score and potentially add error to measuring need on that domain.

Measures (dependent variables)

Mental health treatment and cognitive behavioral therapy (CBT). To measure whether a youth received any mental health treatment, we created a new dichotomous variable (0 = did not receive mental health treatment/psychological treatment/counseling, 1 = mental health treatment/psychological treatment/counseling received). To measure whether a youth received any CBT, we created a separate dichotomous variable (0 = did not receive CBT treatment, 1 = CBT treatment received). Because the provided treatment information was not always specific or

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detailed, we used any indication of treatments or programming often used to address these indicators such as counseling, therapy, cognitive behavioral therapy, or outpatient counseling.

Substance use treatment. To measure whether a youth received any substance use treatment, we created a new dichotomous variable (0 = no substance use treatment, 1 = substance use treatment received). We used any indication of treatment or programming typically used to address substance use such as substance use counseling, addictions 101, or substance abuse assessment to measure treatment referrals in this area.

Results

Descriptive statistics. This sample was comprised of 1,107 (80%) male youths and 276 (20%) female youths, with an average age of 15.8 (*sd* = 1.4). The majority (52.7%) of youths identified as Non-White and 47.2% of youths identified as White. About 21% of the youths who received the disposition assessment indicated a mental health need. Our sample had, on average, low to moderate substance use needs (see Table 2.30 for descriptive statistics).

Table 2.30. Sample Descriptive Statistics (N = 459)

Variable	**Descriptive Statistics**			
	$\bar{x}$ /%	*sd*	Min.	Max.
Age	15.8	1.37	11	20
Race (1 = White)	53.0	--	0	1
Gender (1 = Female)	20.0	--	0	1
Juvenile Justice History Score (0-6)	2.01	1.54	0	6
MH Indication Disposition (1 = Yes)	21.0	--	0	1
Condensed SU Index (Disposition)	0.79	0.95	0	4
Condensed SU Index (Reentry)	1.87	1.31	0	5
Condensed SU Index (Residential)	2.79	1.64	0	5

Note: *sd* = Standard Deviation; Min. = Minimum; Max. = Maximum; MH = Mental Health; SU = Substance Use.

Multivariate logistic regression models. We estimated multivariate logistic regression models of the relationship between mental health and substance use risk indicators and treatment received, breaking the analyses down by specific assessment type where necessary. Control

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variables included age, race, gender, whether the case had a violent focal offense (0 = No; 1 = Yes), and juvenile justice history score from the assessments (0 to 6).

The results for the multivariate regression of youth referral to any mental health treatment suggest that—when controlling for other variables—those youth that were indicated on the OYAS were in fact significantly more likely to be referred to that programming. The odds ratio (1.74) suggest that they were 74 percent more likely to be referred to such treatment (see Table 2.31). No statistically significant relationships were identified for CBT and Substance Use Treatment and the OYAS mental health indicator.

Table 2.31. Summary of Logistic Regression Analysis for Mental Health Indicator, Substance Use, and Treatment (N = 459)

Variable	**Mental Health Indicator**
Treatment Type	**OR**
Any Mental Health Treatment	1.74*
Any Cognitive Behavioral Treatment	0.86
Any Substance Use Treatment	0.99

Notes: *p<.05, **p<.01; OR = odds ratio; all relationships estimated in models including controls for age, gender, race, violent focal offense, and juvenile justice history.

The model results for the regression predicting treatment referral based on the substance use score are presented in Table 2.32. The relationship between substance use score and substance use treatment was statistically significant in all models, suggesting that a one unit increase on need score led to between 50 and 87 percent greater odds of referral to substance use treatment. In the residential tool model, youths also were more likely to be referred to CBT interventions.

Table 2.32. Summary of Logistic Regression Analysis for Mental Health Indicator, Substance Use, and Treatment (N = 459)

Variable	**Substance Use Need Score**
	OR
Disposition Tool	
Any Substance Use Treatment	1.71**

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Table 2.32. Summary of Logistic Regression Analysis for Mental Health Indicator, Substance Use, and Treatment (N = 459)

Variable	Substance Use Need Score
	OR
Any Cognitive Behavioral Treatment	1.33
Any Mental Health Treatment	1.12
Residential Tool	
Any Substance Use Treatment	1.87**
Any Cognitive Behavioral Treatment	2.05*
Any Mental Health Treatment	1.12
Reentry Tool	
Any Substance Use Treatment	1.53*
Any Mental Health Treatment	1.02

Notes: *p<.05, **p<.01; OR = odds ratio; all relationships estimated in models including controls age, gender, race, violent focal offense, juvenile justice history, there were no cases with CBT treatment in the reentry sample.[68]

Summary of Treatment Matching. Youths in the sample had relatively low rates of mental health need when identified with the OYAS marker. Of the youths who received the disposition assessment, only 20 percent had indicated for a mental health need, which is a low estimate compared to previous studies. On the other hand, the relationship between the mental health indicator and mental health treatment referral was statistically significant. This raises questions as to the thoroughness of the single item measure, but also suggests that it may be serving as a gateway to needed services. The youths in the current sample had low to moderate substance use risk. Overall, it appears that indication of substance use risk is informing receipt of necessary treatment—statistically significant result in most analyses, where higher scores lead to a greater likelihood of substance use treatment. They also were significantly more likely to receive cognitive behavioral interventions.

[68]Violent focal offense and age were the only control variables that were statistically significant in multiple sets of regression models.

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The results of this study suggest that these items and scores are related to receipt of treatment in this state. These tools are intended to guide referrals to treatment, but indicators are limited and not necessarily specific. Still, the information does seem to be impacting decision making in these cases. With more information, assessments could potentially better inform treatment planning and case management for justice-involved youths. Mental health and substance use disorders can progress, sometimes at a rapid rate, and if not treated, they can have salient effects on youths' ability to successfully complete treatment and supervision requirements and, in turn, may impact other life outcomes.

Usage Study 6: OYAS Strengths and Barriers

As mentioned in previously in this section of the report and in the usage studies specifically, case records can provide insight into juvenile risk and need assessments usage that extend insight drawn from interviews and surveys of juvenile justice personnel. Certain responses to usage questions suggest that perhaps the scope of use of risk and needs assessment is not as wide as researchers might recommend. For example, use of the assessment information seemed far more comprehensive on risk management concepts as opposed to case planning and treatment sides in the juvenile justice personnel responses.[69] To further this understanding, this section considers the possible extension of juvenile justice assessment to cover strengths and barriers that may be utilized in working with youths, including in fashioning treatment and supervision plans.

The information gathered in juvenile risk and need assessments should be used to identify those who are at the greatest risk of recidivating, determine their most pressing criminogenic needs, and match the youths to the most appropriate treatments (Bonta & Andrews, 2017). In a juvenile justice context, Bonta and Andrew's risk-needs-responsivity (RNR) model asserts that a

[69] See case record analyses in Section III of this report as well.

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youth's risk level should drive supervision and treatment intensity and duration. At an agency level resources should be prioritized for higher risk/need youths and lower risk/need youths should be given fewer services. The model also states that delinquency producing factors (i.e., criminogenic needs) should be targeted for change, especially if recidivism reduction is a goal. Lastly, the responsivity component of the theory purports that to be effective in reducing recidivism, proven methods should be used to deliver services and that these services need to be responsive to each individual youth in the juvenile justice system.

While early assessments tended to focus primarily on risk and need factors, recent tools have expanded to include other factors that may impact an individual's likelihood of success or failure (Lovins & Latessa, 2013). Consistent with the responsivity principle, practitioners are encouraged to identify barriers to treatment and to be mindful of potential challenges when tailoring supervision and treatment. For example, common barriers faced among adolescents such as financial issues, problems with family and peer relationships, education, and access to health services and transportation (Arnold, Walsh, Oldham, & Rapp, 2007). Acknowledging these barriers is a fundamental step in effective case management and development of realistic case or treatment plans.

In conjunction with the notion of responsivity, the growing focus on strength-based juvenile justice attempts to better engage with youths, provide opportunities to build upon available resources, and promote positive development (Nissen, 2006). A number of interventions have been developed under this strengths-based approach such as Strength-based Case Management (SBCM), Intensive Aftercare Program for youths reentering the community, and the Good Lives Model (GLM) of rehabilitation (Ward & Brown, 2004). Proponents of this general perspective claim that shifting from primarily focusing on problematic behaviors and labeling

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youths as "difficult" will promote more successful outcomes among juvenile justice system-involved youths through a more comprehensive mode of case management and treatment.

Given the potential benefits, more recent generations of risk and needs assessment tools—including the OYAS—have incorporated items to identify strengths and barriers. While capturing these aspects of youths' lives may be valuable, the extent to which strengths and barriers are incorporated into case management may be limited by challenges in implementation. As an example, the strengths and barriers included on the OYAS are not required to be completed on the assessment nor are strengths and barriers incorporated into the total risk score or level. Practitioners whose agencies do not require them to fill out strengths and barriers, or practitioners who are facing time constraints during the risk and need assessment process, could decide to omit these items. Additionally, there may be difficulty in using the information effectively once it is collected. For example, agency resources may be too limited to fully address barriers to treatment (e.g., this may be particularly difficult in rural areas).

Current substudy. The inclusion of strengths and barriers on actuarial risk assessments may be a promising step forward in providing services for justice-involved youths; however, this remains an under-researched area and adds steps to risk and needs assessment processes, which as highlighted above, can be challenging to implement at a basic level. Prior research has not examined the extent to which practitioners are capturing these aspects of youths' life circumstances, and whether doing so can enhance case management and our understanding of justice-involved youths. In light of these shortcomings, this study has two aims. First, we determine the extent to which practitioners are assessing strengths and barriers with the OYAS, and their perceptions of the tool's utility in gathering this information. Second, we investigate whether there are any differences in the composition of strengths and barriers across subgroups

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based on the tool used to complete the assessment and risk classification. This allows us to better understand this special topic of JRNA and, in turn, consider the degree to which agencies and personnel utilize additional options for understanding youths' cases when given the opportunity.

Method

Sample. The study was conducted using two sources of data. The first is a sample of 2,361 assessments selected from the OYAS database that were completed between 2010 and 2015.[70] While some of these cases overlap with the comprehensive assessment sample described above, they are drawn more generally the OYAS database in State 1. These data include assessment and demographic information that is officially recorded in the database. We included every assessment that was completed with one of the three tools that incorporates strengths and barriers (i.e., Disposition, Residential, and Reentry).[71] To gain insights into practitioners' perceptions, data gathered through surveys and interviews with 71 practitioners in State 1 in 2015 and 2016 is also examined (see Section I for juvenile justice personnel interview and survey methodology).

Measures. The demographic measures captured in the youth data include whether the youths were white (48.1%) or non-white (50.3 %), and whether they were male (77.1%) or female (22.8%). OYAS assessment data includes a number of key variables including the assessment tool used, item scores, domain scores, total risk score, and total risk level. Overall, 57 percent of the sample was classified as low risk, 30.2 percent as moderate risk, and 12.9 percent as high risk. The tools included in this study are limited to the Disposition (74.4%), Residential (11.6%), and Reentry (14.1%) Tools, as the other tools in the OYAS do not include strengths and barriers.

[70] Though we did not formally assess time trends in recording of strengths and barriers during this time window, there were no concerted prevalence shifts in recording of strengths/barriers in the data on which these analyses were based.
[71] Fifty-three individuals were assessed more than once with different tools during this time period. Given the focus on the assessment process and that each type of tool is largely analyzed individually, all of these cases were retained in the sample.

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Item scores are recorded for risk indicators, as well as strengths and barriers. With respect to the risk indicators the number of items varies, but the exact same 30 strength and barrier indicators are included across all of the tools. For every item on the assessments, practitioners are given scoring criteria to use to determine if the item applies to a particular case. Among the strength and barrier indicators, if the criteria specified in the scoring guide are met the appropriate box is checked. If a youth does not possess a particular strength or barrier based on the provided instructions, the OYAS administrator is instructed to leave the item blank. This aspect of implementation limits the capacity to distinguish between instances in which practitioners have skipped sections of the assessments and when an item was considered but determined to be neither a strength nor a barrier. In light of this concern, a measure was created to determine whether any item was recorded as a strength or barrier on a youth's assessment.

In scoring the assessments, the total number of strengths and the total number of barriers in each domain and overall across the entire tool can be calculated. These values are included in the current study. One set of additional variables was created for the analyses to reflect the overall degree of strengths and barriers in each domain and overall. These measures were created by giving every item marked as a strength a value of 1 and every item marked as a barrier a value of -1, and then summing the values. Negative scores reflect a greater presence of barriers, positive scores are indicative of a greater concentration of strengths, and values close to 0 suggest that the number of strengths and barriers are nearly equivalent. Total scores for strengths and barriers can range from 0 to 30, and the range of possible values for combined scores is -30 to 30.

Analytic Plan. First, the general composition of the sample of youths is described to offer a sense of the strengths and barriers typically captured in the assessments. Importantly, these values will indicate how often practitioners assess these aspects of youths' cases and provide a

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general sense of common strengths and barriers observed in the sample. Chi-Square tests and analysis of variance are used to determine whether any observed differences between groups are statistically significant. These analyses provide insights into whether or not there are differences in assessment practices (e.g., are strengths and barriers recorded for girls more so than boys?), as well as whether or not there are differences in the extent to which youths in particular subgroups are exposed to strengths and barriers (e.g., do low risk youths encounter more strengths than moderate or high risk youths?). Where possible, we also incorporate information gathered through surveys and interviews with practitioners to contextualize the findings.

Results. Overall, administrators recorded at least one strength or barrier for 65.7 percent of youths in the sample. Among youths assessed with the Disposition Tool, 62.3 percent had at least one strength or barrier noted in the assessment. About three quarters of youths who were assessed with the Residential and Reentry Tools had a strength or barrier recorded. Across all of the tools, 69 percent of non-white youths had at least one strength or barrier recorded, which was significantly more ($\chi^2 = 11.48$, $p < .01$) than the 62.3 percent of white youths. There was no significant differences observed in the recording of these items between males and females; however, the proportions of youths for which strengths and barriers were recorded did significantly differ by risk level ($\chi^2 = 6.71$, $p < .05$). Low risk youths had at least one recorded in 64.2 percent of cases, compared to 65.9 percent of moderate risk youths and 72 percent of high risk youths.

Although practitioners appear to record strengths or barriers for the majority of youth who are assessed, it is important to further examine what is being captured. The average number of strengths and barriers overall and by domain for each tool are shown in Table 2.33. Recall that positive values on the combined scores reflect a greater number of strengths and negative scores reflect a greater number of barriers. For youths assessed with the Disposition Tool, the total

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combined score of 5.38 indicates that there was a greater presence of strengths relative to barriers. This was generally observed across most domains, and the greatest number of strengths tended to be recorded in the *Education and Employment* domain ($\bar{x}$ = 3.17), followed closely by the *Substance Abuse, Mental Health, and Personality* domain ($\bar{x}$ = 3.00). The greatest number of barriers for youths assessed with the Disposition Tool were recorded in the *Peers and Social Support Network* domain ($\bar{x}$ = 1.87). Inspecting the frequencies across individual items further revealed that the least likely items to be recorded as a strength or barrier were whether the youth had a high school diploma or GED (missing = 76%), whether the youth had previous employment experience (missing = 72.5%), or whether the youth had an individualized education plan (missing = 70.7%).[72] The most prevalent strengths were having a family that is supportive of change (41%) and parents who are supportive of education (38.8%). The items with the greatest prevalence as a barrier for youths were having prosocial peers (25.6%), managing antisocial peers effectively (26.5%), and engaging in prosocial leisure activities (25.4%).

Table 2.33. Strengths and Barriers by Tool and Domain

Variable	**Strengths**	**Barriers**	**Combined**
Disposition Tool	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
Family and Living Arrangements	2.90 (1.69)	1.08 (1.40)	1.82 (2.80)
Peers and Social Support Network	1.47 (1.51)	1.87 (1.47)	-.40 (2.79)
Education and Employment	3.17 (1.94)	1.50 (1.63)	1.67 (2.84)
Pro-Social Skills	2.07 (1.51)	1.25 (1.29)	.82 (2.59)
Substance Abuse, Mental Health, & Personality	3.00 (2.43)	1.62 (1.72)	1.38 (2.48)
Values, Beliefs, & Attitudes	1.91 (1.14)	.66 (.94)	1.24 (1.96)
Total	11.95 (9.30)	6.57 (6.21)	5.38 (11.72)
Residential Tool	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
Family and Living Arrangements	2.41 (1.77)	1.54 (1.55)	.87 (3.06)

[72]Frequencies for individual items were calculated for all individuals who were assessed with the Disposition tool, regardless of whether any strengths or barriers items were scored. This is true of the analysis of Residential and Reentry tools as well.

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Table 2.33. Strengths and Barriers by Tool and Domain

Variable	Strengths	Barriers	Combined
Peers and Social Support Network	.86 (1.24)	2.69 (1.34)	-1.84 (2.45)
Education and Employment	2.89 (1.83)	2.16 (1.80)	.72 (2.92)
Pro-Social Skills	1.44 (1.29)	1.94 (1.25)	-.50 (2.33)
Substance Abuse, Mental Health, & Personality	2.43 (2.02)	2.99 (1.72)	-.56 (3.27)
Values, Beliefs, & Attitudes	1.28 (1.18)	1.37 (1.16)	-.09 (2.24)
Total	9.81 (7.32)	10.98 (6.75)	-1.16 (10.41)
Reentry Tool	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)
Family and Living Arrangements	2.88 (1.79)	1.50 (1.74)	1.38 (3.36)
Peers and Social Support Network	1.61 (1.57)	2.02 (1.51)	-.41 (2.97)
Education and Employment	3.99 (1.90)	1.69 (1.69)	2.31 (3.04)
Pro-Social Skills	2.33 (1.57)	1.36 (1.47)	.97 (2.94)
Substance Abuse, Mental Health, & Personality	3.77 (2.21)	2.16 (1.83)	1.62 (3.68)
Values, Beliefs, & Attitudes	1.99 (1.20)	.88 (1.16)	1.10 (2.32)
Total	15.11 (8.99)	8.76 (7.17)	6.34 (13.70)

The average scores observed among youths assessed with the Residential Tool are also shown in Table 2.33 and reveal a somewhat different pattern. Overall, the total scores suggest that youths assessed with this tool may be facing more barriers ($\bar{x}$ = 10.98) than strengths ($\bar{x}$ = 9.81). The combined scores suggest that barriers are more common for these youths in the *Peers and Social Support Network* ($\bar{x}$ = -1.84); *Pro-Social Skills* ($\bar{x}$ = -.50); *Substance Abuse, Mental Health, and Personality* ($\bar{x}$ = -.56); and *Values, Beliefs, and Attitudes* ($\bar{x}$ = -.09) domains. Strengths tended to outweigh barriers in the *Family and Living Arrangements* ($\bar{x}$ = .87) and *Education and Employment* ($\bar{x}$ = .72) domains, however. Four items emerged as being the least likely to be recorded as a strength or barrier: whether the youth had a high school diploma or GED (missing = 62.3%), whether the youth had previous employment experience (missing = 58.2%), whether the youth had an individualized education plan (missing = 57.1%) and the youth's attitude towards psychotropic medication (missing = 59.7%). Similar to the Disposition Tool, the most prevalent

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strengths were having a family that is supportive of change (46.5%) and parents who are supportive of education (45.1%). The most frequently noted barriers included having prosocial peers (50.9%), managing antisocial peers effectively (51.6%).

Among youths assessed with the Reentry Tool, strengths tended to outweigh barriers as indicated by the total combined average of 6.34. The average number of overall strengths was highest in these assessments at 15.11 compared to 11.95 on the Disposition Tool and 9.81 on the Residential Tool. Strengths were more prevalent than barriers in every domain except *Peers and Social Support Network*, where the average combined score was -.41. This was the only domain across all three tools in which youths tended to face more barriers. Relatedly, the *Family and Living Arrangements* domain was the only one in which youths tended to have a greater number of strengths, regardless of which tool was used to complete the assessment. Generally, the same item-level patterns were observed among the assessments completed with the Reentry Tool. In addition to the two items that were indicated as the most prevalent strengths in the other tools, a family that is supportive of change (56.9%) and parents who are supportive of education (53.9%), having parents who were supportive of employment was also a commonly noted strength (52.1%). Similarly, the same two barriers that were the most frequently recorded in the other tools were also among the most prevalent barriers recorded in the Reentry Tool assessments: having prosocial peers (43.1%), and managing antisocial peers effectively (41.0%). One other item, having a history of substance use, was also among the most prevalent barriers recorded (42.2%).

Subgroup comparisons. The average number of strengths and barriers, as well as combined scores on each tool were also compared across groups based on risk levels. The results of the analyses for the disposition are shown in Table 2.34. Across each of the domain and total scores, the averages were consistent with the expectations for each risk level. For example, the low

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risk group consistently had the highest average number of strengths, the high risk group consistently had the lowest number of strengths, and the average number of strengths for the moderate risk group always fell between the low- and high risk groups. In each test, all three groups were significantly different from each other. Similarly, the opposite pattern was observed for the average number of barriers, with the low risk group encountering the fewest barriers and the high risk group encountering the greatest number of barriers. Average combined scores were also consistent with expectations, and all three groups significantly differed from one another.

Table 2.34. Differences in the Average Number of Strengths and Barriers by Domain and Risk Level for the Disposition Tool

Variable	**Low**	**Moderate**	**High**	**ANOVA**
Strengths	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	*F* (*df*)
Family and Living Arrangements	3.31^{ab} (1.55)	2.27 (1.70)	1.80 (1.53)	58.40*** (2,902)
Peers and Social Support Network	2.05^{ab} (1.48)	$.55^{c}$ (.94)	.12 (.36)	358.83***^ (2,467)
Education and Employment	3.69^{ab} (1.83)	2.41^{c} (1.84)	1.76 (1.53)	81.85***^ (2,242)
Pro-Social Skills	2.62^{ab} (1.35)	1.29^{c} (1.32)	.52 (.83)	219.60***^ (2, 265)
Substance Abuse, Mental Health, & Personality	3.67^{ab} (2.41)	2.06^{c} (2.07)	1.18 (1.40)	122.26***^ (2, 322)
Values, Beliefs, & Attitudes	2.28^{ab} (.96)	1.39^{c} (1.10)	.60 (.83)	163.31***^ (2, 209)
Total	14.59^{ab} (9.48)	8.05^{c} (7.23)	5.03 (4.56)	156.54***^ (2, 378)
Barriers	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	*F* (*df*)
Family and Living Arrangements	$.78^{ab}$ (1.19)	1.44^{c} (1.52)	2.10 (1.64)	38.73***^ (2, 201)
Peers and Social Support Network	1.29^{ab} (1.31)	2.73^{c} (1.16)	3.29 (1.02)	204.51***^ (2, 257)
Education and Employment	1.19^{ab} (1.38)	1.91^{c} (1.79)	2.53 (2.02)	30.45***^ (2, 206)
Pro-Social Skills	$.77^{ab}$ (.99)	1.89^{c} (1.26)	2.72 (1.19)	151.80***^ (2, 204)
Substance Abuse, Mental Health, & Personality	1.01^{ab} (1.22)	2.38^{c} (1.72)	3.46 (2.19)	116.18***^ (2, 222)
Values, Beliefs, & Attitudes	$.33^{ab}$	1.02^{c}	1.98	149.69***^

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Table 2.34. Differences in the Average Number of Strengths and Barriers by Domain and Risk Level for the Disposition Tool

Variable	**Low**	**Moderate**	**High**	**ANOVA**
	(.66)	(1.02)	(.91)	(2, 181)
Total	4.44[ab]	9.19[c]	13.62	121.97***^
	(4.31)	(6.42)	(8.10)	(2, 236)
Combined	$\bar{x}$	$\bar{x}$	$\bar{x}$	*F*
	(*sd*)	(*sd*)	(*sd*)	(*df*)
Family and Living Arrangements	2.53[ab]	.83[c]	-.30	60.26***^
	(2.46)	(2.91)	(2.84)	(2, 209)
Peers and Social Support Network	.76[ab]	-2.18[c]	-3.17	329.88***^
	(2.59)	(1.85)	(1.15)	(2, 339)
Education and Employment	2.51[ab]	.49[c]	-.77	95.05***
	(2.49)	(2.75)	(2.76)	(2, 900)
Pro-Social Skills	1.85[ab]	-.59[c]	-2.19	237.79***^
	(2.15)	(2.31)	(1.71)	(2, 235)
Substance Abuse, Mental Health, & Personality	2.67[ab]	-.32[c]	-2.28	175.19***
	(2.99)	(3.02)	(2.83)	(2, 970)
Values, Beliefs, & Attitudes	1.95[ab]	.37[c]	-1.37	188.13***^
	(1.50)	(1.97)	(1.59)	(2,194)
Total	10.15[ab]	-1.14[c]	-8.59	308.98***^
	(10.19)	(8.69)	(8.05)	(2, 298)

*** $p < .001$; ANOVA=Analysis of Variance
^ Welch F statistic reported and comparisons based on Games-Howell test
[a] Low risk is significantly different from moderate risk; [b] Low risk is significantly different from high risk; [c] Moderate risk is significantly different from high risk.

Scores on the Residential Tool were also examined for differences based on youths' risk levels. The results were largely consistent with those of the Disposition Tool. As shown in Table 2.35, average scores are consistent with expectations based on risk level. Low risk youths consistently had the highest number of strengths and the lowest number of barriers, while the opposite was true for high risk youths. Significant differences were observed across groups for each score, though scores for low and moderate risk youths were not significantly different with respect to the average number of strengths overall and in the *Family and Living Arrangements*, *Peers and Social Support Network*, and *Education and Employment* domains. Similarly, there was not a significant difference between low and moderate risk youths in the average number of

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barriers on the *Family and Living Arrangements* domain, nor the combined scores in the same domain and the *Education and Employment* domain.

Table 2.35 Differences in the Average Number of Strengths and Barriers by Risk Level

Variable	**Low**	**Moderate**	**High**	**ANOVA**
Strengths	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	*F* (*df*)
Family and Living Arrangements	3.00[b] (1.75)	2.70[c] (1.67)	1.72 (1.70)	9.16*** (2, 190)
Peers and Social Support Network	1.69[b] (1.47)	1.06[c] (1.30)	.29 (.72)	19.28***^ (2, 95)
Education and Employment	3.59[b] (1.86)	3.16[c] (1.76)	2.19 (1.70)	8.66*** (2, 174)
Pro-Social Skills	2.30[ab] (1.53)	1.51[c] (1.25)	.94 (.95)	12.93***^ (2, 79)
Substance Abuse, Mental Health, & Personality	3.78[ab] (2.17)	2.61[c] (1.92)	1.69 (1.76)	12.27*** (2, 171)
Values, Beliefs, & Attitudes	2.03[ab] (1.08)	1.36[c] (1.22)	.83 (.99)	14.16***^ (2, 82)
Total	13.58[b] (8.68)	10.89[c] (6.95)	6.66 (5.67)	15.11***^ (2, 92)
Barriers	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	*F* (*df*)
Family and Living Arrangements	1.08[b] (1.42)	1.24[c] (1.40)	2.17 (1.63)	9.77*** (2, 190)
Peers and Social Support Network	1.62[ab] (1.43)	2.58[c] (1.32)	3.25 (1.02)	17.82***^ (2, 73)
Education and Employment	1.19[ab] (1.26)	2.02[c] (1.74)	2.83 (1.87)	12.87***^ (96)
Pro-Social Skills	.97[ab] (1.02)	1.88[c] (1.18)	2.48 (1.13)	20.03*** (2, 180)
Substance Abuse, Mental Health, & Personality	1.48[ab] (1.34)	2.92[c] (1.69)	3.68 (1.49)	19.14*** (2, 180)
Values, Beliefs, & Attitudes	.58[ab] (.85)	1.27[c] (1.15)	1.86 (1.08)	19.59***^ (2, 91)
Total	5.66[ab] (4.85)	10.35[c] (5.96)	14.35 (6.58)	27.42*** (2, 204)
Combined	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	*F* (*df*)
Family and Living Arrangements	1.92[b] (2.89)	1.46[c] (2.80)	-.45 (3.04)	11.33*** (2, 190)
Peers and Social Support Network	.07[ab] (2.69)	-1.52[c] (2.51)	-2.96 (1.58)	21.18***^ (2, 70)
Education and Employment	2.41[b] (2.18)	1.14[c] (2.77)	-.64 (2.85)	15.24*** (2, 174)

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Table 2.35 Differences in the Average Number of Strengths and Barriers by Risk Level

Variable	Low	Moderate	High	ANOVA
Pro-Social Skills	1.33[ab] (2.35)	-.37[c] (2.18)	-1.54 (1.90)	20.88*** (2, 180)
Substance Abuse, Mental Health, & Personality	2.30[ab] (2.81)	-.32[c] (3.15)	-1.99 (2.75)	20.92*** (2, 171)
Values, Beliefs, & Attitudes	1.45[ab] (1.80)	.08[c] (2.26)	-1.03 (1.96)	18.74***^ (2, 87)
Total	7.92[ab] (9.20)	.54[c] (9.04)	-7.69 (8.19)	43.52*** (2, 204)

*** $p < .001$; ANOVA=Analysis of Variance ^ Welch F reported, comparisons based on Games-Howell test
[a] Low risk is significantly different from moderate risk; [b] Low risk is significantly different from high risk; [c] Moderate risk is significantly different from high risk.

The comparative analyses were repeated for the subsample of youths who were assessed with the Reentry Tool. The pattern of results was generally consistent with the other assessment tools and is displayed in Table 2.36. Low risk youths consistently had the greatest number of strengths and the least number of barriers, and high risk youths had the fewest strengths and most barriers. The average combined scores reflected the same pattern. In each of the comparisons, the average scores among low risk youths were significantly different from those of moderate and high risk youths. In the *Family and Living Arrangements* domain, however, the average number of strengths and barriers and combined scores did not significantly differ between the moderate and high risk groups.

Table 2.36. Differences in the Average Number of Strengths and Barriers by Domain and Risk Level for the Reentry Tool

	Low	Moderate	High	ANOVA
Strengths	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	*F* (*df*)
Family and Living Arrangements	3.56[ab] (1.51)	2.38 (1.81)	1.82 (1.74)	20.78***^ (2, 86)
Peers and Social Support Network	2.53[ab] (1.44)	.93[c] (1.18)	.24 (.74)	78.91***^ (2, 120)
Education and Employment	4.64[ab] (1.67)	3.65[c] (1.92)	2.59 (1.64)	20.27*** (2, 232)
Pro-Social Skills	3.21[ab] (1.14)	1.82[c] (1.43)	.52 (.94)	99.51***^ (2, 95)

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Table 2.36. Differences in the Average Number of Strengths and Barriers by Domain and Risk Level for the Reentry Tool

	Low	**Moderate**	**High**	**ANOVA**
Substance Abuse, Mental Health, & Personality	4.94[ab] (1.77)	2.94[c] (2.09)	1.74 (1.39)	62.26***^ (2, 92)
Values, Beliefs, & Attitudes	2.69[ab] (.66)	1.61[c] (1.17)	.30 (.60)	186.13***^ (2, 82)
Total	19.99[ab] (7.82)	11.67[c] (7.86)	6.94 (4.63)	78.71***^ (2, 118)
Barriers	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	*F* (*df*)
Family and Living Arrangements	.98[ab] (1.49)	1.80 (1.77)	2.52 (1.94)	12.37***^ (2, 83)
Peers and Social Support Network	1.10[ab] (1.20)	2.68[c] (1.27)	3.44 (.86)	89.32***^ (2, 105)
Education and Employment	1.12[ab] (1.25)	1.82[c] (1.60)	3.29 (2.11)	19.18***^ (2, 79)
Pro-Social Skills	.54[ab] (.97)	1.80[c] (1.33)	3.18 (1.36)	90.16***^ (2, 84)
Substance Abuse, Mental Health, & Personality	1.12[ab] (1.14)	2.73[c] (1.63)	4.39 (1.65)	69.99***^ (2, 74)
Values, Beliefs, & Attitudes	.18[ab] (.47)	1.20[c] (1.13)	2.70 (.60)	238.73***^ (2, 71)
Total	4.68[ab] (4.00)	10.53[c] (6.34)	18.65 (6.75)	85.01***^ (2, 80)
Combined	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	$\bar{x}$ (*sd*)	*F* (*df*)
Family and Living Arrangements	2.58[ab] (2.87)	.58 (3.35)	-.70 (3.41)	18.37***^ (2, 85)
Peers and Social Support Network	1.43[ab] (2.51)	-1.75[c] (2.34)	-3.21 (1.49)	94.37***^ (2, 114)
Education and Employment	3.52[ab] (2.30)	1.83[c] (2.90)	-.71 (3.26)	29.24***^ (2, 82)
Pro-Social Skills	2.68[ab] (2.01)	.03[c] (2.62)	-2.67 (1.87)	108.14***^ (2, 90)
Substance Abuse, Mental Health, & Personality	3.82[ab] (2.54)	.21[c] (3.21)	-2.65 (2.62)	88.28***^ (2, 82.15)
Values, Beliefs, & Attitudes	2.51[ab] (1.07)	.41[c] (2.24)	-2.40 (1.19)	217.38***^ (2, 75)
Total	15.31[ab] (9.24)	1.14[c] (10.57)	-11.71 (8.89)	124.56*** (2, 248)

*** $p < .001$; ANOVA=Analysis of Variance

^ Welch F statistic reported and comparisons based on Games-Howell test

[a] Low risk is significantly different from moderate risk; [b] Low risk is significantly different from high risk; [c] Moderate risk is significantly different from high risk.

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Juvenile justice personnel perceptions. In an effort to gain insights as to how and why practitioners use the strengths and barriers items in the OYAS, we examined some of the juvenile justice personnel survey data described above. Specifically, when asked whether the OYAS provides useful information regarding non-criminogenic needs, 55.6% of respondents answered affirmatively and 28.9% indicated that it did not. The remaining 15.6% were unsure. Additionally, 81.8% of respondents indicated that they incorporate needs into case plans, 13.6% indicated that they do not, and the remaining 4.5% were unsure. Using QDA Miner, we also extracted some practitioner quotes on the non-criminogenic needs included in the OYAS, which provide some added insights on the strength and barrier portions of the tools.

Generally, the open-ended responses suggest that users are receptive to using the information to enhance treatment, but there are some potential obstacles. For example, one respondent indicated that the non-criminogenic needs captured in the OYAS can be used "to match services." Another respondent (presumably one in a supervisory role) reported that his/her strategy was to "encourage probation officers to use strengths and barriers and work with strengths to enhance kid[s]." These sentiments align with the intended use of these portions of the tool and strength-based case management, but other responses suggest that this view is not consistently adopted by practitioners. One practitioner noted that the tools "only captures non-criminogenic needs if probation officers do it and it's not a requirement." Another expressed the concern that "we do not do a great job of integrating these factors since we are just checking boxes on the tool[s]." These responses may be indicative of uncertainty among practitioners regarding the value of the information gained from these items or how to use the information once they take the time to collect it. When asked about the use of OYAS to gather information on non-criminogenic needs another respondent stated, "much of the focus is on criminogenic needs so no opinion on it."

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Summary of OYAS Strengths and Barriers. Contemporary research in juvenile justice and correctional intervention has given greater attention to the potential benefits of examining strengths and barriers in enhancing case management and interventions. In line with these perspectives, the most recent generations of risk and needs assessments have incorporated these factors. Despite these developments in practice, little empirical attention has been given to assessing how these aspects of assessment tools are used in the juvenile justice system and the extent to which practical understanding of cases can be improved through the information gained.

The results of this substudy indicate that practitioners who are using the OYAS elect to capture strengths and barriers with some regularity. About three fourths of youths who are assessed with the Residential and Reentry Tools have at least one item recorded. Though less frequent, the majority of those assessed with the Disposition Tool (62%) also had at least one item noted as strength or barrier. Moreover, the results suggest possible differences in the presence of strengths and barriers for youths at different stages of the juvenile justice system. Those assessed with the Residential Tool tended to have more barriers, and those assessed with the Disposition and Reentry Tools had more strengths. A closer inspection of each domain revealed that there were more barriers than strengths related to peers and social support, regardless of the tool that was used to complete the assessment. This may be a consistent problem for all justice-involved youth. There were also consistently more strengths related to the family and *Education and Employment* domains, which may reflect areas to build upon in interventions across different points in the system. In terms of risk level, the number of strengths and barriers for each category of risk was significantly different and in the expected directions. This is not surprising given the design of the tool, but does provide some indication that the tool is working as designed in this respect.

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Overall, this analysis suggests that one state using the OYAS (State 1) has started to move toward a more comprehensive assessment process through use of strengths and barriers indicators to inform case planning. The findings simultaneously reveal some room for expansion in the use of the strengths and barriers portions of the OYAS tools as well, which may prove to be one avenue for identifying more options for clients and better tailoring their treatment and supervision plans. In order to achieve meaningful gains in this regard, however, it may be necessary to consider several enhancements for the strengths and barriers sections. For example, through demonstrating their potential usefulness to juvenile justice personnel, setting clearer guidelines for their use, and offering more training opportunities on this element of the process. Like several of these use example studies, this also helps to illustrate some places where understanding more about risk and needs assessment in practice can inform us about implementation and training needs.

Summary of Section II

Section II of this report examined individual youth case data and youth interviews to help explore case-level JRNA usage and its potential impact on youths. These results alert us to the fact that while JRNA may be a substantial element to working effectively with youths, there is room for improvement in better integrating the information into every-day decision making in order to maximize its potential to affect the cases of justice-involved youths and, in turn, the juvenile justice system. For example, while approximately 60 percent of sampled youths were assessed to be moderate or high risk to recidivate, only around 35 percent of youth records showed exposure to treatment. The usage studies reported here also show evidence of varying outcomes concerning race and geography and risk level and also room for improvement concerning race, ethnicity, and OYAS validity. Further, the usage case studies discussed patterns in OYAS overrides, showed that having substance abuse and mental health indicators did predict receiving services in these areas, and that juvenile justice personnel are using the strengths and barriers items (which are optional)

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at a higher level than anticipated. In Section III, presented next, we further examine the youth case level and interview data in an effort to help answer questions on how JRNA impacts youths' outcomes.

Section III. Youths' Outcomes and Juvenile Risk and Needs Assessment

Better understanding implementation and usage of risk and needs assessment is essential in creating a more comprehensive evidence base for their usage in juvenile justice practice and fills a clear need in the research in this area. At the same time, linking insight on implementation and usage to outcomes for youths helps to connect this study to previous research on JRNA. That research has focused heavily on the relationship between risk and needs assessment and justice-based outcomes (e.g., new referrals to juvenile court or placements in correctional facilities). We therefore consider the risk and needs assessment process in relation to record-based recidivism as in previous studies while also using a small subsample of self-report interviews with youths to measure and analyze other developmentally-relevant outcomes such as engagement in school and/or work as well as shifts in attitudes that may be conducive to crime and delinquency.

Risk Assessment, Juvenile Justice Decisions, and Youths' Outcomes

As highlighted earlier, structured risk and need assessments has become increasingly prominent over the last two decades of juvenile justice practice (e.g., Wachter, 2015). JRNA are frequently part of the implementation of evidence-based practices, having been touted as potentially improving case decision-making, youths' outcomes, and recidivism rates (Nelson & Vincent, 2018). The results of risk and need assessments can be viewed as a "cornerstone of treatment,"[73] with the potential to exert great impact on youths' paths through the juvenile justice system process due to their impact on decisions about their cases—ranging from intake to case

[73] This quote is drawn from a response to the juvenile justice personnel web-based survey described in Section I.

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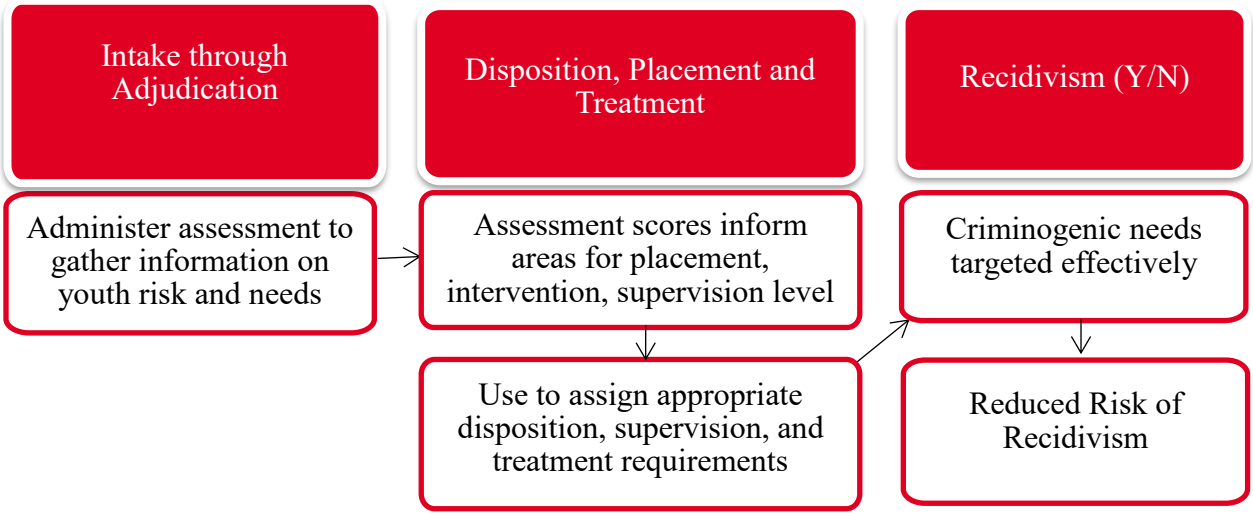
disposition and placement to treatment. Likewise, since youths' justice-system experiences will impact their personal and case outcomes, assessment can be viewed as the first step towards generating more positive results for justice-involved youths. Building on the early background of the report, the applied logic of this framework as it manifests in juvenile justice case processing is briefly outlined below and illustrated in Figure 3.1. This model uses recidivism as an endpoint given its primacy in the existing research, practice, and the current study. Nevertheless, the JRNA process shown in the figure below can inform juvenile justice response in ways that impact other important youths' outcomes as well (National Research Council, 2013; Sullivan, 2019).

Figure 3.1. Overview of Risk and Needs Assessment, Juvenile Justice Decisions, and Youths' Outcomes



This logic model builds on the notion that risk and needs assessments should be administered to each youth to inform key decision points in the juvenile justice system. This starts at intake and detention decisions (Mears, 2012; Steinhart, 2006) and proceeds through later stages of the system (Baglivio, Wolff, Jackowski, & Greenwald, 2017). In addition to detailing background and personal characteristics (which could be useful in highlighting specific responsivity factors), results from each assessment should be used to gauge risk of re-offense and existing areas of criminogenic need (Duwe & Rocque, 2017; Latessa, Listwan, & Koetzle, 2014).

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This information should then be used to match youths to appropriate services and levels of supervision, as well as inform dispositional and case-management decisions (Andrews & Bonta, 2010; Viera, Skilling, & Peterson-Badali, 2009). Finally, assuming that each youth completes his or her assigned supervision requirements or is otherwise placed appropriately, we can expect to see reductions in recidivism and more positive developmental outcomes than if a systematic assessment was not used to inform the juvenile justice decision-making process.

Despite the importance of ensuring that risk and need assessments are used completely and properly in decision-making, few studies have examined the use of risk assessment in practice in the juvenile justice system (Peterson-Badali, Skilling, & Haqanee, 2015; Vincent, Paiva-Salisbury, Cook, Guy, & Perrault, 2012). Existing studies have focused heavily on the utility and predictive validity of risk and need assessment – rather than examining the process in its entirety (Singh et al., 2014). While there is evidence that these tools are indeed useful when predicting recidivism, the observed effect sizes suggest considerable variation across systems and studies (Schwalbe, 2007), and still reflect a good deal of prediction error. In the absence of strong implementation practices, risk assessments may be completed but not used to guide decision making (Shook & Saari, 2007) or be utilized correctly. In these cases, agencies and youths will fail to fully capitalize on the possible benefits of JRNA (Vincent et al., 2012; Vincent et al., 2016).

Analysis of Case Decisions and Outcomes Based on JRNA

To this point, the report has characterized the implementation process across three states—and multiple agencies within those states—in part to set a foundation for other analyses of assessment use and youths' outcomes and to assess some isolated examples of its use. The data discussed above are largely based or influenced on the perceptions of those in the field, however. Here we conduct a series of mediation models to better understand the degree to which the

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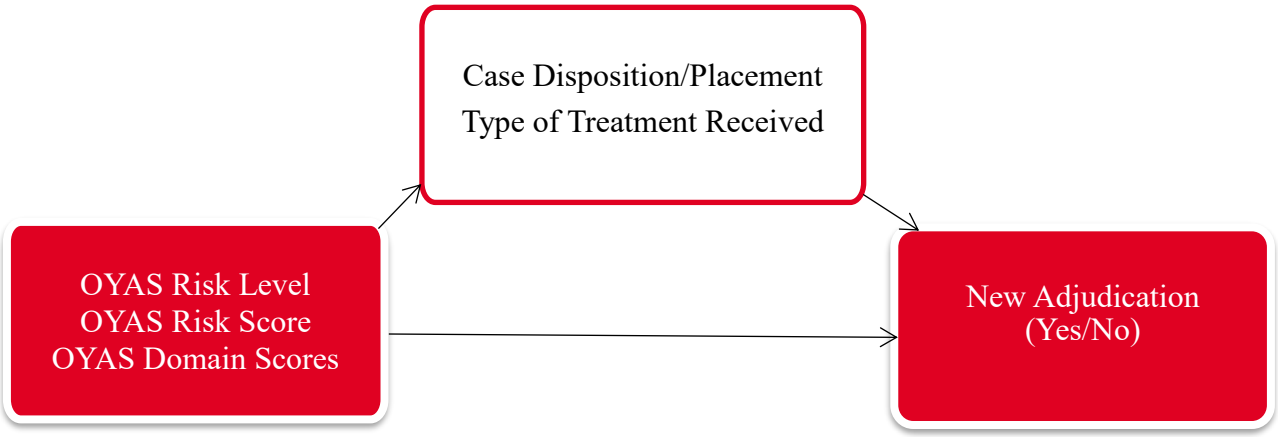
information gathered and synthesized from risk and needs assessment affects juvenile justice case decision-making in the sites from which we gathered data. In turn, the results of those decisions theoretically should contribute to better outcomes among youths. To assess this, the data gathered in this study were used to formally test the impact of risk and need assessment results on juvenile-justice decision-making and subsequent recidivism outcomes. In particular, we use the data and sample described above to assess the statistical models outlined in Figure 3.2, which is a statistical distillation of the broader processes depicted in Figure 3.1 above.

Figure 3.2. Statistical Model for Risk Assessment, Decision-Making, and Youths' Outcomes



We first consider whether some key disposition types mediate the relationship between the results of the OYAS risk assessment (i.e., overall risk level and score) and youths' recidivism (i.e., new juvenile court adjudication). Secondarily, we determine whether the various domain scores in the OYAS are related to receipt of relevant treatment types (e.g., substance use, cognitive behavioral therapy). In turn, we identify whether that treatment affects youths' recidivism. In doing so, we attempt to fill in the implicit gap in between risk assessment results and recidivism outcomes by modeling some relevant juvenile justice processes as potential mediators. This helps make a more precise determination of how JRNA usage works in practice.

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We estimate these models using controlled causal mediation analyses with bootstrapped standard errors to assess the assumed risk and need assessment-decision-outcome relationship (Hayes, 2013; Vanderweele, 2015). These analyses were carried out using the *paramed* program created by Valeri & Vanderweele (2013) and available in Stata, as well as Mplus software for path modeling due to the fact that some of the domain and overall OYAS score variables are continuous. Both the mediation and outcome models are handled as multivariate logistic regressions due to the binary nature of the relevant variables in those parts of the model (e.g., received probation, any new adjudication).

This strategy was used because it allowed us to effectively model indirect relationships between risk and recidivism while controlling for potential unmeasured effects on the risk and disposition/treatment relationships that could otherwise confound results. These modeling strategies also allow us to handle interaction assumptions in mediation analysis that cannot be dealt with in standard multivariate regression processes and other approaches to mediation (c.f., Baron & Kenny, 1986; Vanderweele, 2015). This interaction term is tested in each case in order to determine whether the effect of the mediator on the outcome is stronger or weaker depending on the initial risk level. The control variables used in each equation vary somewhat depending on the models and are described as we report the results for each. However, the core controls include: age, sex (1=Female), race (1=Non-White), violent focal offense (1=Yes), and a set of dummy variables for state site (Reference=State 1).

Data from all three states were used in the disposition analyses and States 1 and 2 comprised the analytic sample for the treatment mediation models. Relevant details for the independent variables (i.e., OYAS assessment results) and mediators (i.e., case disposition/placement and treatment indicators) are shown in Tables 2.8, 2.9, and 2.10 in the

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section on the comprehensive assessment sample above. Recidivism is the main dependent variable in this study. It was scored dichotomously, with "0" indicating no recidivism and "1" indicating recidivism. Youths were considered to have recidivated if they had an adjudication on a new charge following their assessment for the focal charge. Overall, 26 percent of youths in the analytic sample for the disposition analysis, which mainly comprised cases assessed with disposition and diversion tools (~n=4,805), had a new adjudication following the disposition of their case or release from a facility. Roughly 24 percent of those in the smaller sample for the treatment mediation analysis (n=3,584) had a record of a new adjudication.[74]

Disposition type captures the outcome of the youths' disposition hearing for their focal cases. "Disposition type" refers to control-oriented strategies. In the original study data, disposition types included secure commitment, non-secure residential placement, house arrest or electronic monitoring, intensive probation, standard probation, diversion, penalties (e.g., restitution, fines), community service, and dismissal or termination. In comparison, "treatment type" refers to therapeutic-oriented dispositions that include referrals to services (e.g. counseling, cognitive behavioral therapy, substance abuse treatment). In both cases, these serve as potential mediator variables.

For the purposes of this analysis, disposition type and treatment type were collapsed into binary variables. The first dichotomous mediator compared youths who received the most severe disposition in our dataset, commitment to a state facility (1), with youths who received a less serious disposition (0). The second dichotomous mediator compared youths who received the most

[74] Reductions in the sample sizes were primarily due to the scope of information available in individual case records and the ability to effectively link across the assessment, case disposition and treatment referral, and recidivism data. The largest reductions to the analytic samples were due to available offense type (16.8%), treatment (55.5%), disposition (19.6%) data. Patterns of missingness did differ somewhat across OYAS risk levels with relatively greater proportions missing among low and high risk youths relative to moderate risk cases ($\chi^2_{(3)}$ = 48.5, p<.001). Nevertheless, these differences were relatively modest in strength (V = 0.09). Still, it is possible that generalizability of some findings may be weighted toward moderate risk cases.

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common disposition in our dataset, standard probation, or a less serious disposition (e.g. diversion, penalties, community service, or dismissal/termination) (1), with youths who received a more serious disposition (e.g., state commitment, residential placement, house arrest or electronic monitoring, or intensive probation) (0). Finally, the third dichotomous disposition type mediator compared youths who received intensive or standard probation (1) to youths who received a less serious case outcome (e.g., diversion, dismissal/transfer, penalties, or community service).

Six binary categories of treatment referral were examined in this analysis: cognitive behavioral, anger/aggression, education/employment, family services, mental health services, and substance abuse treatment. Programs were classified into these categories based on the content or topic of the services they provided or the type of behavior/issue they claimed to target. A score of "0" indicated that the youth did not receive the type of treatment specified, while "1" meant s/he did receive the type of treatment specified. For the mediation models estimating treatment effects, the *Juvenile Justice History* domain score was also included as a control.

Results

Disposition. Table 3.1 reports the results of the mediation process models for risk level, case dispositions, and new adjudication. In all estimated models age, gender, race/ethnicity, violent offense, and state category were included as control variables. In total, 6 models were estimated to examine the impact of disposition on the relationship between OYAS risk level and new adjudication. Two models were estimated for each disposition of interest. The first in each set compared moderate and high risk youth to low risk youth, while the second compared moderate youths to either high or low risk youths only. Although we do not devote much attention to controls, there are significant state effects in some models that tend to reflect differential patterns of disposition decisions and recidivism in particular analyses (e.g., State 3 is less likely and State

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2 more likely than State 1 to use state commitment). The violent focal offense indicator is generally statistically significant as well, which suggests that case characteristics play a significant role in understanding recidivism as well as in disposition decisions made during the juvenile justice process. In both cases, the results illustrate the importance of conditioning on these variables to obtain unbiased estimates of key relationships among risk assessment, juvenile justice decisions, and recidivism.

Disposition: State Commitment. Results of the mediation process model for risk level and recidivism via state commitment are presented in Table 3.1 and Figure 3.3 below. We converted the estimates from the top panels of the tables into an Odds Ratio (*OR*) scale to ease interpretation and discussion of key results. Results indicated that compared to low risk youths, moderate and high risk youths had significantly higher chances of commitment to a state facility ($OR = 1.39$, $p < 0.01$). This finding suggests that the risk assessment information is associated with state commitment placement decisions in an expected way and one that is aligned with best practices in JRNA. Moderate and high risk youths also had significantly higher chances of recidivism ($OR = 1.39$, $p < 0.01$) compared to low risk youths committed to a state facility. The relationship between state commitment and new adjudication suggests that youths with secure placement have one-third as high odds of recidivism as those who were not ($OR = 0.33$, $p < 0.01$).

Table 3.1. Results of Mediation Process Model for State Commitment

	Mod/High vs. Low Risk and State Commitment b (95% CI)	**High vs. Mod Risk and State Commitment b (95% CI)**
	N=4750	N=2887
New Adjudication on…		
OYAS Risk Level	0.40**	0.40**
	(0.25 - 0.54)	(0.21 - 0.60)
State Commitment	-1.12**	-1.22**
	(-1.32 - -0.92)	(-1.46 - -0.98)
Age	-0.11**	-0.09**

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Table 3.1. Results of Mediation Process Model for State Commitment

	Mod/High vs. Low Risk and State Commitment b (95% CI)	**High vs. Mod Risk and State Commitment b (95% CI)**
	(-0.15 - -0.07)	(-0.14 - -0.04)
Female	-0.22**	-0.19
	(-0.38 - -0.06)	(-0.40 - 0.02)
Non-White	0.24**	0.23**
	(0.09 - 0.38)	(0.05 - 0.41)
Violent Offense	-0.31**	-0.37**
	(-0.47 - -0.16)	(-0.55 - -0.19)
State 2	-0.02	0.02
	(-0.19 - 0.15)	(-0.18 - 0.23)
State 3	0.18	0.21
	(0.001 - 0.36)	(-0.01 - 0.44)
Disposition on...		
OYAS Risk Level	0.33**	0.32**
	(0.17 - 0.48)	(0.12 - 0.52)
Age	0.45**	0.45**
	(0.40 - 0.51)	(0.38 - 0.52)
Female	-0.92**	-1.21**
	(-1.13 - -0.72)	(-1.50 - -0.93)
Non-White	0.31**	0.29**
	(0.15 - 0.46)	(0.10 - 0.48)
Violent Offense	0.61**	0.56**
	(0.46 - 0.76)	(0.38 - 0.75)
State 2	0.88**	0.78**
	(0.72 - 1.04)	(0.57 - 0.98)
State 3	-2.27**	-1.74**
	(-2.60 - -1.95)	(-2.09 - -1.39)
Risk Level to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Controlled Direct Effect	1.49**	1.50**
	(1.27 - 1.75)	(1.22 - 1.81)
Natural Direct Effect	1.49**	1.50**
	(1.27 - 1.74)	(1.22 - 1.80)
Natural Indirect Effect	0.97*	0.96*
(Thru Disposition)	(0.95 - 0.98)	(0.92 - 0.98)
Marginal Total Effect	1.44**	1.43**
	(1.23 - 1.70)	(1.16 - 1.71)

Notes: *p < .05; **p < .01; Mod=Moderate; CI=Confidence Interval

The indirect effect of state commitment on the risk level and recidivism relationship was also significant (*OR* = 0.97, $p < 0.05$), indicating a small (~3%) decrease in odds of recidivism for

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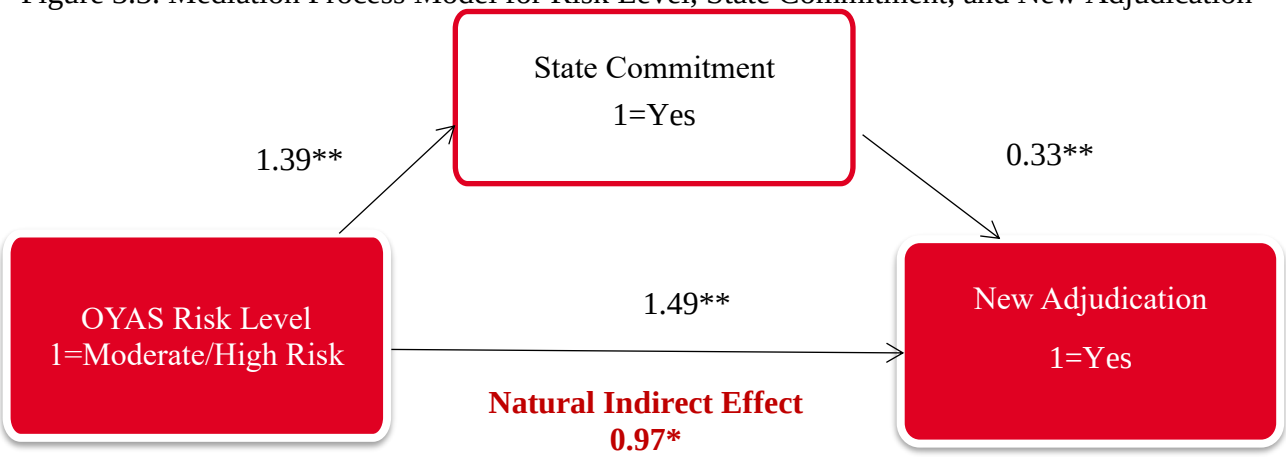
moderate/high risk youths based on commitment to a state facility—relative to those youths in the group that were not placed in secure facilities. These results indicate that an indirect pathway between risk level and recidivism does exist via state commitment. It does not negate the relationship between risk level and recidivism, as a significant direct relationship was still found between risk level and new adjudication for moderate and high risk youths ($OR = 1.49$, $p < 0.01$). It does, however, illustrate that appropriate dispositional placement based on risk level can affect the likelihood of recidivism. When this model was re-estimated comparing only moderate and high risk youths (i.e. excluding low risk youths), the results were very similar among all of the key comparisons made above (see Table 3.1 above).[75] This suggests that appropriately matching higher risk youths to intensive services—even if it results in custody—does have some comparative advantages in reducing recidivism. This is likely conditioned by the quality of the programming in facilities, however (Lipsey, 1999), which was not measured in this study.

Figure 3.3. Mediation Process Model for Risk Level, State Commitment, and New Adjudication



Notes: Estimates are in Odds-Ratio scale. Model includes control variables in all equations; **p<0.01 and *p<0.05 with either t-test or bootstrapped 95% confidence interval.

[75] Additionally, models with risk level and recidivism via state commitment were also estimated using new commitment as the dependent variable instead of new adjudication. Results from this model were mainly consistent with the models used for the final analysis and indirect effects were non-significant. Only youths from States 1 and 3 were used for this supplementary analysis.

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Disposition: Standard Probation vs. Less Severe Sanctions. The mediation process model for risk level and recidivism via standard probation or less severe sanctions (compared to intensive probation or more severe sanctions) is shown in Table 3.2. The estimates suggest that, compared to low risk youths, moderate and high risk youths had significantly lower odds, by about 46 percent, of assignment to standard probation or less severe sanctions (OR = 0.54, $p < 0.01$). Moderate and high risk youths also had significantly higher chances of recidivism (OR = 1.45, $p < 0.01$) compared to low risk youths. There was not, however, a statistically significant relationship between the probation or less severe sanctions indicator and recidivism. The results of the disposition model demonstrate that youths with moderate or high risk levels had a significantly lower likelihood of being assigned to sanctions like standard probation.

Table 3.2. Results of Mediation Process Model for Standard Probation vs. Less Severe Sanctions

	Mod/High vs. Low Risk and Probation or Less Severe b (95% CI)	**High vs. Mod Risk and Probation or Less Severe b (95% CI)**
	N=4836	N=2929
New Adjudication on…		
Risk Level x Less Severe Sanctions	-	0.59** (0.21 - 0.97)
OYAS Risk Level	0.37** (0.22 - 0.51)	0.07 (-0.20 - 0.34)
Probation or Less Severe Sanctions	0.12 (-0.04 - 0.29)	0.02 (-0.21 - 0.25)
Age	-0.15** (-0.19 - -0.11)	-0.14* (-0.19 - -0.09)
Female	-0.13 (-0.29 - 0.025)	-0.08 (-0.28 - 0.13)
Non-White	0.19* (0.04 - 0.33)	0.20* (0.02 - 0.38)
Violent Offense	-0.39** (-0.54 - -0.25)	-0.45** (-0.63 - -0.27)
State 2	-0.15 (-0.31 - 0.03)	-0.09 (-0.30 - 0.13)
State 3	0.33** (0.16 - 0.51)	0.39** (0.17 - 0.62)
Disposition on…		

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Table 3.2. Results of Mediation Process Model for Standard Probation vs. Less Severe Sanctions

	Mod/High vs. Low Risk and Probation or Less Severe b (95% CI)	**High vs. Mod Risk and Probation or Less Severe b (95% CI)**
OYAS Risk Level	-0.62**	-0.78**
	(-0.76 - -0.47)	(-0.98 - -0.58)
Age	-0.34**	-0.35**
	(-0.39 - -0.29)	(-0.41 - -0.29)
Female	0.90**	0.94**
	(0.73 - 1.07)	(0.72 - 1.17)
Non-White	-0.39**	-0.43**
	(-0.54 - -0.25)	(-0.61 - -0.25)
Violent Offense	-0.47**	-0.23*
	(-0.61 - -.0.33)	(-0.41 - -0.05)
State 2	-1.61**	-1.70**
	(-1.77 - -1.45)	(-1.91 - -1.50)
State 3	1.44**	0.98**
	(1.23 - 1.66)	(0.73 - 1.23)
Risk Level to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Controlled Direct Effect	1.44**	1.93**
	(1.24 - 1.65)	(1.47 - 2.66)
Natural Direct Effect	1.44**	1.63**
	(1.24 - 1.65)	(1.31 - 2.06)
Natural Indirect Effect	0.98	0.90**
(Thru Disposition)	(0.97 - 1.00)	(0.83 - 0.95)
Marginal Total Effect	1.42**	1.46**
	(1.23 - 1.63)	(1.18 - 1.80)

Notes: *p < .05; **p < .01; Mod=Moderate; CI=Confidence Interval

The natural indirect effect of standard probation or less severe sanctions on the risk level and recidivism relationship was small and not significant (*OR* = 0.98) for moderate- or high risk youths as compared to low risk youths. Taken alone, these results indicate a lack of an indirect pathway between risk level and recidivism via standard probation or less severe sanctions. However, when the model was restricted to compare high vs. moderate risk youths only (i.e., low risk youths were excluded), a significant interaction between risk level and assignment to standard probation or less severe sanctions was found (*OR* = 1.80, $p < 0.01$). This suggests that the

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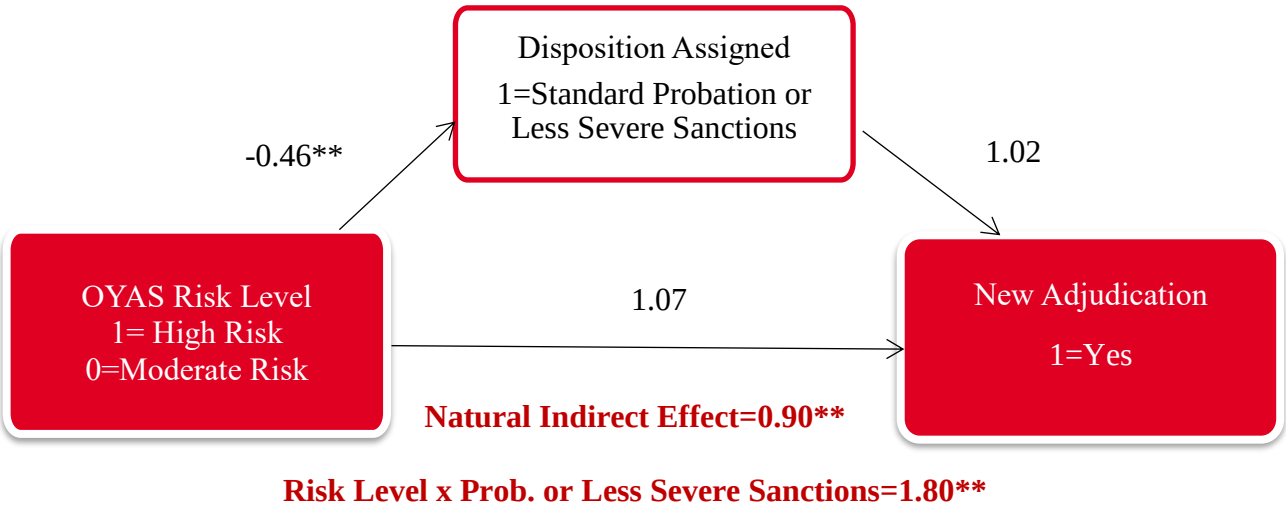
relationship between probation and recidivism, which is small but positive (*OR* = 1.02), is stronger for high, as opposed to moderate, risk youths.

Figure 3.4. Mediation Process Model for Risk Level, Standard Probation or Less Severe Sanctions, and New Adjudication



Notes: Estimates are in Odds-Ratio scale. Model includes control variables in all equations; **p<0.01 and *p<0.05 with either t-test or bootstrapped 95% confidence interval

The results of this modified model are presented in Figure 3.4. They suggest that the relationship of risk level and adjudication is mediated by disposition (at least among high risk youths assigned to standard probation or lower severity sanctions). When this interaction term was included in the model it rendered both the direct relationship between risk level and adjudication, and the impact of assignment to probation or less severe sanctions on adjudication, non-significant. A significant natural indirect effect via standard probation or a lower severity disposition for risk level and recidivism also emerged. This suggests potential for a recidivism reduction in high risk youths in terms of their new adjudication, but it is not materializing here due to the fact that the small relationship between probation and recidivism is stronger in the high risk group as compared to moderate risk youths. This is reflected in the controlled direct effect Odds Ratio of 1.93, which

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suggests a substantial relationship between high risk youths and recidivism that held when all of these relationships, processes, and controls were taken into account.

Disposition: Intensive or Standard Probation. Estimations of the mediation process model for risk level and recidivism via standard or intensive probation (as compared to less severe sanctions) are shown in Table 3.3. Results indicated that compared to low risk youths, moderate- and high risk youths had significantly lower chances of assignment to intensive or standard probation (OR=0.46, p<0.01). Youths on probation also tended to have greater odds of new adjudication compared to youths with a less serious disposition (OR=1.90, p<0.01). Neither risk level nor the interaction of risk level and intensive/standard probation were found to be have a significant effect on adjudication. The interaction effect was substantial enough to retain it in the model. The controlled direct effect of 1.84 means that high risk youths have a significantly higher likelihood of new recidivism when accounting for the probation disposition versus a lesser sanction as well as the other variables included in the model.

Table 3.3. Results of Mediation Process Model for Intensive or Standard Probation

	Mod/High vs. Low Risk and Probation b (95% CI)	**Mod vs. Low Risk and Probation b (95% CI)**
	N=2270	N=2044
New Adjudication on…		
Risk Level x Probation	0.39	-0.50*
	(-0.01 - 0.78)	(-0.92 - -0.09)
OYAS Risk Level	0.22	-0.06
	(-0.08 - 0.53)	(-0.38 - 0.25)
Probation (Intensive or Standard)	0.64**	1.14**
	(0.33 - 0.94)	(0.85 - 1.42)
Age	-0.08*	-0.09**
	(-0.13 - -0.02)	(-0.15 - -0.03)
Female	-0.10	-0.11
	(-0.31 - 0.10)	(-0.33 - 0.10)
Non-White	0.18	0.20
	(-0.03 - 0.39)	(-0.02 - 0.43)
Violent Offense	-0.25*	-0.27*

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Table 3.3. Results of Mediation Process Model for Intensive or Standard Probation

	Mod/High vs. Low Risk and Probation b (95% CI)	**Mod vs. Low Risk and Probation b (95% CI)**
	(-0.47 - -0.03)	(-0.51 - -0.03)
State 2	-0.39*	-0.30
	(-0.67 - -0.11)	(-0.59 - 0.00)
State 3	0.11	0.11
	(-0.13 - 0.34)	(-0.14 - 0.36)
Disposition on…		
OYAS Risk Level	-0.77**	0.89**
	(-0.95 - -0.59)	(0.71 - 1.08)
Age	0.11**	0.12**
	(0.06 - 0.16)	(0.07 - 0.17)
Female	-0.55**	-0.53**
	(-0.74 - -0.37)	(-0.73 - -0.33)
Non-White	0.14	0.14**
	(-0.05 - 0.34)	(-0.07 - 0.35)
Violent Offense	0.05	0.04**
	(-0.14 - 0.25)	(-0.18 - 0.25)
State 2	-0.52**	-0.41**
	(-0.77 - -0.27)	(-0.67 - -0.15)
State 3	-0.93**	-0.78**
	(-1.14 - -0.71)	(-1.01 - -0.55)
Risk Level to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Controlled Direct Effect	1.84**	0.57**
	(1.46 - 2.37)	(0.43 - 0.76)
Natural Direct Effect	1.71**	0.68**
	(1.40 - 2.14)	(0.53 - 0.86)
Natural Indirect Effect	0.84**	1.14**
(Thru Disposition)	(0.80 - 0.88)	(1.08 - 1.23)
Marginal Total Effect	1.44**	0.77*
	(1.20 - 1.81)	(0.62 - 0.97)

Notes: *p < .05; **p < .01; Mod=Moderate; CI=Confidence Interval

The model exploring the effect of intensive/standard probation on the risk level and recidivism relationship was then estimated comparing moderate and low risk youths (i.e., high risk cases were excluded). The results of this model are presented in Figure 3.5 below. A moderate, as opposed to low, risk level was found to significantly increase chances of youths' assignment to intensive or standard probation as opposed to a less serious sanction or case dismissal (OR=2.43,

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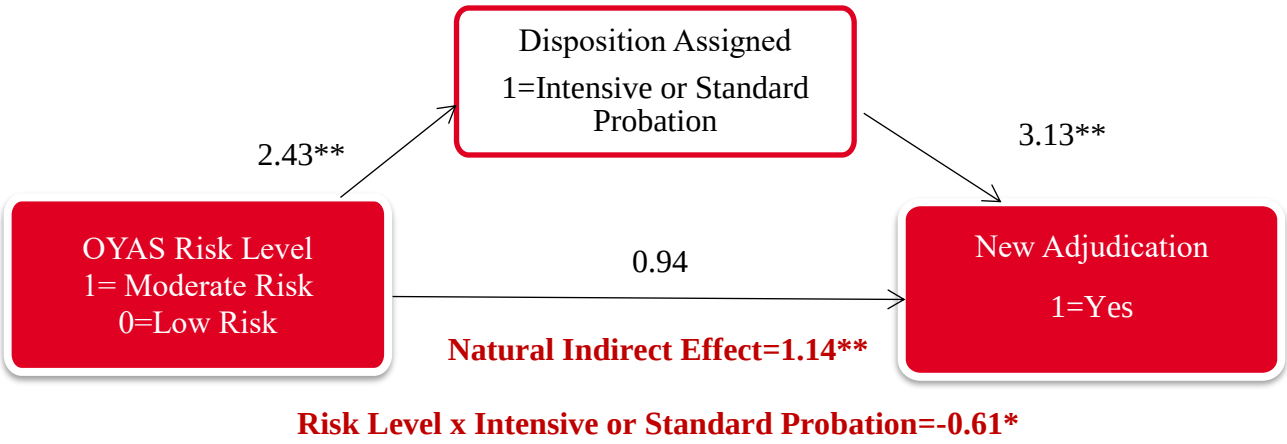
p<0.01). Moderate risk youths on intensive or standard probation also had increased odds of recidivism. Furthermore, a significant interaction between risk level and assignment to intensive or standard probation was detected (*OR* = -0.61, $p < 0.05$), which decreased the odds of receiving a new adjudication. The natural indirect effect via standard or intensive probation also remained significant (*OR* = 1.14, $p < 0.01$), which reflects that moderate risk youths on probation will have greater likelihood of recidivism than those who are placed on less serious sanctions. This could potentially be a supervision effect associated with the probation process relative to other less formal sanctions. Risk level was not significantly associated with recidivism in the initial model estimated for this set of relationships, but the controlled direct effect of 0.57 indicates that moderate risk youths on probation or intensive probation (vs. something less formal) have lower odds of recidivism than low risk youths on probation versus lower sanctions. This further indicates that aligning risk and needs with particular case dispositions and placements can impact recidivism. In this case, moderate risk youths on probation perform better than low risk youths on probation, even though this is not necessarily their optimal placement.

Figure 3.5. Mediation Process Model for Risk Level, Standard Probation or Less Severe Sanctions, and New Adjudication



Notes: Estimates are in Odds-Ratio scale. Model includes control variables in all equations; **p<0.01 and *p<0.05 with either t-test or bootstrapped 95% confidence interval.

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Treatment and Services Referral. While risk and needs assessment is meant to inform disposition decisions, it is also potentially valuable as a means of providing insight for treatment matching (e.g., Vieira et al., 2009). Given that expectation, we also estimated parallel multivariate mediation models to better understand potential linkages between risk and needs assessment, treatment, and youths' recidivism. The estimates and interpretation of results is somewhat different than in the prior section due to the continuous nature of the variables used as key independent variables (i.e., risk scores as opposed to levels). Indirect estimates were also estimated to formally assess the impact of key independent variables on recidivism as they potentially operate through treatment and service referral. These referrals are made in different contexts and the OYAS assessment domains differ somewhat for risk/needs in the disposition and residential tools. This could lead to possible differential relationships in the models so we also divide the analyses into subgroups for community-based and residential samples.[76] We present and interpret partially standardized estimates given the mixed levels of measurement involved in the predictor, mediator, and outcome variables (Muthèn & Muthèn, 1998-2018).

Treatment and Services: Cognitive Behavioral (CBT). The results of the treatment mediation models examining the relationships between criminogenic needs, receiving CBT, and recidivism are shown in Table 3.4. The first column includes cases that were referred to community –based placements or diverted. The second column refers to cases in residential facilities. The *Values, Beliefs, and Attitudes* and *Prosocial Skills* domain scores were included as predictors of receiving CBT and recidivism, as higher scores in these domains suggest that treatment targeting cognition may be appropriate. The *Juvenile Justice History* domain score was included in the treatment models as a control variable as well.

[76] We also estimated the community-based disposition models without those cases that received informal resolutions (e.g., various types of dismissal) and reached similar conclusions to those presented here.

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The results suggest that referral to CBT had did not have a significant relationship with recidivism. The juvenile justice history score had a statistically significant and moderate-sized relationship with recidivism in the community-based sample suggesting that there was a slight increase in the likelihood of recidivism for a one unit increase on that juvenile justice history score.[77] Two of the OYAS variables, *Prosocial Skills* and *Juvenile Justice History*, did have a relationship to whether or not youths were referred to CBT in the Residential sample. Those with higher prosocial skills deficits were slightly less likely to receive CBT (*b* = -0.10), but those with more extensive juvenile justice histories had a greater likelihood of referral to CBT (*b* = 0.10). The indirect effects estimates for the *Values, Beliefs, and Attitudes* and *Prosocial Skills* domain and the *Prosocial Skills* domain did not yield any significant effects on recidivism in either of these subgroups.[78] This is evident in the fact that the Bootstrapped Confidence Interval (CI) values overlap with 1.00 in each of the four cells capturing the "Natural Indirect Effect."

Table 3.4. Results of Mediation Process Model for Cognitive Behavioral Treatment

	Community-Based Cases (N =1153)	**Residential Cases (N = 1236)**
	b (se)	**b (se)**
New Adjudication on…		
Cognitive Behavioral Treatment	0.05 (0.09)	0.67 (0.39)
Values, Beliefs, and Attitudes Domain Score	0.004 (0.04)	0.02 (0.04)
Prosocial Skills Domain Score	0.04 (0.03)	0.06 (0.04)
Juvenile Justice History Domain Score	0.20 (0.03)***	-0.06 (0.04)

[77] We sometimes see a negative estimate for "violent offense" in the models presented above and in this section. As this is mainly a control in the current study, we intend to investigate this pattern of relationships in further research, There are three preliminary explanations based on the current analyses. First, this may be due in part to the collection of variables included in the models that may create some patterns of suppression and redundancy. Second, in this study "violent offense" as a categorical designation can include different levels (e.g., simple assault and aggravated assault) and may be of mixed types across states. Therefore, it is not always the case that these are serious violent offenses. Finally, we utilize official records of recidivism in the analysis of records and therefore supervision effects may emerge during the follow up period where youths with such offenses may be monitored more closely—potentially creating artifactual patterns in its relationships with recidivism.

[78] Elements of the presentation of results differ slightly across the disposition and treatment/services models due to the nature of the variables involved. We present all relevant coefficient estimates and standard errors based on the method of estimation and software used.

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Table 3.4. Results of Mediation Process Model for Cognitive Behavioral Treatment

	Community-Based Cases (N =1153)	**Residential Cases (N = 1236)**
	b (se)	**b (se)**
Age	-0.10 (0.03)***	-0.15 (0.04)***
Female	-0.08 (0.09)	0.17 (0.72)
Non-White	-0.04 (0.08)	-0.09 (0.12)
Violent Offense	-0.17 (0.08)*	-0.46 (0.12)***
State 2	-0.26 (0.12)*	0.59 (0.89)
Cognitive Behavioral Treatment on…		
Values, Beliefs, and Attitudes Domain Score	0.06 (0.05)	0.01 (0.03)
Prosocial Skills Domain Score	0.02 (0.05)	-0.10 (0.05)*
Juvenile Justice History Domain Score	0.03 (0.05)	0.10 (0.04)**
Age	-0.08 (0.04)*	-0.03 (0.04)
Female	-0.26 (0.14)	-0.42 (0.46)
Non-White	0.06 (0.11)	0.19 (0.11)
Violent Offense	0.05 (0.12)	0.19 (0.11)
State 2	-0.72 (0.12)***	-0.74 (0.55)***
Values, Beliefs, and Attitudes to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Natural Indirect Effect	1.004 (0.99 – 1.02)	1.01 (0.97 – 1.06)
Natural Direct Effect	1.01 (0.85 – 1.20)	1.06 (0.92 – 1.26)
Total Effect	1.02 (0.86 – 1.21)	1.07 (0.93 – 1.26)
Prosocial Skills to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Natural Indirect Effect	1.001 (0.99 – 1.02)	0.96 (0.85 – 1.00)
Natural Direct Effect	1.09 (0.95 – 1.27)	1.03 (0.85 – 1.22)
Total Effect	1.09 (0.95 – 1.27)	0.99 (0.82 – 1.14)

Notes: *p < .05; **p < .01; ***p<.001 CI=Confidence Interval; b=Partially Standardized Estimate; se=Standard Error of the Estimate

Treatment and Services: Anger/Aggression. The mediation process model between criminogenic needs, receiving treatment for anger/aggression, and recidivism are displayed in Table 3.5. Two key domains were examined in relation to treatment for anger/aggression and

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recidivism: *Values, Beliefs, and Attitudes* and *Prosocial Skills*. In the community sample, the results indicate that youths who received treatment for anger/aggression were significantly more likely to have a new adjudication (b = 0.40) relative to youths not referred to this type of intervention. The *Juvenile Justice History* domain score was significantly related to the likelihood of a new adjudication as well (b = 0.15). Neither of the relevant domain scores was significantly related to new adjudications after controlling for the other covariates included in this model.

The only covariate that had a significant relationship with likelihood of anger/aggression treatment referral was violent focal offense (b = 0.47), suggesting that those youths were more likely to be referred to than those with a nonviolent or other focal offense. Similarly, there were no significant indirect effect estimates in the Community-placed youths' model. Only two significant findings emerged among the key variables of interest in the Residential Case model; both related to the likelihood of anger/aggression treatment referral. Those with higher prosocial skills deficits were slightly less likely to receive such referrals (b = -0.17), but those with more extensive juvenile justice histories had a greater likelihood of referral to Anger/Aggression treatment (b = 0.18). A similar violent offense to treatment referral relationship (b = 0.32) emerged in the residential case model. None of the indirect effects was statistically significant, suggesting that the risk/needs information for these domains was not affecting recidivism through referral to Anger or Aggression treatment.

Table 3.5. Results of Mediation Process Model for Anger/Aggression Treatment

	Community-Based Cases (N =1153)	**Residential Cases (N = 1236)**
	b (se)	**b (se)**
New Adjudication on…		
Anger/Aggression Treatment	0.40 (0.10)***	0.16 (0.29)
Values, Beliefs, and Attitudes Domain Score	0.06 (0.05)	0.02 (0.03)
Prosocial Skills Domain Score	-0.004 (0.05)	0.02 (0.05)

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Table 3.5. Results of Mediation Process Model for Anger/Aggression Treatment

	Community-Based Cases (N =1153)	**Residential Cases (N = 1236)**
	b (se)	**b (se)**
Juvenile Justice History Domain Score	0.15 (0.05)***	-0.02 (0.05)
Age	-0.11 (0.04)***	-0.17 (0.04)***
Female	-0.21 (0.12)	-0.04 (0.76)
Non-White	0.05 (0.11)	0.00 (0.11)
Violent Offense	-0.36 (0.12)***	-0.38 (0.12)***
State 2	-0.35 (0.12)***	0.11 (0.11)
Anger/Aggression Treatment on…		
Values, Beliefs, and Attitudes Domain Score	-0.13 (0.08)	0.05 (0.04)
Prosocial Skills Domain Score	0.11 (0.08)	-0.17 (0.07)**
Juvenile Justice History Domain Score	0.11 (0.07)	0.18 (0.06)**
Age	0.02 (0.07)	0.02 (0.04)
Female	0.30 (0.19)	-0.40 (0.86)
Non-White	-0.21 (0.18)	0.25 (0.16)
Violent Offense	0.47 (0.16)**	0.32 (0.16)*
State 2	0.14 (0.19)	-0.06 (0.06)
Values, Beliefs, and Attitudes to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Natural Indirect Effect	0.99 (0.93 – 1.00)	1.001 (0.99 – 1.02)
Natural Direct Effect	1.02 (0.86 – 1.22)	1.07 (0.93 – 1.25)
Total Effect	1.02 (0.86 – 1.21)	1.07 (0.93 – 1.26)
Prosocial Skills to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Natural Indirect Effect	1.003 (0.99 – 1.05)	0.99 (0.96 – 1.02)
Natural Direct Effect	1.09 (0.94 – 1.27)	0.99 (0.82 – 1.14)
Total Effect	1.09 (0.95 – 1.27)	0.99 (0.81 – 1.14)

Notes: *p < .05; **p < .01; ***p<.001 CI=Confidence Interval; b=Partially Standardized Estimate; se=Standard Error of the Estimate

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Treatment and Services: Education/Employment. The mediation process model examining the relationships between criminogenic needs, participating in services targeting education or employment, and recidivism is shown in Table 3.6. The *Education and Employment* domain score was included as a key independent variable in these models, as these need areas are expected to be the most impacted by these types of interventions. The results indicate that receiving services aimed at education and employment is not a significant predictor of recidivism in either of the two models. The *Education and Employment* need/risk score is a statistically significant predictor of recidivism in both models. Focusing on the "Natural Direct Effect" in the bottom panel of Table 3.6, for instance, shows roughly 20 and 25 percent greater odds of new adjudication in the community and residential samples, respectively.[79]

Controlling for the other variables in the model--the *Juvenile Justice History* domain score is significantly related to new adjudication in the community-based sample (b = 0.21), but not the sample of residential youths (b = 0.02). The *Education and Employment* score did not predict referral to those services in either of these models, however. The only significant coefficient among the key variables in that aspect of the model was the *Juvenile Justice History* domain score for the community-based cases (b = 0.14). This suggests that the likelihood that youths receive those services increases with each additional point on that domain score. Neither of the indirect effects was statistically significant, suggesting that the needs information for education and employment was not affecting recidivism through treatment referral (or not).

[79] The estimate for residential cases is more tenuous when judged by a statistical significance criteria, but is non trivial and roughly comparable to that observed in the other sample.

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Table 3.6. Results of Mediation Process Model for Cognitive Education and Vocational Services

	Community-Based Cases (N =1155)	**Residential Cases (N = 1243)**
	b (se)	**b (se)**
New Adjudication on…		
Education and Vocational Services	0.17 (0.11)	0.03 (0.33)
Education and Employment Domain Score	0.10 (0.04)*	0.10 (0.05)
Juvenile Justice History Domain Score	0.21 (0.04)***	0.02 (0.04)
Age	-0.10 (0.03)***	-0.16 (0.04)***
Female	-0.08 (0.09)	-0.11 (0.42)
Non-White	-0.09 (0.10)	0.03 (0.41)
Violent Offense	-0.14 (0.09)	-0.34 (0.13)**
State 2	-0.42 (0.12)***	0.03 (0.34)
Education and Vocational Services on…		
Education and Employment Domain Score	-0.005 (0.08)	-0.02 (0.08)
Juvenile Justice History Domain Score	0.14 (0.06)*	-0.01 (0.08)
Age	-0.08 (0.05)	-0.03 (0.07)
Female	0.14 (0.19)	0.05 (1.04)
Non-White	0.28 (0.18)	0.40 (0.65)
Violent Offense	-0.17 (0.17)	0.16 (0.23)
State 2	0.48 (0.18)**	1.27 (0.25)***
Education and Employment Score to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Natural Indirect Effect	1.00 (0.96 – 1.02)	1.00 (0.96 – 1.03)
Natural Direct Effect	1.20 (1.05 – 1.41)	1.25 (1.02 – 1.65)
Total Effect	1.20 (1.05 – 1.41)	1.25 (1.02 – 1.64)

Notes: *p < .05; **p < .01; ***p<.001 CI=Confidence Interval; b=Partially Standardized Estimate; se=Standard Error of the Estimate

Treatment and Services: Family. The mediation process model examining the effects of four criminogenic needs areas on recidivism through treatment consisting of family services is shown in Table 3.7. The *Family and Living Arrangements* domain is included in the model as it most clearly maps onto the services of interest in this analysis. For residential cases, on average, youths who participated in family services had a significantly higher likelihood of new adjudication relative to youths who did not participate in these interventions (*b* = 0.56). That

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relationship was not statically significant in the community-based sample (*b* = 0.01), though. For the community-based sample both OYAS domain scores were also found to increase the likelihood of a new adjudication: *Family and Living Arrangements* (*b* = 0.10) and *Juvenile Justice History* (*b* = 0.24). Interestingly, scores in the *Family and Living Arrangements* domain did not significantly influence whether or not the youths would receive family services in either of the samples, suggesting that youths may not be matched to these services based on assessment information. Coupling this with the findings for the "New Adjudication" equation suggests some potential untreated need among these samples (especially the community-based youths).

Table 3.7. Results of Mediation Process Model for Family Treatment and Services

	Community-Based Cases (N =1302)	**Residential Cases (N = 1247)**
	b (se)	**b (se)**
New Adjudication on…		
Family Treatment and Services	0.01 (0.06)	0.56 (0.11)***
Family and Living Situation Domain Score	0.10 (0.03)**	-0.05 (0.06)
Juvenile Justice History Domain Score	0.24 (0.04)***	0.07 (0.04)
Age	-0.15 (0.03)***	-0.04 (0.05)
Female	-0.04 (0.04)	-0.14 (0.29)
Non-White	0.01 (0.04)	-0.07 (0.13)
Violent Offense	-0.08 (0.04)*	-0.28 (0.13)*
State 2	-0.13 (0.04)***	-0.16 (0.17)
Family Treatment and Services on…		
Family and Living Situation Domain Score	0.02 (0.04)	0.12 (0.06)
Juvenile Justice History Domain Score	0.02 (0.05)	-0.10 (0.05)*
Age	-0.02 (0.03)	-0.23 (0.06)***
Female	0.09 (0.12)	0.02 (0.38)
Non-White	0.28 (0.11)**	0.22 (0.17)
Violent Offense	-0.16 (0.10)	-0.11 (0.16)
State 2	-0.35 (0.10)**	-0.74 (0.55)***
Family and Living Situation Score to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Natural Indirect Effect	1.00 (0.99 – 1.01)	1.01 (1.00 – 1.14)

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Natural Direct Effect	1.15 (1.05 – 1.28)	1.04 (0.80 – 1.32)
Total Effect	1.15 (1.05 – 1.28)	1.04 (0.83 – 1.35)

Notes: *p < .05; **p < .01; ***p<.001 CI=Confidence Interval; b=Partially Standardized Estimate; se=Standard Error of the Estimate

Treatment and Services: Mental Health. Treatment for mental health was the most commonly recorded form of treatment in the sample with 20 percent of youths referred to interventions in this category. The model estimates for the effects of three domains on recidivism through mental health treatment are shown in Table 3.8. The estimates suggest that this type of treatment is not associated with the likelihood of a new adjudication in either of the two subsamples. The *Substance Use, Mental Health, and Personality* domain was significantly and positively related to the likelihood of a new adjudication (*b* = 0.06 in both samples), however. That score was not significantly related to the odds of receiving this type of intervention in the model for either subgroup. As in some other models, this suggests that unaddressed need might be contributing to elevated levels of recidivism. The *Juvenile Justice History* (*b* = 0.11) and violent offense (*b* = 0.43) variables were significantly related to the likelihood of receiving this type of treatment, seemingly playing a more prominent role in that allocation than the information from the specific need domain. Neither of the indirect effects was statistically significant, suggesting that the risk domain information was not affecting recidivism through treatment referral (or not).

Table 3.8. Results of Mediation Process Model for Mental Health Treatment and Services

	Community-Based Cases (N =1156)	**Residential Cases (N = 1248)**
	b (se)	**b (se)**
New Adjudication on…		
MH Treatment and Services	0.11 (0.07)	0.22 (0.13)
Substance Abuse, Mental Health, and Personality Domain Score	0.06 (0.03)*	0.06 (0.03)*
Juvenile Justice History Domain Score	0.19 (0.03)***	-0.01 (0.04)
Age	-0.11 (0.03)***	-0.16 (0.03)***

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Table 3.8. Results of Mediation Process Model for Mental Health Treatment and Services

	Community-Based Cases (N =1156)	**Residential Cases (N = 1248)**
	b (se)	**b (se)**
Female	-0.10 (0.08)	0.06 (0.21)
Non-White	-0.04 (0.09)	0.04 (0.10)
Violent Offense	-0.15 (0.08)	-0.40 (0.10)***
State 2	-0.31 (0.10)**	-0.01 (0.13)
MH Treatment and Services on…		
Substance Abuse, Mental Health, and Personality Domain Score	0.02 (0.03)	-0.05 (0.03)
Juvenile Justice History Domain Score	-0.01 (0.04)	0.11 (0.03)**
Age	-0.08 (0.04)*	0.01 (0.04)
Female	0.03 (0.12)	-0.69 (0.31)*
Non-White	-0.11 (0.11)	0.10 (0.12)
Violent Offense	-0.05 (0.11)	0.43 (0.11)***
State 2	0.34 (0.11)*	0.45 (0.24)
Substance Abuse, Mental Health and Personality Score to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Natural Indirect Effect	1.003 (0.99 – 1.02)	0.99 (0.97 – 1.003)
Natural Direct Effect	1.14 (1.02 – 1.29)	1.11 (1.00 – 1.25)
Total Effect	1.15 (1.03 – 1.29)	1.04 (1.00 – 1.24)

Notes: *p < .05; **p < .01; ***p<.001 CI=Confidence Interval; b=Partially Standardized Estimate; se=Standard Error of the Estimate

Treatment and Services: Substance Abuse. Interventions that target substance abuse were also commonly received by the youths in the sample. Table 3.9 provides the estimates for the mediation process model investigating the relationships between scores in *Substance Use, Mental Health, and Personality*, substance abuse treatment, and recidivism. We also consider the relative role of *Juvenile Justice History*. The estimates suggest that this type of treatment is not associated with the likelihood of a new adjudication in either of the two subsamples. As seen in the previous model, the *Substance Use, Mental Health, and Personality* score was significantly and positively related to the likelihood of a new adjudication (*b* = 0.06 in both samples). That score was also

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significantly related to the likelihood of referral to substance abuse treatment (*b* = 0.08) in the community sample, but not among residential youth cases, suggesting that it is syncing up with decision-making in the former. This is one of the only places in the analyses where a relationship between the domain of interest and the treatment/service type has emerged. As seen in the previous analyses, there are no significant mediating effects from this OYAS domain to treatment and then recidivism.

The OYAS *Juvenile Justice History* score has a significant, positive relationship with new adjudication (*b* = 0.19) in the community-based sample and is positively related to substance abuse treatment referral in the Residential case sample (*b* =0.16). This model therefore suggests some degree of untreated need that may be affecting likelihood of recidivism as well as mixed results on the degree to which youth receive treatment referrals in line with their substance use needs.

Table 3.9. Results of Mediation Process Model for Substance Abuse Treatment and Services

	Community-Based Cases (N =1156)	**Residential Cases (N = 1248)**
	b (se)	**b (se)**
New Adjudication on…		
MH Treatment and Services	0.02 (0.08)	0.33 (0.13)*
Substance Abuse, Mental Health, and Personality Domain Score	0.06 (0.03)*	0.06 (0.03)*
Juvenile Justice History Domain Score	0.19 (0.03)***	-0.04 (0.04)
Age	-0.12 (0.03)***	-0.17 (0.04)***
Female	-0.10 (0.08)	0.03 (0.23)
Non-White	-0.05 (0.09)	0.05 (0.10)
Violent Offense	-0.15 (0.09)	-0.42 (0.11)***
State 2	-0.26 (0.11)*	-0.11 (0.15)
MH Treatment and Services on…		
Substance Abuse, Mental Health, and Personality Domain Score	0.08 (0.03)*	-0.04 (0.03)
Juvenile Justice History Domain Score	0.02 (0.04)	0.16 (0.03)**
Age	0.07 (0.03)	0.04 (0.04)
Female	-0.18 (0.12)	-0.38 (0.37)
Non-White	-0.01 (0.11)	0.03 (0.13)
Violent Offense	-0.29 (0.10)**	0.34 (0.13)**

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Table 3.9. Results of Mediation Process Model for Substance Abuse Treatment and Services

	Community-Based Cases (N =1156)	**Residential Cases (N = 1248)**
	b (se)	**b (se)**
State 2	-0.59 (0.12)***	0.58 (0.24)*
Substance Abuse, Mental Health and Personality Score to Recidivism	**Odds Ratio (95% Bootstrapped CI)**	**Odds Ratio (95% Bootstrapped CI)**
Natural Indirect Effect	1.001 (0.99 – 1.01)	0.99 (0.97 – 1.00)
Natural Direct Effect	1.15 (1.03 – 1.30)	1.10 (0.99 – 1.25)
Total Effect	1.15 (1.03 – 1.29)	1.10 (0.99 – 1.24)

Notes: *p < .05; **p < .01; ***p<.001 CI=Confidence Interval; b=Partially Standardized Estimate; se=Standard Error of the Estimate

Summary of Case Decisions and Outcomes Based on JRNA

While they require caveats about available detail, follow-up time, and potential artifacts in case record analysis, the results of these mediation analyses suggest that the relationships between risk and needs assessment, juvenile justice decisions, and recidivism are quite complex when they are broken down into the various pieces that operate within the implementation, usage, and outcome model on which the theorized process is predicated. The models focused on disposition show that risk level and juvenile court dispositions have an impact on youths' recidivism (measured via new recorded adjudication), generally in ways anticipated by prior research. The addition of controlled mediation analysis (see Vanderweele, 2015) offers insight as to the match between disposition and risk level and how that may relate to later recidivism. This is true across various contrasts of OYAS risk. Here, we found, for instance, that when used appropriately, state commitment may have a slight negative effect on the likelihood of recidivism for higher risk youths. Similarly, there was a significant contrast in the fit of probation supervision (vs. less severe

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case dispositions) where moderate risk youths had increased likelihood of recidivism when placed on probation or intensive probation as opposed to a less formal supervision or case dismissal.

In the second group of mediation models we examined processes that are expected to occur in which risk assessment information is used to strategically match youths to treatment, which in turn is intended to reduce recidivism. The results of the analysis generally suggest that matching criminogenic needs to treatment does not consistently occur in the juvenile justice systems as much as one would anticipate based on the underlying logic of JRNA. This is based on the absence of any indirect effects from OYAS subdomain scores through treatment/services to recidivism as well as the limited findings of relationships between the various domain score covariates and referral indicators (i.e., a single instance across several models and two subgroups). In fact, offense type, juvenile justice history, and the state dummy variable tended to have more consistent relationships with treatment referral than did the OYAS domain score that would seemingly be the best fit to that decision-making. Additionally, the relationships between participating in treatment and recidivism were largely null or—in three cases—in the opposite direction of what would be expected if the referrals made to treatment programming had their intended effect (i.e., engaging in treatment increased the likelihood of recidivism). This may be a marker of the (in)effectiveness of the programming to which youths—even those who have a particular area of need—are being exposed, availability of programming to fit with need, as well as some inefficiencies in how youth are assigned to particular types of treatments. This more formal modeling helps to better illustrate the manner in which different elements of measured risk and needs might impact eventual case outcomes. Lastly, in this section of the report, we also explore some additional analyses of the follow-up interview with youths below.

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Analysis of Youth Follow-Up Interview Data

Building on the background in the Section II above, we analyze data for the 131 youth follow-up cases in this section. As context, recall that these youths did not appear to differ much from the randomly-selected record sample with exception of the fact that there are relatively few youths who were placed in a state facility for their focal offense. Given the study priority of understanding the linkage between risk assessment, decisions about youths' cases, and case outcomes, we utilize that as an organizing variable in presenting much of the follow-up analysis and results. To reiterate, roughly 44 percent of these youths were originally identified as low risk with the OYAS, followed by 37 percent moderate risk, and 19 percent high risk.

Table 3.10 reports descriptive statistics and risk group comparisons for the six scales that were developed based on interview items that are meant to capture some developmental outcomes of interest following study youths' contact with the juvenile justice system (e.g., development of prosocial thinking, attitudes toward juvenile justice, attitudes toward family). Each of these is coded on an averaged scale from "1" to "5" with higher values reflecting stronger agreement. With the exception of procriminal attitudes, each reflects a prosocial response pattern to the relevant items in each summary measure. The F statistics shown in the far-right column of the table are all non-significant, indicating that the three groups of youths were similar statistically in their responses to these questions.

Table 3.10. Descriptive Statistics for Youth Follow-Up – Self-Report Scales by Risk Level

Variable	**Low (N = 57)**	**Moderate (N = 48)**	**High (N = 25)**	
	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*	$F_{(df)}$
Attitudes toward Family	4.74 (0.41)	4.65 (0.67)	4.70 (0.33)	$0.412_{(2, 127)}$
Attitudes toward Peers	4.10 (0.62)	4.06 (0.96)	4.05 (0.84)	$0.050_{(2, 110)}$
Attitudes-Juvenile Justice System/Services	4.0 (1.13)	4.3 (1.14)	3.9 (1.16)	$1.38_{(2, 127)}$

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Table 3.10. Descriptive Statistics for Youth Follow-Up – Self-Report Scales by Risk Level

Variable	**Low (N = 57)**	**Moderate (N = 48)**	**High (N = 25)**	
	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*	$\bar{x}$ *(sd)*	$F_{(df)}$
Attitudes-Work and School	4.2 (0.70)	4.3 (0.81)	4.3 (0.87)	$0.806_{(2, 106)}$
TCU Adolescent Thinking	4.2 (0.82)	4.3 (0.79)	4.2 (0.90)	$0.884_{(2, 127)}$
Procriminal Attitudes	2.30 (0.69)	2.19 (0.66)	2.55 (1.02)	$1.85_{(2, 127)}$

The responses noted in Table 3.10 are generally quite positive on average. The mean attitudes toward family are each above 4.6 (out of 5.0) for the three risk groups reflecting positive perceptions of and ties and support from family. The standard deviation values are generally smaller than for other scales suggesting a great deal of consensus in those responses. The groups are very similar, and report positive relationships with peers as well (4.1 out of 5.0). There is more variability between and within the groups on the attitudes toward juvenile justice and treatment score, which ranges between 3.9 and 4.3, but the responses still generally reflect favorable attitudes. Attitudes toward work or school are similarly positive across the three groups (4.2 to 4.4, on average), reflecting some level of investment and positive experience among the interviewees.

The TCU Adolescent Thinking scale reflects youths' confidence and efficacy in self-management, problem solving, and avoidance of situations that can lead to substance use or other delinquency. The moderate risk youths reported the highest mean score, but also had considerably more variation than the other two groups (4.5, *sd* = 1.36). The low and high risk youths reported mean scores of 4.3 and 4.2 respectively; their standard deviations on the score were roughly 0.80 on the five-point scale. Lastly, the procrime attitudes scale measured the degree to which youths identified with "criminal thinking." Higher scores are more consistent with such attitudes and thinking patterns. The mean scores ranged from 2.2 to 2.5 among the three OYAS risk groups. The moderate group had the lowest average score and the high risk group reported the average

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score of about 2.5. In contrast to some of the other results, although not exceptionally high, the youths still did tend to identify with some procrime and delinquency sentiments during the follow-up interview.

To further assess relationships between OYAS subscales and the follow-up measures and potentially link the earlier risk assessment process that occurred in the juvenile justice system with these interview response scales, the results of bivariate Pearson correlation analyses are presented in Table 3.11. We use a more liberal $p < .10$ designation to reject the null hypothesis ($\rho = 0$) in this case due to the low sample sizes in many of the domain scores, which is the result of the fact that not all OYAS tools include these domains. The table reveals few clear patterns except that overall risk is associated with higher scores on the TCU adolescent scale ($r = 0.16$), which runs counter to directional expectations. Similarly, the family and living arrangements risk score is positively correlated with positive attitudes toward work and school ($r = 0.24$). Additionally, the prosocial skills risk score is positively and significantly associated with the procrime attitudes measure ($r = 0.21$), which is also positively correlated with the earlier assessment of educational and employment risk ($r = 0.18$). Overall, these relationships suggest that while there is some carryover in particular attitudes and risks from the earlier assessment in the juvenile justice process, they are not all that highly tied together in youths' responses on these particular measures, which are generally markers of positive attitudes at follow-up. This may in part reflect some natural "aging out" among these youths (see, e.g., Farrington, 1986), but also may be indicative of some impact of their juvenile justice experiences.

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Table 3.11. Summary of Correlations (r) Between Initial OYAS Scores and Follow-Up Scales

	Follow-Up Interview Scale					
Initial OYAS Risk	Attitudes Toward Family	Attitudes Toward Peers	Attitudes Toward Juvenile Justice	Attitudes Toward Work/ School	TCU Adolescent Thinking	Procrime Attitudes
Overall Risk Score (N = 130)	.058	-.105	-.095	.090	.157^	.120
Peer and Social Support (N = 88)	.082	.005	-.039	.150	.045	.149
Pro-Social Skills (N = 88)	-.087	-.030	.030	.004	.048	.210*
Juvenile Justice History (N = 91)	.015	-.082	-.011	.083	-.024	.019
Family and Living Arrangements (N = 91)	-.052	.024	.077	.242*	.152	.153
Education and Employment (N = 88)	-.034	-.221*	.059	.080	.022	.178^
Substance Abuse/Mental Health/Personality (N = 88)	-.064	-.118	.031	.073	.114	.050
Values/Beliefs/Attitudes (N = 88)	.040	.101	-.041	.122	.089	.128

Notes: All values are Pearson's r correlations; ***p<.001, **p<.01, *p<.05, ^p<.10

Building on the analyses of youths' outcomes above, interviewees were asked about receipt of treatment during their juvenile justice experience or in the follow-up period as well as their current engagement with work or school. Those results are summarized in Figure 3.6. The vast majority of youths across all three OYAS risk groups (>82%) were engaged in work or school when they were interviewed by UC researchers. At 86 percent, the high risk group was actually most likely to respond "yes" to being enrolled in school or working at the time of the interview.[80]

[80] Given the possibility of a supervision effect, we considered the degree to which this variable was associated with whether or not the youth was still on community supervision. The relationship was small in size and not statistically significant ($\chi^2_{(2)}$= 0.63, Cramer's V = 0.07).

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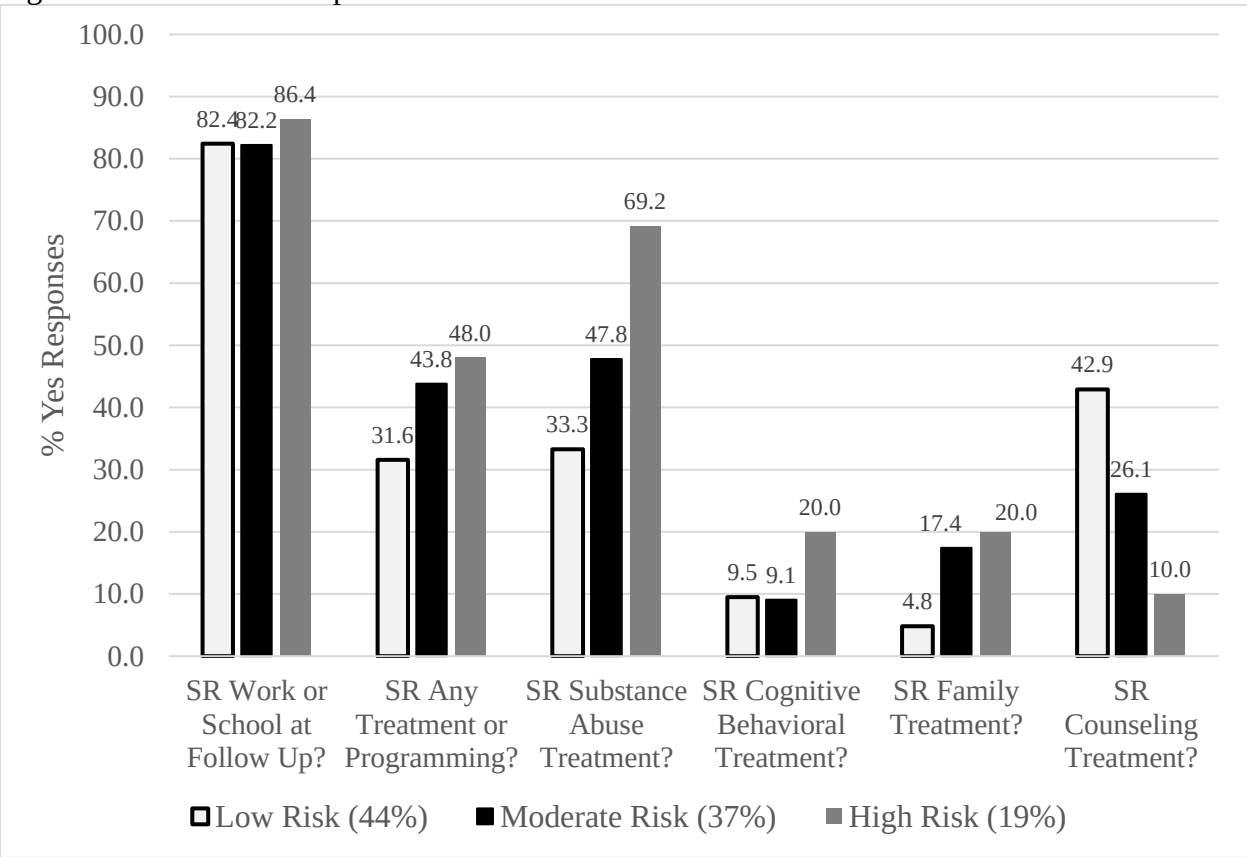
Figure 3.6. Youth Self-Reported Treatment and Current Work/School Involvement



The self-reported treatment indicators suggest a clear contrast across the OYAS risk levels for "any treatment," "substance abuse treatment," and "CBT." Forty-eight percent of interviewees from the OYAS high risk group responded that they received some treatment in the juvenile justice system or subsequently compared to 44 percent of the moderate and 32 percent of low risk group. A similar trend emerged with the substance abuse treatment question as well. High risk youths were more than twice as likely (20%) to report receiving CBT relative to those in the low (9.5%) and moderate (9.1%) groups. These results and relevant measures of association (Cramer's V = 0.13 to 0.27) suggest that there was some trend toward higher risk youths' likelihood of reporting treatment. Still, the overall sample sizes warrant some caution in treating these trends too compellingly. The "family treatment" indicator shows that moderate and high risk youths report greater likelihood of receipt of that service at 17 and 20 percent respectively. Only five percent of

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the OYAS low risk group reported some past or current family treatment at follow-up. The final panel of Figure 3.6 shows the comparative prevalence of involvement in "general counseling." In this case the reporting trend is reversed such that 42 percent of low risk youths state that they received that service compared to 26 and 10 percent of moderate and high risk youths, respectively. Chi-Square tests again found that these relationships were not statistically significant, but they may be indicative of patterns in treatment receipt that differ across risk groups with youths in moderate and high groups receiving more intensive services.

Self-reported behavioral outcomes, including substance use, and updated contact with the juvenile or criminal justice system were assessed across risk level. We also report involvement in treatment and work and school during the follow-up period. Figure 3.7 reports the relationship between youths' self-reported substance use and their initial risk levels. The alcohol use measure suggests that low and moderate risk youths are actually more likely to use alcohol during the follow-up, 61 and 52 percent used, respectively, compared to the high risk group (44%). This difference was not significant in a Chi-Square test; although, the Cramer's *V* measure of association statistic was 0.13 suggesting a nontrivial relationship. The relationship differed for marijuana and harder drugs (e.g., cocaine, heroin) where high risk youths tended to have greater prevalence of self-reported use at 60 and 24 percent, respectively. Over half of youths in both the low and moderate risk groups used marijuana and thirteen to fifteen percent used harder drugs. Neither of these relationships were statistically significant in a Chi-Square test. The hard drug use by risk relationship had a Cramer's *V* statistic of 0.12, however.

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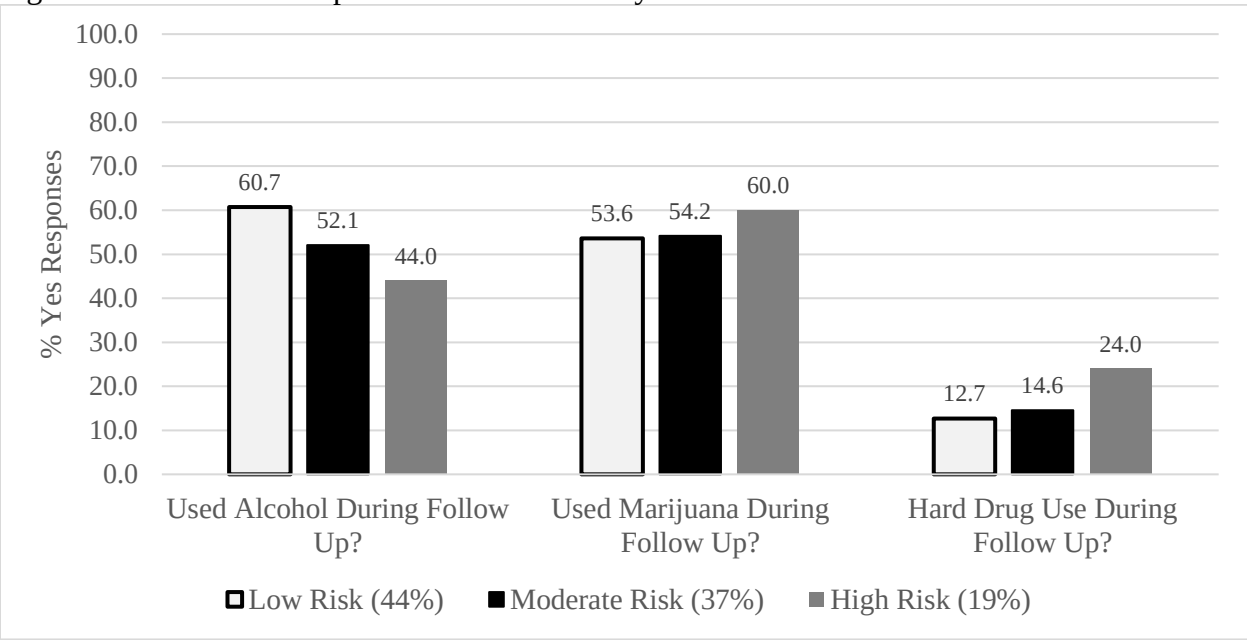
Figure 3.7. Youth Self-Reported Substance Use by Initial Risk Level



The analysis of self-reported justice contact during the follow-up period followed as similar process. Figure 3.8 summarizes the results of comparisons of self-reported justice contact across the three risk levels identified in each youth's assessment. Notably, the prevalence of juvenile justice responses tended to follow the case record sample in terms of the overall magnitude reported earlier in the report (e.g., new adjudication in 26% of cases in the comprehensive assessment sample vs. 33% youth follow up interviewees). Overall, the levels of self-reported police stops (52% to 55%) and adjudications (32% to 34%) were quite similar across the three risk groups. The Chi-Square tests of association with those groups were not statistically significant. The other measures suggest that the higher risk groups reported somewhat greater levels of juvenile and criminal justice system contact during the follow-up window. The moderate (37.5%) and high risk (36.0%) groups had somewhat greater prevalence of self-reported arrest during the follow-up period while the low risk group was several percentage points lower in its prevalence (28.6%). The Chi-Square statistic was not statistically significant.

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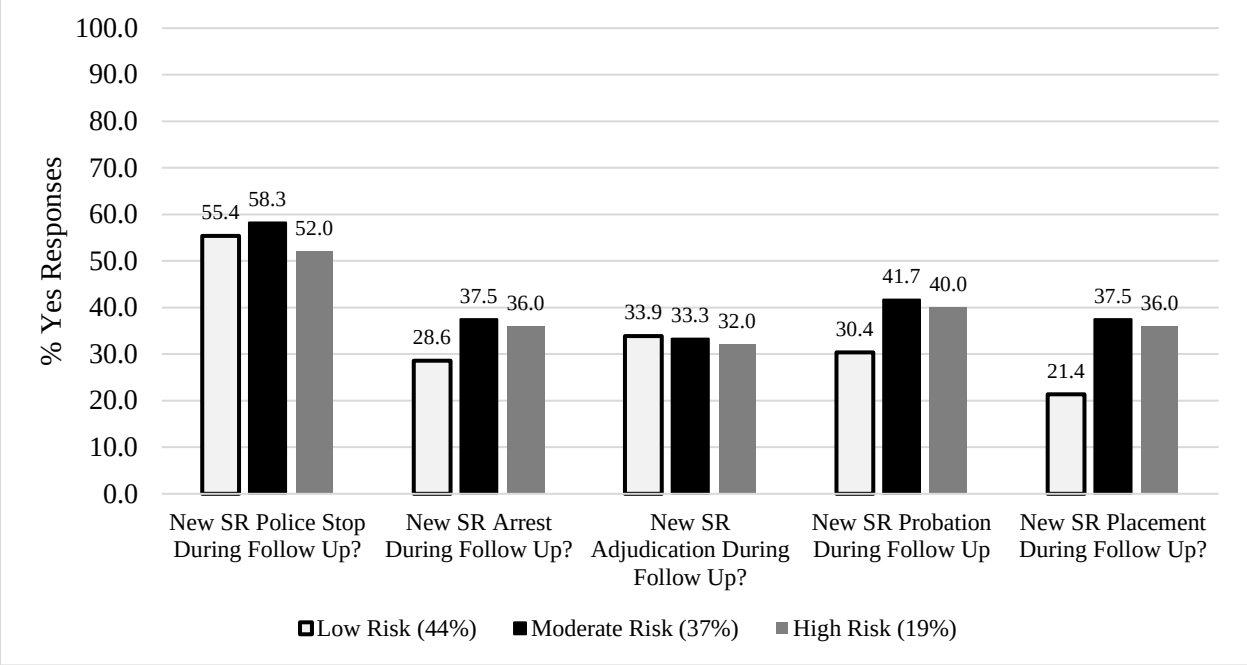
Figure 3.8. Youth Self-Reported Juvenile Justice Contact during Follow-Up by Initial Risk



There was greater, but still not a statistically significant separation between the groups in self-reported probation referrals and new detention or residential placement during the follow-up period. In each case, the moderate and high risk youths groups reported higher levels of new system contact than low risk youths. For example, 38 and 36 percent of moderate and high risk youths reported a new placement during follow-up compared to the 21 percent of low risk youths who reported a new justice placement. The Cramer's *V* statistics for probation and new placement are 0.11 and 0.16 respectively, suggesting still limited, but non-trivial relationships between risk level and these outcomes. Notably, the Chi-Square statistic approaches statistical significance when the moderate and high risk groups are contrasted with low risk ($\chi^2_{(1)} = 3.64$). This suggests some differentiation in this outcome comparison—especially when coupled with the relatively low sample and cell sizes.

The interview data convey relatively low statistical power and limited variability in some measures in the follow-up interview sample. Nevertheless, we utilized some of the findings

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described above to tentatively assess a key relationship that can help lend insight into how youths with different initial risk levels may have ended up responding fairly similarly on many of the interview questions. In turn, we considered what that implies for their other outcomes, justice contact in this case. Keeping in mind that there was a differential between risk and self-reported treatment receipt in most of the comparisons reported in the table above (e.g., CBT, any treatment), we began with the premise that higher risk youths were more apt to receive treatment. Mean comparisons were made between youths that reported receiving treatment and those that did not on each the six scales. All comparisons suggested that youths who reported treatment had higher scores on the positive outcome scales and a lower mean score on the procrime attitudes score. The difference between the treatment ($\bar{x}$ = 4.52, *sd* = 1.26) and non-treatment groups ($\bar{x}$ = 4.19, *sd* = 0.89) on the TCU Adolescent Thinking Scale approached statistical significance (p = .07) and the effect size was modest in size (Hedges' g = 0.38).

Although nonsignificant, there is also a moderate relationship between the procrime attitudes and self-reported treatment engagement (Hedges' g = 0.21). Given the relationships between procrime attitudes and OYAS risk scores described above, we in turn consider the degree to which that distinction in procrime attitudes might be associated with concurrent differences in justice and substance use related outcomes. In particular, the figure below summarizes the differences between those who self-reported arrest and substance use on procrime attitudes. With the exception of the comparison between those who report alcohol use and those who did not, each of the results is statistically significant using a t test. The Hedges' g effect sizes range from 0.26 (self-reported alcohol use) to 0.54 (self-reported arrest).

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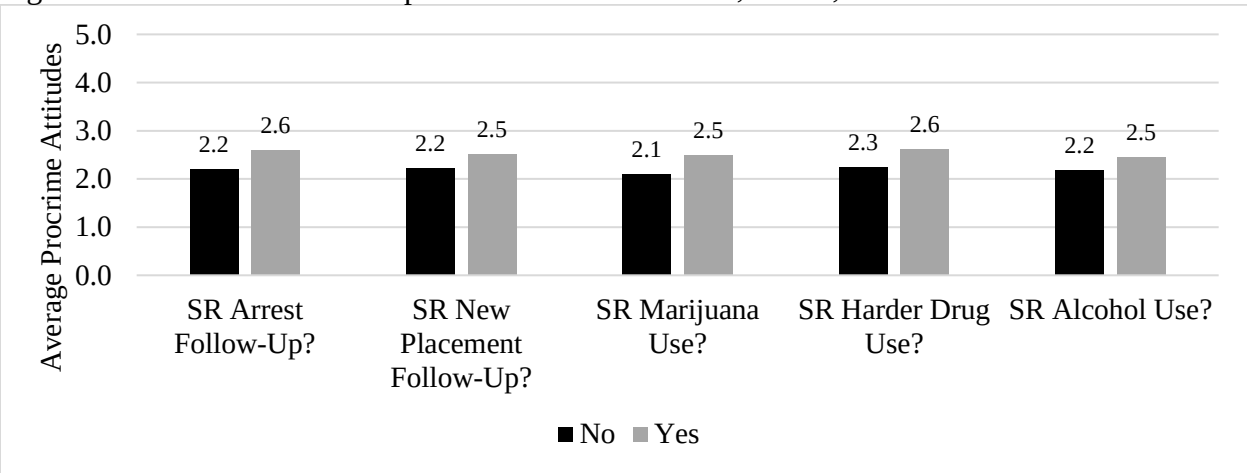
Figure 3.9. Interviewee Self-Reported Procrime Attitudes, Arrest, and Substance Use



Summary of Analysis of Youth Follow-Up Interview Data

In general, many of youths' self-reported outcomes were positive when looking at the various attitudinal scales measured during the follow-up interviews. Most trended dramatically toward prosocial outcomes. Generally, those responses were not significantly related to youths' scores from the initial assessment process or to the risk levels that emerged from the initial OYAS process. There are some important exceptions in that procriminal attitudes at follow-up was positively related to some of the earlier risk domain scores. This suggests in part that some change is occurring for these youths during the juvenile justice process and in the period thereafter. Also positive, youths frequently reported being in school or working at the follow-up—regardless of their initial risk level.

Still, despite some positives in attitudes, interviewees also reported a good deal of later contact with the juvenile and criminal justice system and many self-reported drug or alcohol use. Youths frequently received treatment during the juvenile justice process or follow-up period. The moderate and higher risk groups tended to report greater involvement in treatment across most of the categories included in the interview protocol (with the exception of "counseling"). This suggests the potential that the juvenile justice process can utilize the assessment information

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collected early on to inform decisions that impact positive attitudes and other developmental outcomes later on—effectively breaking the relationship between risk and later poor outcomes. Although the analysis was limited by the overall and within group-sizes for the interview sample, this is illustrated in part based on the procrime attitudes example that was explored in order to illustrate some tentative relationships among JRNA, treatment, and different categories of youths' outcomes.

Section III of the report addresses the fourth objective of the study: evaluating justice-based and developmentally relevant youths' outcomes based on variation in assessment-based decisions that reflect the usage, monitoring, and implementation of standardized risk and needs assessments. The results from this section alert us to the fact that risk level and juvenile court dispositions have an impact on youths' recidivism and these are generally in ways anticipated by prior research. For example, when state commitment was used appropriately, it had a slight negative effect on the likelihood of recidivism for higher risk youths. Similarly, moderate risk youths had increased likelihood of recidivism when placed on probation or intensive probation as opposed to a less formal supervision or case dismissal. In the second group of mediation models, we found that matching criminogenic needs to treatment referral does not consistently occur in the juvenile justice agencies that we studied and that frequently factors beyond the assessment information tended to be better predictors of whether or not youths were assigned to particular services. Additionally, where there were relationships between participating in treatment and recidivism were largely found to be in the opposite direction of what would be expected (i.e., engaging in treatment increased the likelihood of recidivism). Finally in this section, we took a deeper look at the follow-up interviews with youths. These analyses suggest that youths are changing during the

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juvenile justice process and in the period thereafter. Positively, youths frequently reported being in school or working at the follow-up—regardless of their initial risk level.

The previous three sections of this report, set the stage for the Section IV: Summary and Conclusions. This section will elaborate on some of the key finding and provide recommendations for systematically improving the implementation and use of JRNA.

IV. Summary and Conclusion

The four project objectives described throughout the report focused on the implementation, usage, and outcomes of JRNA. We analyzed several sources of data in order to reach informed conclusions in each of those areas. This final section of the report first identifies some limitations of our data. It then summarizes key findings in each area of the study before considering relevant implications and offering recommendations in four areas pertinent to JRNA: *Training, Usage, Monitoring,* and *Research and Evaluation*.

Limitations

The project data collection efforts led to several useful sets of data pertinent to relevant research and practice questions in JRNA. Nevertheless, each source of data described in the report has its own limitations that contextualize the findings and recommendations made based on this study. Those have been mentioned in brief throughout the report as relevant, but we describe them in more detail here to contextualize the key findings and offer insight for the future research and evaluation section below.

Sampling

The research team approached the three states included in this study because they all were using the OYAS, but were at different stages in the implementation process. These states are in the Midwest and in the Southwest. Geographically, this means that these states may not be

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representative of other locations and state contexts. Beyond that, the interview sites were hand selected by state actors and the research team. While selecting the sites, we attempted to include agencies and individuals who our state contacts believed might hold both positive and negative views of the OYAS and the implementation process. We also ensured that early and late adopters of the assessment system participated. Agencies varied in their size, setting, and geographic location. However, the sample was purposively selected and as a result, opinions of personnel in these agencies may not be representative of all personnel in these states, other personnel who use the OYAS, or a different JRNA tool. Related, while the web-based survey link was sent to all staff in state maintained lists, personnel who responded to the survey may have been those who were either more satisfied or dissatisfied with the assessment system. Again, this may have resulted in responses that are not illustrative of the views of all personnel.

The sampling strategies used for the case record and youth interview data elements were intended to generate representative samples of the population of justice-involved youths based on geographic region (which may influence the size and operations of a given agency) and the various stages of the juvenile justice system where the OYAS might be employed to assess risk and needs. In States 1 and 2, however, some counties refused to participate. To illustrate, 71.4 percent of counties that were contacted in State 1 agreed to participate. In State 2, 66.7 percent of counties agreed to provide data. As a result, the samples may not have fully captured the range of youths in these states.

In many instances, counties that responded to our requests and declined to participate expressed concerns about the agency's capacity to complete the data extraction task due to a lack of resources. Several indicated they were too understaffed to take on new obligations, and practical barriers may have amplified this concern. For example, the lack of sophisticated data management

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systems in some counties necessitated that staff manually review each youth's case for the requested information. In some cases, this required locating and reviewing paper files that may have been placed in a secure storage location that was not easily accessible, and the agency could not devote the staff time required to gather the information. These issues could have important implications for the study, particularly if agencies that are severely lacking staff and other resources also find it challenging to fully implement JRNA and the recommended case management strategies that come with using the tools.

The subsample of youths selected for the follow-up interviews may also be limited in the extent to which it represents the youths in each state. In some instances, the states were unable to provide contact information for prospective interviewees, or the contact information that was received was outdated. Although multiple methods were employed to locate and contact those youths selected for this portion of the study, many were unreachable. Additionally, several youths who were found refused to participate. With an overall response rate was just below 10 percent and 20 percent among those youths with whom we had some contact, insights can be gathered from these data; however, the generalizability of the findings pertaining to the follow-up surveys is limited.

Finally, contact information for youths who were selected for the follow-up interview portion of the study was received at varying points in time. Counties in State 1 and State 2 provided the requested data on a rolling basis, and State 3 only provided contact information in the final few months of data collection. This variation impacted the amount of time the research team had to make contact with potential interviewees (particularly in State 3), as well as the length of time between selection and follow-up interviews.

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Measures and Data Collection

The juvenile justice personnel interviews and surveys were designed to draw both breadth and depth into the data on implementation, usage, and perceptions of the OYAS. With that in mind, we used a dual-pronged approach to asking questions of juvenile justice personnel. Nevertheless, it is possible that the methods used for asking questions may have generated some artifacts in our data. For example, respondents may have been more apt to self-nominate particular types of strengths and weaknesses after having answered thematically similar questions earlier in the survey and/or interview. There was also the possibility of social desirability bias as reflected in the fact that interviewees, who were with a UC interviewer, tended to give more positive responses than web-based survey respondents on similar questions. In some sense, this helps to bolster the rationale for including both data collection modalities.

The case record data collected from agencies presented some limitations with respect to measurement. First, data for the comprehensive assessment sample were gathered from numerous different agencies, each of which adopted their own norms for recordkeeping. Although each agency was given the same instructions for completing the data request, some items were not routinely collected by all agencies or there may have been variation in what and how data fields were documented. For example, agencies that listed a specific intervention such as Aggression Replacement Training may have classified it as cognitive behavioral therapy or anger management training. The research team discussed inconsistencies as they were identified and addressed them as each data file was cleaned and integrated. There were also limitations in the terms of the depth of data collected on each treatment type such that details on aspects of treatment such as dosage or completion status were not available (or not provided by the agency). Where the information provided was unclear or deviated from the instructions that were provided, efforts were made to

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contact the agency for clarification. While these strategies likely enhanced the consistency and accuracy of the data, it is possible that some differences in interpretation or reporting exist. Although evaluation of specific treatment types and dosages was beyond the scope of this study, that may have impacted some conclusions about the relationships between treatment/services and recidivism.

Similar issues came up in the officially recorded case details and justice outcome data. Agencies had different definitions for recording data about focal cases, dispositions, and recidivism and varied in the level of detail provided about each in response to data request. Most agencies provided dichotomous indicators that amounted to tallies of new referrals, adjudications, and commitments. This was particularly problematic in State 3 where no treatment information was provided for any cases. Further, only 35 percent of youths from State 1 received a treatment referral and only 28 percent of youths in State 2 received a treatment referral. As a result, it was not possible to examine differences in treatment effectiveness based on these factors. These measurement limitations are particularly relevant in the analyses focused on linkages between risk assessment information, treatment referrals, and youths' recidivism. Overall, the data received across agencies varied in its completeness. In jurisdictions that provided large amounts of data that were easier to download from a larger database, only information contained in that database may have been submitted.

Second, the accuracy of the data collected in the youth follow-up surveys is contingent upon the capacity of youths to recall events accurately as well as their willingness to respond honestly. Given that the interviews were completed by phone, it was not possible for the research team to ensure that the youths were in an environment that was conducive to sharing sensitive information. For example, when asked to report involvement in deviant or illegal behaviors, youths could have

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been dishonest if a parent or guardian were present during the interview and they were fearful of receiving a consequence if their activities became known to that person. Prior research has generally found, however, that self-reported measures of delinquency are valid and reliable (Thornberry & Krohn, 2000). Additionally, the data obtained from that portion of the study seemed to reflect a reasonably high level of disclosure of substance use and new justice contact.

A third limitation related to the measures included in the study is that many of the variables were ultimately dichotomized for the analyses that examined the use of JRNA in the juvenile justice process. As a result, the findings are more general in nature. For example, there was a great deal of variation in the information we received about the treatments the youths participated in. In order to examine patterns across the full sample, treatment information was collapsed into more generally defined categories (e.g., CBT) that did not allow for differences in the effects of particular types of treatment (e.g., Thinking for a Change) to be estimated individually. In turn, the findings do not provide any indication of whether some interventions are more or less effective at reducing recidivism than others.

Analytic Limitations

The limitations in our data analysis approaches generally follow from some of the measurement and sample shortcomings identified in the prior sections. The qualitative portion of the study relied on analysis toward grounded theory building. While we used a variety of checks and proceeded iteratively, emergent themes were nevertheless drawn from interpretive analysis of interview responses. In many cases, those responses comprised brief comments and interviewer notes as opposed to full narratives and are therefore limited in depth at times. In the quantitative analysis, at times the range of particular measures was limited and therefore we were required to use modeling strategies to follow that. In some cases, that meant that methods for dichotomous

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measures were utilized. In other cases, the statistical power was relatively low for some comparisons. This was especially true in the youth follow-up interview analyses and the consideration of patterns of OYAS vignette scoring in the web-based survey. In general, we attempted to assess assumptions and sensitivity of particular estimates wherever possible in order to contextualize our main findings.

Key Findings

Key Findings and Discussion from Juvenile Justice Personnel Interviews and Surveys

This portion of the study identified a solid foundation upon which juvenile justice agencies may build an effective and sustainable implementation process and many of the findings were used to draft the recommendations that are discussed at the end of this section of the report. Overall, most personnel were positive generally about risk and needs assessments and satisfied with the OYAS. However, they perceive their own satisfaction to be higher than that of their peers. Similarly, personnel who responded to the survey were generally less satisfied with the OYAS than interviewees.

The key discussion points for the juvenile justice personnel interviews and surveys can be summarized into six main areas: (1) personnel were generally favorable towards the OYAS, however, there is a lot of room for improvement concerning their views; (2) personnel alluded to the fact that the full utility of the assessment system was not being realized; (3) personnel were able to identify numerous strengths and areas of concern (areas of concern were more consistent that the strengths); (4) personnel noted many ways to improve the implementation process; (5) there was a major lack of quality assurance processes taking place in the three states; and (6) only about half (52.2%) of survey respondents scored the vignettes correctly.

Starting with the first point, interviewees and survey respondents were generally satisfied

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with the OYAS. Across the board, interviewees reported higher levels of satisfaction than survey respondents. Concerning personal satisfaction with the OYAS (on a scale of 1 to 5 with 1 being 'not at all satisfied' and 5 being 'very satisfied), mean satisfaction for interviewees was 3.54. Survey respondents' mean satisfaction, separated by those who administer the tools and those who do not, was 2.96 and 3.13, respectively. Both samples did agree at higher rate that the OYAS benefits youths, which is promising, and agencies may be able to capitalize and leverage that support. As a whole staff were positive, or at least neutral, towards to the assessment system. However, this indicates a lot of room for growth concerning increasing the favorable views of the OYAS. To illustrate, the OYAS was often pitched to staff as an "end all, be all" piece of information, not as one piece of the puzzle in working effectively with justice involved youths. Many of the recommendations in the next area of this section relate to how to agencies can increase satisfaction with the tool before, during, and after implementation.

The second clear finding was that agencies and personnel within the agencies are not using the OYAS to its full utility. The OYAS is typically used to (a) determine supervision level, (b) measure the progress of youths, (c) match youths to services, and (d) assist in placement decisions. However, the OYAS is not being used in the following ways: (a) assessment results are not consistently shared with those who may need the information (e.g., referral agencies, parents), (b) staff are not utilizing youths' assessments results to inform case planning, (c) assessment results are not used to place youths with staff, and (d) agencies are not using aggregate data that are generated from use of the OYAS (i.e., agency resources are not being allocated based on OYAS findings and specialized caseloads have not been developed).

Related, the mostly commonly reported uses of the OYAS matched the state and local policies. Policy in essence drove practice in this study and robust policies seemingly then would

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translate to more comprehensive usage practices. Some interviewees specifically expressed the need for additional guidance on how to use the information gathered and produced by the OYAS in more meaningfully supervision of youths and in treatment/case planning. Further, the lack of using the OYAS to its full potential may be impacting the levels of satisfaction noted above. To illustrate, if staff are taking the time to complete the assessments, they may appreciate the assessment information being used to its full potential.

Third, personnel were able to clearly articulate strengths and limitations. It is noteworthy that, despite the separate analysis processes, both the interview and survey samples generated many of the same themes, which helps to triangulate some key findings. Common strengths included: it helps decision-making and service provision; it provides overall system fairness, consistency, and objectivity; provides useful and comprehensive information; identifies risk level, needs, and aids in determining supervision level; establishes a baseline and allows for the monitoring of progress; is helpful in developing with case plans; and that it is easy to administer.

Limitations were noted as: lack of validity/reliability (i.e., provides inaccurate or invalid results regarding risk level); it does not provide comprehensive information (i.e., fails to capture family and education issues, mental health needs, and/or substance abuse issues); concerns with the items on assessment; conducing the tools was time-consuming; that there is inconsistent administration and scoring of the tools; issues with using the information in case planning (e.g., staff were not trained how to do this, but are expected to do it); poor implementation and training (i.e., lack of policies and procedures); that the tool is inaccurate for sex offenders; issues with using the automated system; concerns with youths manipulating scores; lack of buy-in from personnel; and lack of utility of the results. In looking at one of these limitations in detail, the personnel were in agreement that the OYAS is too time-consuming. This speaks to the nature of their daily work,

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and lends itself to ‘shortcuts’ (e.g.,, cutting assessment questions) that can exacerbate issues with validity and reliability. As such, some perceived OYAS limitations and implementation challenges can become self-reinforcing over time without continuous quality improvement efforts.

Taken together, while the tools have benefits, these may be overshadowed by the staff-noted limitations. In highlighting one of these limitations, there is concern regarding using OYAS information to determine placement and supervision level if the tool is not accurately predicting risk. It was suggested that inaccurate scoring has created a ‘net-widening’ effect in one state, as more youths at one particular agency were being classified as “high risk” than before use of the OYAS. On the other hand, in a different state, it was suggested that the OYAS was routinely underscoring youths. These patterns of classification generally depended on the agency where the personnel was interviewed, but overall, there were concerns expressed about the manner in which risk level was tied to supervision and service levels.

Fourth, personnel were able to provide numerous recommendations for improving buy-in, roll out, and implementation. Common suggestions included: making the automated system more user-friendly and integrated into other online systems prior to rollout; allowing more room for professional judgment to change the risk level of a youth in instances where that is necessary (i.e., many staff feel that the OYAS under or over classifies many youths); higher quality initial training and providing more frequent training and certification on the tools; designating certain staff to be OYAS administrators to ensure consistency and accuracy in administration; taking steps to foster consistency in implementation across counties of a given state (e.g., minimum usage guidelines and ensuring that treatment providers are in place to address the youths’ need areas); providing more convenient ways for staff to access aggregate OYAS data; and consistently training outside stakeholders on the OYAS (e.g., referral agencies attorneys, judges, prosecutors). In terms of

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implementation and training, 17.6 percent of State 2 interviewees, 15.2 percent of State 3 interviewees, and 12.7 percent of State 1 interviewees named this as a concern.

Adding context to the recommendation regarding better training, one interviewee explained that, as a member of the detention staff, the trainings were too "probation-focused," and not as applicable to his/her role as he/she would have liked. Another interviewee suggested the importance of asking staff, "What do you want the tool to do for you?" for establishing buy-in prior to conducting trainings. Though, the value in doing so is decidedly in whether trainers and/or agency leadership adjust their approach according to trainees' responses. Lastly, another interviewee suggested a post-training trial period for the tools, where staff could decide for themselves how it would be the most useful for a specific agency, department, or unit. In this way, while the tools may be mandated in a state, each agency, department, and/or unit could have the opportunity to determine *how* to best introduce and use each OYAS tool for their setting. State 3 respondents agreed significantly more that formal OYAS training *is* routinely offered. Once more, this suggests the importance of not only providing regular training opportunities, but ensuring their quality or applicability to staff. This is evidenced by State 3's generally low levels of satisfaction for the OYAS and its uses, but there is a high level of agreement that training is available. This illustrates that satisfaction with the tool is not totally synonymous with a positive view of the implementation—and vice versa—again illustrating the multifaceted nature of implementation, use, and outcomes in JRNA.

Fifth, there was a serious lack of quality assurance procedures. Only 37.1 percent of interviewees responded that any quality assurance processes were in place specific to the OYAS. Follow-up questions in this area evidence that these processes mostly relate to ensuring that the tools are conducted within a certain timeframe and are not related to quality of the information

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collected or that the tools are conducted and scored correctly. Two effective practice to showcase here is that (a) some agencies had identified a local point of contact for the agency to help answer questions and increase consistency in scoring and use of the OYAS and (b) one agency noted interrater reliability efforts where supervisors sit in interviews with newly trained staff and review the scoring of their assessments. In each of the three states, numerous staff noted that it was often difficult to get their questions answered related to the OYAS. This was a result of either supervisors who were not trained and could not support them or that there was someone knowledgeable about the OYAS, but that individual was not responsive to their questions. It would benefit agencies using risk and needs assessments to consider using dedicated staff to support the use of the tool. These individuals need to be knowledgeable about the tools and be provided enough time within their job responsibilities to properly support staff using these assessments. These same staff could then be used for general OYAS quality assurance processes as well.

Finally, vignette results show that only half of OYAS administrators scored their assigned vignettes correctly (52.2%). Interviewees expressed concern that their coworkers were not scoring the OYAS correctly, and this seems to be supported by the vignettes. Incorrect scoring trended in the direction of underscoring the vignette, indicating that respondents were more likely to assess less risk, not more risk. Overall, the vignette scores suggest that, while there is some correspondence with the manual, there are also some discrepancies that require further attention and that might be addressed in future booster trainings. The vignette findings give more credence to the recursive nature of having a tool that may not be scored correctly—that staff become aware of this and lose faith in the results of the tool as a result. Similarly, survey respondents who reported higher level of support for the usefulness of the OYAS were more likely to accurately score the vignette. These two elements are interrelated in complex ways that need to be addressed early in

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the implementation process in order to ensure that different components of the tool itself, implementation practices, and usage in case-level decisions do not undermine effective and fair usage.

Key Findings and Discussion from Youth Case Records and Follow-Up Interviews

Another important aim of the study was to determine how youths were impacted by the use of JRNA in the juvenile justice system. Tremendous emphasis has been placed on using these tools to classify youths into categories based on their likelihood of reoffending, and whether or not those classifications are valid and reliable. Far less attention has been given to understanding the use of risk and needs assessment to inform decision-making and case management, or the impact that may have on the youths who are involved in the juvenile justice system. Implementation and usage of JRNA are multifaceted and depend on a number of different sub-components to work effectively and efficiently. We therefore used the record data collected here to study questions about how OYAS was being used in practice in these sites, focusing on several key questions of interest. This in turn provides insight on implementation and youths' outcomes. Key findings from each of these usage studies are presented in brief below followed by the youths' case data and follow-up interviews. We also call attention to particularly important implications of each.

Usage Study 1: Support for the OYAS and Integrity in the Risk and Needs Assessment Process

This study explored the integrity in the risk and needs assessment process. The results from the study suggest that assessment administrators with higher levels of perceived support for the utility of the assessment system were more likely to score the domains accurately. Taking stock of what the OYAS is designed to do can influence integrity as captured by the degree to which administrators tended to score accurately. Those who underscore the tool may not see the utility of using it to its full potential and may believe they think they know what is best for a youth. This

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in turn, may lead staff to not engage in proper information gathering during the interview to effectively score out the tools.

Usage Study 2: Youth Appraisals by Race and Geography

This study explored the potential variation in the distribution of youths' risk levels across juvenile court jurisdictions and investigated whether race accounts for any of the variation in risk-level classification between juvenile court jurisdictions. The results indicate that risk assessment classifications varied significantly among sites in our sample of juvenile court jurisdictions (i.e., the distribution of youths that fall into the risk classification categories differ across the courts). Non-White youths were significantly more likely to receive a higher risk classification than their White counterparts, though these effects do not differ by court jurisdiction. This effect of race on risk classification remained statistically significant when we accounted for the youths' focal offense type and demographic characteristics.

This substudy highlights the need to further examine the neutrality of JRNA. These findings have implications for case management, court processing, treatment-related decisions, and potential disparities in each as the risk assessment information may be impacting those decisions. Risk and needs assessments are valuable tools that can help to guide a number of decision making points in the juvenile justice system, but researchers and practitioners should also carefully consider the degree to which practices may affect differential juvenile justice experiences among youths of different race and ethnic groups.

Usage Study 3: Race, Ethnicity, and Validity of the OYAS Residential Tool

The third of these studies examined the measurement properties of the Residential Tool in State 3, and whether racial/ethnic differences in the predictive validity of the tool could be partially attributed to variance in the measurement of risk. The results indicated that it may be possible to

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refine the measurement of risk for recidivism in this population. In the full sample, the *Education and Employment* and *Family and Living Arrangements* domains were the strongest areas of concern as evidenced by weak item and domain loadings. These findings highlight the importance of empirically testing whether JRNA tools developed in a specified population can be assumed to measure risk and needs equally well when adopted in a new population where the prevalence and nature of specific risk indicators may vary from that of the original population. As an example, a number of items had very low or very high prevalence in the State 3 population, which would limit the utility of those items in terms of distinguishing those who returned to custody from those who did not.

Another important finding from this substudy is that the Residential Tool does aid in predicting recidivism relative to chance; however, the predictive validity varies across groups defined by race/ethnicity. Relationships between risk scores and recidivism appear to be stronger for Hispanic youths relative to Caucasians as evidenced by a general pattern of stronger correlations and higher AUC estimates. Similar to the measurement analysis, the analytic strategies used to examine the predictive validity revealed that the *Education and Employment* and *Family and Living Arrangements* domains did not aid in predicting returns to custody for the full sample or the Caucasian and Hispanic subgroups.

Lastly, given the differences across racial/ethnic groups with respect to predictive validity, preliminary analyses were carried out to investigate whether those differences could be partially accounted for by differences in the constructs captured by the Residential Tool when used in Caucasian and Hispanic subgroups. The findings of this substudy suggest that the tool may not be measuring risk equally well among these two groups. Such patterns can be indicative of individual items working differently in the two groups (e.g., more or less prevalent in one relative to the

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other), including items that do not contribute to the measurement of risk for one or both groups, or failing to include items that have a meaningful impact on risk. These complex relationships, which in some case reflect potential threats to the validity of the measures, warrant further investigation.

Usage Study 4: Professional Override of Risk Assessment

This substudy includes case record data for 6,222 youths assessed by the OYAS across the three states studied and links it with the juvenile justice personnel interviews and the web-based survey. The overwhelming majority of interviewees noted that their agencies allow override of the OYAS risk level. Of the 213 cases where an override occurred in the analytic sample, 210 of them – roughly 98.5 percent – were upward overrides. This aligns with some of the concerns noted in the juvenile justice personnel interview and survey data as numerous staff mentioned concerns that the tool does not scores youths accurately. Another potential explanation for this is that upward override results in more opportunity for services. In essence, if an administrator thinks that a youth should enroll in a program, but the program has a risk-level eligibility requirement, the administrator may use an override in order to render the youth eligible. This suggests the importance of understanding the implementation context, especially local political pressures and resource constraints, that can affect full adherence to assessment protocols (see Aarons et al., 2011; Fixsen et al., 2009). Moreover, the most common reasons for overrides were sex offenses, offense seriousness, and criminal history. This is a potential area of concern that staff should receive training in—what constitutes a reason for an override, what to do with special population youths, and how to use the OYAS in conjunction with other risk and needs assessments.

Usage Study 5: Use of Mental Health and Substance Use Information in Treatment Matching

Case record data for four juvenile courts in State 2 were used in order to examine the OYAS indicators of substance use and mental health needs and asses the links between these indicators

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and the services received. First, youths in the sample had relatively low rates of mental health need (~20%) and substance use (low mean scores on the substance use index score). Using multivariate logistic regression modeling, the results suggest that—when controlling for other variables—those youths that were indicated on the OYAS as having substance use and mental health needs were in fact significantly more likely to be referred to that programming. These tools are intended to guide referrals to treatment, but indicators are limited and not necessarily specific. Still, the mental health item and substance use score information seems to be impacting treatment referral decisions in these cases, and these findings are consistent with patterns observed in the treatment mediation models (described below).

Usage Study 6: OYAS Strengths and Barriers Usage

The final substudy investigated the extent to which the strengths and barriers portions of the OYAS Disposition, Residential, and Reentry tools are used in practice and whether exposure to strengths and barriers varies by risk level. The findings revealed that, though the strengths and barriers portions of the tools are optional, the majority of youths (~66%) have at least one strength or barrier noted in their assessments. Moreover, the relationship between risk levels and the number of strengths and barriers was consistent with expectations; low risk youths had the greatest number of strengths and the least number of barriers while high risk youths had the fewest strengths and the most barriers. Across the board, strengths were more prevalent than barriers, except in Peers and Social Support Networks—highlighting the need for agencies to anticipate treatment needs in this area. These findings are encouraging, as it suggests that staff are taking steps to gather more information that could be used to guide case management decisions, and it provides some preliminary evidence to suggest that these portions of the OYAS are working as intended.

The results of this substudy also provided some important insights about justice-involved

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youths at varying stages of the juvenile justice process. Acknowledging strengths and barriers may be a fundamental step in effective case management and the development of realistic treatment plans—especially in the context of juvenile justice where some barriers to effective treatment may lie outside of the youth's control. Overall, these findings suggests that one state using the OYAS has started to move toward a more comprehensive assessment process through use of strengths and barriers indicators to inform case planning. The findings simultaneously reveal some room for expansion in the use of the strengths and barriers portions of the OYAS tools as well, which may prove to be one avenue for identifying more options for clients and better tailoring their treatment and supervision plans. In order to achieve meaningful gains in this regard, however, it may be necessary to consider several enhancements for the strengths and barriers sections and related training.

Analysis of the Linkage Between Risk Assessment, Juvenile Justice Decisions, and Recidivism

The large sample of case records from the three states studied was used to estimate statistical models to capture the key elements of the presumed process linking JRNA to youths' recidivism. In the course of that analysis we found that higher risk youths tended to have significantly higher rates of recidivism—even with other controls in the models—which suggests that the OYAS is predicting risk for recidivism as intended. The main point of that analysis, however, was intended to link risk and needs assessment usage with outcomes in a way that more fully captured the system processing that occurs in between the two. The results indicate that the relationship between risk level and recidivism is at least partially mediated by dispositions. In particular, when high risk youths receive more intensive services—including commitment to state facilities—their likelihood of having a new adjudication decreases slightly (~3%). Further, moderate risk youths on probation had lower rates of recidivism relative to low risk youths on

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probation—relative to less restrictive, or informal, sanctions. These findings align with prior research that stresses the importance of fitting the intensity of juvenile justice options to those at greater risk of reoffending.

The theory on JRNA emphasizes the need to match the treatment youths receive to their most pressing criminogenic needs in order to reduce recidivism as well. That potential use of JRNA in this process was also examined in this study. Several notable patterns emerged. First, the most common treatment received by youths was for mental health, followed by substance use. Additionally, these seem to be supported by the fact that higher scores on these indicators drove these referrals. Second, generally, referral to the six types of treatment or services examined in this study did not significantly reduce the likelihood of a new delinquency adjudication. In every analysis the effect of treatment was either non-significant or was associated with an increase in the likelihood that youths would recidivate. Third, the domain scores generally were not significantly associated with their relevant treatment types as would be suggested by the underlying logic of JRNA. The multivariate models generally showed that other variables like juvenile justice history, focal offense type (i.e., violent/not), and State site generally were more relevant in whether a youth was referred to a particular treatment type or not. Not surprisingly given the previous finding, the relationships between criminogenic needs (i.e., domain scores) and recidivism were not mediated through treatment, as would be expected. Given that the relationships between criminogenic needs and recidivism were not mediated as would be expected by various modes of treatment, further research is needed to determine what may account for these unexpected patterns.

Analysis of Youths' Self-Reported Outcomes

Youths in the study also reported on some of their behaviors, and the findings based on these data were positive overall. Many of the attitudinal scales included in the follow-up interviews

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revealed favorable perspectives, and the majority of those interviewed reported being involved with school or work at the time of the interview. There was also a general trend suggesting that most justice-involved youths received some form of treatment, with higher rates of treatment reported among those at higher risk levels. While these findings are encouraging, the youths also reported using drugs or alcohol during the follow-up period, and many continued contact with the juvenile and criminal justice systems. The findings nevertheless provide some confirmation of patterns seen elsewhere in the study while also offering some additional insights that would not be possible based on the analysis of official records alone.

Implications and Recommendations

Section I of the current report outlines the trends in agency policies and practices around assessment, the facilitators to implementation and use of the OYAS, and the barriers to implementation and use. The second section of this report focuses on the results of usage, processing, and case decisions. Section III examines youths' outcomes in relation to their risk and needs assessments and their experiences while involved in the juvenile justice system. Across these three areas, these findings suggest that the OYAS is generally being used in line with what is intended. At the same time, there are areas of practice where improvements could be made to ensure optimal usage. These raise implications for both practice and research in JRNA. The start of this fourth and final section of the report summarizes key findings and highlights discussion points that inform the last piece of this section and report, implications and recommendations. With so many juvenile justice jurisdictions using JRNA, it is important to understand how they are being used and develop strategies to enhance their use. A huge element of this is the juvenile justice personnel who are interacting the youths. This study is unique in that it combined the actual practices and opinions of these personnel with both case records from youths assessed with JRNA

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and follow-up interviews with a subset of these youths. The combination of these data allowed the research team a comprehensive view of JRNA so that recommendations could be developed to help achieve a next step with these assessments – usage optimization.

In light of the findings presented above, the research team offers the following recommendations to cover the full spectrum of risk and needs assessment implementation including policies and practices, establishing buy-in, designing implementation, training, use of a comprehensive risk and needs assessment, promoting usage, and establishing quality assurance processes.[81] The recommendations are a culmination of feedback from juvenile justice personnel and researcher insights into how to improve JRNA implementation and use. These recommendations are mindful of the fact that risk and needs assessment—and associated decision-making—involves a concerted change in how those in the field process and react to information on justice-involved youths. In parallel, we also contextualize the implementation and use of this assessment in the broader objectives of the juvenile justice system and the youths that it encounters.

While risk and needs assessment prevalence and integration into the juvenile justice system has increased in recent years, relatively little research has been done on the implementation of risk and needs assessments and its associated processes. The available research informed this study and a lot of the recommendations provided in this section align with this body work. Of note in the research on JRNA is the work of Vincent and colleagues' guidebook for risk assessment implementation in juvenile justice (2012). This work infused the results of past research and input from expert and stakeholder panels into an expansive how-to guide for implementing risk and needs assessments in juvenile justice settings (focusing on probation in particular). According to their research, Vincent et al. (2012) divided the implementation process into eight stages: (1)

[81] State-level reports are being provided to each state to consider efforts to improve JRNA training, usage, and monitoring within their own states.

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Getting ready; (2) Establishing stakeholder and staff buy-in; (3) Selecting and preparing the risk and needs assessment tool; (4) Preparing policies and essential documents; (5) Training; (6) Implementing the pilot test; (7) Full implementation; and (8) On-going tasks for sustainability. In the guidebook, each step of the implementation process is accompanied with its own set of recommendations, many of which overlap with those resulting from the current study.

In the same vein, OJJDP published a bulletin describing the main findings of recently-funded research (i.e., Vincent et al.'s work and preliminary results from this study), and their implications for JRNA implementation (Vincent et al., 2018). Following the work of Fixsen et al. (2005) and the National Implementation Research Network (n.d.), these implications were divided into various sets of "implementation drivers" specific to staff competency, as well as organizational and leadership factors. While the current study's recommendations cover these three implementation drivers, they are organized more specifically by the objectives of the current study and provide more detailed suggestions for implementation based on the results previously described.

While there is some degree of overlap with the goals, recurring themes, and recommendations set forth in the work of Vincent et al. (2012) and the studies described in the OJJDP bulletin (2018), the current study expands upon these works by including information from four unique data sources (i.e., in-person juvenile justice personnel interviews, a web-based juvenile justice personnel survey, a review of youths' records, and results from a follow-up survey of youths). We also relied on the broader work on implementation of effective intervention and innovation in complex environments (e.g., Aarons et al., 2011; Durlak & DuPre, 2008; Fixsen et al., 2009; Greenhalgh et al., 2004). Additionally, the current study focused on the implementation of one particular already established risk and needs assessment across 22 agencies at various

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juvenile justice decision-points (i.e., intake/diversion, detention, disposition, residential intake, and reentry), and across three states in unique phases of a statewide implementation process. The results include agency policies and practices surrounding the OYAS and identified facilitators and barriers to its implementation and use.

As such, the current study allows us to outline recommendations with more specificity and in more topic areas. These recommendations, while based specifically on information gathered about the OYAS, are generalizable to the implementation of other JRNA (and moreover to the implementation of risk and needs assessments in the criminal justice system as well). However, as evidenced throughout the report, it is also important to note that each state (and each county or agency therein) presents its own unique implementation environment. Therefore, state, county, and agency leadership must be mindful of which recommendations have more importance in their context, and which may become obstacles. Striking a balance between consistency and adaptation is a challenging, yet key component of effective implementation.

While certain recommendations are geared toward those implementing a statewide risk and needs assessment, others focus on the micro-level implementation concerns faced by counties and agencies, which may be part of a statewide risk and needs assessment implementation, or may result from implementing a risk and needs assessment independently. The recommendations are organized by three major elements of implementation (which reflect the objectives of the larger study): training, usage, and monitoring. Due to the dynamic nature of implementation, many recommendations apply to more than one of these areas. Therefore, recommendations are placed where they are considered most relevant, but may also apply to other pieces of the implementation process. For example, one recommendation under training is adding more detailed information about usage expectations into staff training, which also overlaps with usage recommendations

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about policy requirements.

Training

For the purpose of the current report's recommendations, 'training' recommendations are divided into three unique phases: planning/pre-training, during training, and post-training. Training recommendations cover considerations that have a potentially large impact on buy-in among justice personnel prior to, during, and after training.

Planning/Pre-Training

1. A risk and needs assessment has the potential to impact not only the youths, but everyone who comes into contact with that youth. As such, it behooves agencies to include as many stakeholders as possible in the pre-implementation process. This may include judicial actors, detention center staff, court staff, internal and external service providers, institution staff, the youths, and their families/guardians.

2. Elements of the implementation process (i.e., rollout timeframes, policies and procedures, tool usage practices, and quality assurance processes) should be clearly communicated to all staff impacted by the use of the assessment information (and not just those in leadership positions). More information on policies is located below under *Usage*.

3. Agencies should decide between having staff who are generalists (i.e., those who conduct assessments and have other tasks), having some staff who are more specialized assessors, or having full-time staff who conduct only assessments, and accommodate and support those roles accordingly.

4. States and local agencies should decide whether to develop and support local site trainers, state-level trainers, or if all trainings will be conducted by the developer of the tool (or some combination of the three options). State-level and local site trainers allow for more frequent and seamless ongoing training opportunities. State and local trainers may also increase buy-in from agency staff who are wary of outside trainers, or who have concerns about how a statewide assessment may apply to their specific agency or daily work with youths.

5. States and local agencies should train staff who are both administrators and non-administrators of the assessment tool, as this may harness natural buy-in from those who will not be responsible for administering the tool, but are eager to learn. Non-administrators may not need the full training, but rather an abbreviated version. The 'champions' of a risk and needs assessment need not be those who administer the tool, but those who acknowledge the importance and potential positive impact of a risk and needs assessment on the youths at their agency.

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6. All personnel who are responsible for administering the assessment should be formally trained and certified prior to doing so. Agencies should anticipate the resources needed to provide initial training as well as the onboarding of new staff and plan accordingly for their qualification to assess youths. It is appropriate for staff who are formally trained in the tool to conduct assessments for untrained staff until they are certified to do so.

7. In order to gain a systems perspective of how the assessment process benefits the youths and staff throughout the entire process, states and agencies should consider the feasibility of cross training staff and stakeholders from outside agencies. This helps encourage a common language regarding risk and needs assessment across a county/state, and fosters the sharing and spread of best practices between agencies. For training that is more restricted (e.g., staff only need training on one element like treatment planning or one specific tool within a larger assessment system), shorter sessions are appropriate.

8. If using a data entry and storage system, or management information system, this system should be adequately funded and tested for functionality prior to implementation. This includes entering information, mapping the workflow, and testing whether and how this system can be integrated into others already in use at the time of implementation. Issues and system bugs should be anticipated and resources reserved for fixes that can be completed quickly and with minimal interruption in the processes that are just taking root.

9. Often a risk and needs assessment will be integrated into existing processes and other assessments will continue to be used. Therefore, agencies should consider how the assessment fits into existing assessment protocols and what other enhancements or changes are needed to provide a comprehensive assessment of each youth. For example, it is advantageous to have responsivity assessments (e.g., those that measure barriers) in place prior to the 'roll out' of a risk and needs assessment, as this information will bear directly upon a youth's success while on supervision or in custody. It is also important to begin to set a new process that integrates different information sources as early as possible and provide clear guidance to staff during training and support them after training.

10. Systematic quality assurance (QA) processes should be planned and put in place prior to implementation (see 'Monitoring' section for more specific guidance on what quality assurance practices should entail). The necessary QA training should be planned and developed at the state and local level (e.g., training and certifying supervisors around interrater reliability). These practices should start concurrently with the assessment rollout, but be aligned with the stage of the implementation process.

11. Risk and needs assessments provide useful information on the needs of youths. Services to address these need areas must be in place before the assessment is implemented. To promote assessment information usage and embeddedness, agency leadership should foster and formalize inter-agency collaborations (e.g., memoranda of understanding) prior to rolling out an assessment. More recommendations on service mapping can be found under 'Usage.'

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During Training

1. Information about why the assessment was chosen and how it fits with the agency's mission should be included in the training process. This may involve presenting information on other initiatives or routine practices that are informed by the assessment and any corresponding data or usage examples from other jurisdictions that can illustrate why the state or agency has chosen the tool (e.g., information on the validation of the tool in similar states/localities). This information should be used to address some of the anticipated issues of contention that are expected during the training and implementation process.

2. Along with some other common risk and needs assessments, the OYAS has multiple screeners and assessments that are available for use. In cases where multiple tools are used within an agency, it is important during the training to map out the purpose and corresponding usage guidelines for the different screeners and assessment tools. Staff should receive clear and consistent messages about the purpose of each screening and assessment tool, their suggested timelines, and which tools should be used for reassessment. Should state-level training with multiple participating agencies be provided, staff should receive guidance at the local level immediately following training.

3. In addition to requiring training and certification on the assessment, training should include information about how the assessment results should be used. It is helpful if agency policies and procedures are being provided to personnel at that time as well. This information should include expectations for supervision levels (i.e., frequency and types of contact based on risk and needs level), expectations for treatment referrals, and how to conduct effective case planning (including good example case plans that can serve as a point of reference post-training). For example, case plans should be seen as a living document and personnel should be trained on creating identifiable and measurable goals in order to avoid goal displacement (Klein, 1979).

4. During the training process, staff should be trained specifically to use any management information systems that accompany the tool and case planning issues (if applicable). This may help alleviate some of the technological and case planning issues specific to such systems, which can spillover, creating potential discontent with other aspects of the assessment and associated processes.

5. Personnel should be trained to systematically collect and review collateral information on each youth prior to the assessment. This training should also include guidance and methods for scoring discrepancies between collateral and youth-provided information.

6. Relatedly, personnel should be explicitly trained on the 'hierarchy of information' for any given assessment. For example, in the OYAS, official records (i.e., police, court) should

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take precedence over information provided by the youths during interviews or in self-reports.[82]

7. Personnel should be informed and/or trained on the systematic quality assurance processes that will roll out concurrently with the assessment. This information should include what the quality assurance processes will entail and how they will impact the daily work of staff who conduct the assessment. They should also convey how the QA process fits into the success of the risk and needs assessment process.

8. Training should clarify the purpose and appropriate usage of other assessments (i.e., need and responsivity assessments) and how those intersect with the risk and needs assessment information, especially during the case planning process. Should training take place at the state level with multiple participating agencies, staff should receive guidance at the local level following training.

9. For professional discretion overrides, there was some confusion about what should be overridden—individual items, the overall score, the overall risk level, the custody or supervision level, or any combination of the above. Training should be explicit on the differences and the process for conducting an override. For example, what constitutes a reason for an override, what to do with special population youths (e.g., youths with sex offenses), and how to use the OYAS in conjunction with other risk and needs assessments.

10. Training should use plain and clear language (i.e., not overly research-oriented) about the validation of the chosen tool and any planned validation processes. This should include what "validation" means, the steps to conduct local validation, and validations of the tool that have taken place in other localities. This might also address any potential staff concerns about individual items on the tool, where an item may appear to have low "face validity" (i.e., an item that at face value does not appear to be connected to recidivism risk).

11. A portion of training should also explain the concept of reliability, and the important role reliability plays in the performance of the tools. This may help to further illustrate the importance of aligning the assessment process and scores with the guidelines provided for each tool.

12. At the local site level, specific delinquent populations may have certain supervision expectations. For example, a youth with a sex offense may be supervised differently (i.e., more intensely) than another type of youthful offender. Expectations for how JRNA results (and results from other assessments) will be used to aid in these supervision strategies should be provided at the local level. For example, staff in a sex offender unit would be provided additional training and guidance by their unit supervisor about how to merge general risk to recidivate with other offense specific information.

[82] For example, if youths state that they were not arrested under the age of 14, but police or court records indicate that they were, then this should be scored as a risk factor despite the information provided by the youths.

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13. Trainings should be conducted as closely as possible to the actual rollout of the assessment to capitalize on not only enthusiasm and readiness for change, but also to ensure that the information learned in training can be used immediately post training.

14. Agencies should be cognizant of the job roles of the various individuals participating in a training (e.g., probation officers, parole officers, treatment professionals), and adjust/provide context to the training accordingly.

Post-Training Follow-up

1. Once personnel start conducting assessments, they should be closely monitored initially to ensure they are being conducted properly and that staff have a venue to ask questions. For example, staff may struggle with asking some questions, scoring certain domains, or resolving discrepancies in scoring. Attention to these details shortly after training/rollout is needed in order to ensure that efficient and effective routines are established around the tools and personnel workflow.

2. After initial training, ongoing training that continuously works toward reliability should be required at the state and/or local level. For example, at the state level, required boosters could be provided that would build toward success at planned recertification timeframes. It is possible to capitalize on available technology by providing specific refresher modules in an online framework in the automated system. At the local level, this should include regularly scoring a domain during a staff meeting, holding regular case conferences related to the JRNA, or holding communities of practice that come together regularly to discuss and practice assessment components. Each of these procedures might include an emphasis on more challenging cases/items (e.g., those that are more subjective to score) in order to account for the fact that there are some inherently subjective elements in aspects of information gathering and interpretation prior to scoring of the assessment.

3. Initial and ongoing training should include updated training and messaging materials periodically that include new information about the risk and needs assessment as it is captured for the state/county/agency. For example, once aggregate data are available, these should be integrated into training initiatives including staff and unit meetings to solidify buy-in and foster continuous quality improvement efforts.

4. If supervisors are tasked with QA processes after rollout and initial training, agencies should ensure that they are trained, certified (if required), and proficient with the assessment themselves. As such, supervisors and anyone with QA-related tasks should be provided their own QA trainings, booster trainings, and monitoring. This may include modules that focus on analysis of such information and linkage to aggregate agency objectives. For more information about QA processes, see 'Monitoring.'

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Usage

Optimal risk and needs assessment usage is of the utmost importance in its potential impact (or lack thereof) on the outcomes of justice-involved youths. This is evident from multiple aspects of the study in terms of the usage cases as well as consideration of possible indirect relationships between risk assessment information and recidivism. Practices across the three study states were good in some senses (e.g., using risk and needs assessment information to establish supervision level), mixed in others (e.g., use of risk and needs assessment information for treatment matching), or "next-tier" (e.g., looking at aggregate data or using assessment information to allocate resources within an agency). Across the states, practices generally matched written policies. So, increasing the breadth of the policies could lead to a direct impact in practice. Under the broad umbrella of assessment usage, the next set of recommendations first focuses on the policies and practices surrounding the assessment, moves into establishing buy-in among staff, and then the actual implementation and usage of assessment information.

Policies and Practices

1. State-level policies and best practices that provide a comprehensive view for how the state wishes the assessments and their results to be used should be established before initiating the adoption of the tool and training on it. The different screeners and assessments should be fully mapped out concerning when in the justice process they are recommended to be conducted, if and when reassessments should occur, how the assessment information should be used, and who should be privy to the assessment results. For example, the information from the assessment may be used to determine a youth's placement at a facility or in a local treatment program. Having policies that include this detailed mapping will ensure that personnel receive clear and consistent messages about the purpose of each screening and assessment tool, their suggested timelines, and which should be used for reassessment (particularly for residential youths).

2. At the local level (e.g., court, probation, parole region, detention or institution), assessment-specific policies and procedures should be developed for each specific locality/facility that is tasked with conducting or utilizing the assessments. These should also align with best practices in juvenile justice intervention (i.e., assigning supervision level and treatment dosage based on risk level), and fall within the bounds of the broader, state-level policies mentioned previously.

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3. Within all of these policies and procedures, specifics regarding timelines for initial assessment, reassessment, expectations for developing and updating case plans, and expectations for how the assessment information should be used and shared should be included based on the audience. For example, these policies and procedures should provide: (a) specific guidance for staff and supervisors regarding overrides; (b) suggestions for case planning and service referrals (according to each domain and the referral process), which may take the form of service mapping; and (c) expectations and suggestions for sharing information with outside stakeholders judiciously and effectively.

4. Leadership should ensure that usage policies are logical, and are tailored to the environment in which they are to be monitored. If staff are expected to use assessment information to drive treatment and service referral decisions it is important that this is clearly laid out in policy and practice manuals and that appropriate options are available.

5. At the state and local level, the assessment policies and procedures should be readily available to staff and the public. This is particularly important in light of recent public discussion about risk and needs assessment (and recent controversies about fairness, see e.g., Schwalbe, Fraser, Day, & Cooley, 2006). For the public, it would be helpful that families and guardians are also provided information about the assessment process and how the assessment information is gathered and used throughout a youth's involvement with the juvenile justice system.

6. Agencies adopting a risk and needs assessment need to plan out in detail how the results are expected to be used prior to rollout and training and included in policies and procedures (e.g., placement, supervision standards, running of local data reports, case planning, treatment referrals, reassessment, sharing of assessment results). This usage policy should be specific to the assessment tool being used, in order for the guidelines to be as clear and relevant as possible. It is essential that the agencies introducing and utilizing the tools recognize the series of interrelated parts in information gathering, decision-making, and case management that are a part of this JRNA process.

7. Usage expectations, and examples of what they look like in practice (e.g., review of an actual case), should be included in the assessment policies and procedures, and be presented during initial training, ongoing training, and quality assurance checks and discussions. This will assist in promoting the full potential of the tool in a well-planned and purposeful way. For example, the case plan policy should require those for all youths with at least two high or moderate need areas from the tool, and require that they be updated at least once a month.

8. Alternatively, should agencies wish to provide latitude in the use of tool, they should still offer minimum usage guidelines. These may include any minimum requirements for entering data in the management information system, and placement requirements for state facilities. It is important to ensure that this not undermine the integrity of the assessment.

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9. For agencies using multiple assessments, a "decision matrix" may need to be developed to assist staff in deciding when to use certain assessments (e.g., responsivity assessments, or specialized risk and needs assessments).

10. As referenced in the 'Planning/Pre-training' recommendations, it is possible that, as the treatment resources in the community increase, so will the perceived usefulness and overall staff satisfaction with the tool. Therefore, promoting inter-agency collaboration (through the use of MOUs and other inter-agency agreements) is also essential for optimized usage practices that are mutually beneficial to youths and agencies.

Establishing Buy-In

1. States and local entities should bear in mind key implementation strategies regarding rolling out a new initiative (Fixsen, Blase, Naoom, & Wallace, 2009; National Implementation Research Network, n.d.). The current study revealed that training was the main strategy used to garner buy-in the assessment system. However, training alone is not enough to establish buy-in and effectively implement any new initiative. Pre-implementation decision-making and communication (noted above in 'Planning/Pre-Training') is essential in establishing support.

2. Agency staff may have endured changes in the juvenile justice field, at their agencies, and over the course of their tenure in the field. Leadership should anticipate that the assessment tool is not being implemented to a "blank slate," and brainstorm how this may impact the current implementation effort in their state, county, or agency.

3. Agencies should be deliberate and strategic in garnering personnel and stakeholder buy-in. This is important in the selection and adoption phases (more on the tool selection phase is available in Vincent et al. [2012], which, unlike the current study, included implementation sites that had yet to select an assessment tool). Further, agencies should prioritize the necessary resources for this purpose. This includes personnel (e.g., which staff are tasked with this role and providing them time to build relationships and enthusiasm), technology, quality assurance, and research/evaluation.

4. State and/or agency leadership should gather and present to staff the anticipated *positive* consequences of a systematic assessment process, such as allowing staff to build rapport with youths and establish that early in the juvenile justice process. In turn, they should be clear on how that turns into positive outcomes for youths and for the agency itself. This can happen in numerous contexts—introducing each training, in-person site visits to local agencies, webinars, pre-recorded videos on state or county websites, and written communications through emails and memos. They should also be upfront about changes to routine practice that will come with implementation of a tool and be prepared to effectively answer questions from staff who might be skeptical.

5. States and agencies should work collaboratively with the developers of the risk and needs assessment tool to ensure that they can provide evidence and data from counties or states that previously adopted the tool. This information should be used to demonstrate how the

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tool(s) are likely to perform and to help staff anticipate their potential benefits. They should be specific in terms of how the results will impact supervision and service delivery. States and agencies can show how aggregate data have been used in other counties or states, and how it could potentially be used in their state or county.

6. Relatedly, many of the obstacles to fully embedding risk and needs assessments come after initial implementation with application of the risk and needs assessment information to case disposition, supervision, and treatment decisions. "Optimal use" cases from peers may be more effective than statistical data in convincing skeptical agency personnel or even reassuring those who are more enthusiastic but would like to improve practice. Video testimonials, eventually featuring their own staff, could be used as well.

7. Researchers and champions for assessment systems should be forthright about the limits of actuarial prediction (e.g., risk and needs assessments are not an 'end-all-be-all' solution, which is why overrides are allowed and expected). During this process, staff should able to voice their concerns and administrators should be responsive to those concerns.

8. Agencies should capitalize on enthusiastic staff members who are available to be champions of the initiative. These champions will act as influencers for other staff who have not bought in to the assessment process, are new to the agency, or in an agency that has not yet adopted the tool and process. They should be encouraged to become trainers, and/or part of ongoing quality assurance processes. These staff can then present at unit and staff meetings to continue to build staff support.

9. Allow staff and stakeholders who will not be responsible for conducting the assessments to attend trainings if they so desire. This will capitalize on their natural buy-in and increase institutional knowledge about the assessment process. Consideration for whom these staff and stakeholders may be was also mentioned in the 'Planning/Pre-training' recommendations section, as this may require additional resources and foresight. This falls in line with Vincent et al.'s (2012) finding that buy-in from judges was instrumental for the success of assessment implementation.

10. The individuals who conduct and use the assessments will inevitably have valuable insight into the process and identify questions that perhaps were not considered in planning and initial roll-out. As such, agencies should be open to staff feedback and be willing to adapt policies, procedures, and practices according to feedback as appropriate, while maintaining general adherence to evidence-based practices around the assessment.

11. Leadership should be mindful of the unique professional roles within an agency and plan for how this may impact staff perceptions of the tool. While some staff are supervisors, and therefore may have more 'ownership' over the assessment tool and its associated outcomes, others (e.g., frontline, or non-supervisory treatment staff) may not have this sense of ownership and may need time to adjust to the assessment. Agencies should develop a strategy to foster 'ownership' of the risk and needs assessment with those who are not in supervisory roles.

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12. Demonstrating an ongoing focus on ensuring the tool is accurate should help alleviate some staff concerns about validity and reliability. Continued training and QA are essential to these efforts.

Implementation and Usage Practices

1. Those in leadership positions should identify key elements of the state/county juvenile justice context and be prepared to adjust implementation strategies accordingly (Sullivan, 2019). For example, some states have a centralized juvenile justice system, while others do not. Those states with a decentralized system that want to adopt a statewide risk and needs assessment may have to be more persuasive, or somehow incentivize, the case for the assessment, providing training, and implementing JRNA in juvenile justice processes.

2. A data entry and management system should not serve as a reason to impede buy-in for the assessment. As such, before the roll-out, the system should be tested by likely users of the tool to ensure a user-friendly interface. This should include consideration of the interaction of the assessment system and existing case management and information storage tools.

3. Agencies should strive to adopt and use an information-management system around the tool as that will ease information sharing across agencies and collect case-level and aggregate data. It is important to determine who should have access to the system and to ensure that data are being entered, examined, and results shared with personnel and stakeholders according to policy and practice guidelines.

4. The longer (i.e., non-screener) OYAS assessment tools studied here have responsivity areas that staff can mark as either a strength or a barrier. Current training practices often treat these as optional. However, these should not be treated as optional and staff should be trained to fill out responsivity information in the assessment to optimize use of assessments. Further, as needed, they should routinely use additional responsivity assessments and work to match youths to staff and/or services based on these factors.

5. Assessment results should be shared with treatment providers and all appropriate stakeholders. Sharing this information helps ensure that stakeholders see themselves as partners who are operating from the same base information. Information sharing should be systematic, such as allowing these partners shared access to the automated system. Alternatively, agencies should be provided hard copies of the relevant assessment results at the time of referral, which may come in the form of the assessment itself, pre-disposition reports that include the assessment information, or treatment referral packets. Given the nature of juvenile justice populations, this should occur in a thoughtful way so as not to compromise the youths' ability to change due to labels or stigma that might be attached to certain assessment information.

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6. Another extremely beneficial practice that was largely missing from the current report was using the assessment data to make data driven decisions. As such, planning for this and assisting local agencies with aggregating their own data would help ensure full use of and risk and needs assessment process. For example, providing aggregate data results by county with examples for its potential uses (e.g., specialized units or caseloads, justifying the reallocation of resources to fit agency strategy, or developing referral sources in a particular area based on the needs of youths).

7. OYAS information may be used for reasons other than those specifically outlined in past research, provided that they align with evidence-based practices. This may help to increase the embeddedness of the assessment within an agency. For example, assessment information can be used to interface with the youths' guardians or in determining rewards and sanctions based on progress in treatment or specialized programming.

Monitoring

Once staff are trained on the risk and needs assessment and usage practices are in place, it is necessary to monitor the daily activities of staff via QA processes which were decidedly missing in the current study. Many interviewees and survey respondents across the states noted concerns about validity and reliability and this may be a direct result of that state of affairs. The quality assurance processes that were named were more reminiscent of supervisorial tasks related to meeting deadlines, and not the quality of the information gathering process. While agencies provided clear examples of buy-in tactics and usage practices at their agencies, there QA practices were less common. Systematic QA processes are essential for effective implementation and sustainability thereafter. Agencies implementing JRNA should maintain a focus on tangible youth and agency-level goals and related quality controls rather than succumbing to bureaucratic drift in monitoring (Warner & Havens, 1968).

Quality Assurance Processes and Local Validation

1. State-, county-, and agency-level administrators who monitor the rollout of the assessment process should remain close to the frontline work and be reachable and responsive to staff concerns. For example, at the county level, Chief POs, directors, managers, and supervisors will be central in establishing and maintaining these connections. Additionally, focus groups or meetings with state-, county-, and facility-level administrators, line staff, and stakeholders will facilitate this type of open communication.

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2. QA tasks should go beyond the managerial tasks of a supervisor (e.g., making sure reassessments are completed by a certain date). These tasks should include checks on the integrity of the assessment process, such as whether it is being conducted properly (i.e., is it a valid assessment?), and whether the assessment information is being used to make informed decisions about youth cases (e.g., supervision level, case planning, treatment referrals). These should reflect considerations of practice at both the individual staff and agency levels.

3. Formal quality assurance efforts should take place to ensure the JRNA is being carried out correctly, that items are scored accurately, and the assessments are a reliable indicator of a youth's risk level. In order to boost interrater reliability, computerized learning modules could be developed and required for each certified assessor. These modules should use scoring vignettes and provide explanations for each item not scored correctly, before prompting the user to score it correctly.

4. After acceptable interrater reliability levels have been achieved, validation (both at the state and local level) should be planned for and conducted. Planning should involve realistic time frames for completion. As validation occurs, the results should be clearly communicated to staff. This should include areas for further development and concrete steps for continuous quality improvement.

5. Agencies should create a mechanism for receiving and answering staff questions in a timely and consistent fashion. This could be accomplished through the establishment of an OYAS task force that includes members from agencies at various decision-points in the juvenile justice process, and creating a frequently asked questions document that is updated and available to all staff to consult as needed. Should agencies have an automated system, these questions can be added to the code book (which would ideally "pop up" as a staff member scrolls over the question).

6. Agencies should consider their ability to provide one "point-person" for all QA questions or concerns, though QA processes can and should be carried out by a team of individuals. Having one point person may streamline the process and help ensure consistency in responses.

7. States and local agencies should anticipate and plan for a potential drop in enthusiasm for the assessment after its initial implementation. Turning a new process into a daily practice requires time and effort. Administrators should recognize that the positive impact or usefulness of the tool may not be initially felt by frontline staff, and continuing with consistent messages and identifying and highlighting success stories will be key to furthering buy-in.

8. QA practices should be clearly delineated to ensure the related policies and procedures regarding information usage are being met. For example, supervisors may be tasked with reviewing a certain percentage of case plans for each staff member for content and quality.

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9. Training on basic data interpretation and mapping to court and corrections inputs/outputs should be developed in order to optimize agency-level usage and planning using aggregate risk and needs assessment and case outcome information.

Future Research and Evaluation

Many of the recommendations above are predicated on a strong and comprehensive evidence base for the implementation and use of JRNA. Research on the implementation of risk and needs assessment tools is still minimal relative to the amount of attention focused on the association between risk classification and recidivism (i.e., "predictive validity"). This leaves an important gap in the evidence-base as understanding implementation is a major element of successfully translating such research into practice—especially when the objective is to alter decision-making practice in a complex juvenile justice eco-system. In that context, we also make a series of recommendations for the research and evaluation community who can indirectly inform the effective implementation and use of risk and needs assessment in the juvenile justice system. Building on the recommendations for Training, Usage, and Monitoring above, we add several recommendations for Future Research and Evaluation:

1. Researchers should use a variety of methods to both objectively identify markers of good practice and areas that requires improvement and to understand the perspectives of those in the field who must administer and make decisions based on the information from these tools. Full population data collected from the assessment system can be useful in providing a global view of an agency's caseload to help identify patterns of need and predict outcomes of strategic shifts. At the same time, narrative data on cases and perspectives of juvenile justice personnel can be beneficial in identifying how that information impacts case decisions and the day-to-day work in juvenile justice.

2. Researchers must better balance answering global and more localized questions about JRNA. While studies show that structured assessment tools work in a general sense, this investigation and another recent OJJDP-funded study (see Baird et al., 2013) suggest a need to look more deeply at questions beyond simply whether risk assessment results are correlated with recidivism. A 360° evaluation agenda for JRNA would include a host of different types of validity and reliability studies (e.g., assessment of domain-level integrity, optimal scoring protocols). The next generation in applied risk and needs assessment in the juvenile justice system seems to be focused on use of this information for treatment matching and monitoring of change. Those areas have not

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been covered all that thoroughly in the research to date and therefore more studies using both case and variable based methods is necessary to develop a viable evidence base to inform effective practice at that level.

3. It is essential to study JRNA as a series of interrelated parts as they are embedded in the juvenile justice system. In this way the study of risk and needs assessment must be more aware of the implementation context and understand the mechanisms and outcomes associated with JRNA. In particular, we recommend more studies using varied methods to assess the underlying logic model of JRNA, which assumes a link between the risk assessment, decisions about disposition and treatment, and justice and developmental outcomes. It is also important to determine how that process plays out in different agency environments—especially relative to caseload size and resource restrictions. Further investigations of that sort would also be beneficial in potentially confirming (or not) our findings regarding risk-treatment matching processes in the current data.

4. Practice-informed research should evolve to ensure that organizations have the tools to take next steps in implementation and use of JRNA. This might include more attention to examining case studies to better understand the (in)effective application of the information gleaned from the assessment process. Presently, much of the information on risk and needs assessment is based on the average case and therefore may not hold as much use to practitioners as researchers might hope. Additionally, data driven decision making has increasingly taken hold in justice organizations. With that in mind, it would be useful to develop research focused on effective agency-level use of risk and needs assessment data for organizational planning and continuous quality improvement.

5. Validation research should more thoroughly consider usage questions associated with the subpopulations that are involved in the juvenile justice system and be sure to conduct both predictive and measurement validity research on relevant groups. Some of this work is now underway, but—in light of other juvenile justice initiatives such as trauma-informed intervention—it is important to include females, minority youths who are disproportionately represented in the system, and youths at different developmental stages and ages. Researchers should also undertake more intensive study of prediction errors in their samples to fine-tune risk models and scoring systems. This more focused analysis becomes increasingly important as agencies attempt to map risk and needs information from particular domains to treatment planning and monitoring. This is not simply an academic question as data collected in this study show that the strength of evidence in these areas may have a downstream impact on practitioners' perceptions and use of the tools. Some respondents used "researcher" language in raising concerns about validity and reliability. This was surprising, but perhaps should not have been given the degree to which recent juvenile justice initiatives have been informed—at least nominally—by research.

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6. Building on the previous point and our findings in the treatment matching mediation analyses, validation studies of juvenile risk and needs assessments have been heavily focused on recidivism as opposed to holistically considering the assessment process in evaluating the validity, reliability, and utility of tools. If the latest generation of tools is meant to inform case management via treatment and service allocation, it is essential that research on these tools considers questions that often sit in the periphery right now. For example, at least in research and development, subdomain scores on general risk tools should be considered against relevant criteria that can speak to their ability to inform an understanding of degree of need in that specific area (e.g., a substance use risk domain could be checked against a full substance abuse inventory to check for at least partial recovery of information to establish criterion validity). From there this could be checked against the degree to which that process and related treatment can effect change in that level of need.

7. The results from this study also highlight three other more specific areas for future research. First, JRNA tools are intended in part to guide referrals to treatment. However, indicators in general risk and need assessment tools are limited in scope and not always specific to key need areas. Research should examine whether specialized need assessments should be conducted by court actors, at the time the JRNA flags the need area, or if these are better assessed by referring a youth to a treatment provider. Essentially, is there a preferred practice in terms of youth benefits and system effectiveness and efficiency? A second question pertains to the comprehensive written policies for JRNA in terms of how those may drive practice. In the vein of previous implementation science, researchers should study the degree to which such formal factors impact buy-in and sustainability relative to more process-oriented approaches. Third, elements of the juvenile justice personnel data raise questions about the need for more widespread sharing of assessment information across different points of the juvenile justice system (and its partners). More research is needed about the possible benefits and costs of more widespread sharing of assessment information about youths.

Greater attention to these and related questions would help to create a more comprehensive and rigorous evidence base for the next generation of applied risk and needs assessment in the juvenile justice system. Many of the methods are in place to conduct these studies effectively, which means there is a great deal more that can be learned about the implementation, use, and outcomes of JRNA in the near future.

Conclusion

Gaining a more comprehensive view of JRNA as it is occurring in the field and its impact on youths' cases was the overarching goal of this study. In turn, we endeavored to provide

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practitioners, policymakers, and researchers with some useful insights about that process—which has been the subject of a lot of research but surprisingly narrow in the scope of questions asked. As a state or agency is adopting new tools, or looking to improve their current risk and needs assessment processes, they should consider key implementation facilitators: careful planning that includes establishing support for the risk and needs assessment amongst a variety of stakeholders, creating realistic but detailed usage and implementation guidelines and policies and procedures, sharing information with all those who will be impacted by the use of the assessment, sufficient training and post-training support, and beneficial quality assurance practices that will help ensure the risk and needs assessment is completed correctly and used to its full potential. In usage and process studies, we found that use of JRNA often reflected what was intended, but at other times the picture was more complicated and suggested areas for further consideration and improvement. This is only natural as a field adopts and takes an approach to scale. It also reflects the tremendous variability that is likely to occur across States and local agencies.

The ubiquity of this practice in the current juvenile justice system—and the fact that it is a platform for other decisions and initiatives—underscores its possible impact and suggests that it is important to continually evaluate and improve these practices as they are applied to youths. Collectively, the findings from the study—both supportive and critical—offer some insight on how risk and needs assessment can be used as an engine to help generate better outcomes for youths and the juvenile justice agencies whom they encounter.

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Appendices

Appendix A. Juvenile Justice Personnel Semi-Structured Interview Guide

Agency & Staff Characteristics

To start, we want to get a sense of your role in the agency/facility and the practices of the agency/facility.

1. What is your job title?
2. How long have you worked for this agency/facility?
3. Could you tell me about the types of tasks you regularly perform in your role or describe your daily responsibilities as _____ [INSERT JOB TITLE HERE]?
4. Please describe your involvement with the OYAS used by your agency/facility.
5. In your opinion, how would you characterize the agency's/facility's current status with respect to the assessment process? On a scale from 1 to 5, with 1 being at a "planning" stage and 5 being "full implementation," how would you rate the agency's/facility's current status with respect to the assessment process?
    a. Are there particular benchmarks that you have achieved or things that you have observed that led you to this response?
6. Please tell me a little bit about your agency/facility.
7. Can you describe the type(s) of youths served by this agency/facility?
8. What do you view as the most challenging cases for your agency/facility?
9. What specific programs does *your* agency/facility offer?
10. Does your agency use referral agencies/facilities to provide treatment services to youths? If so, please describe the type(s) of treatment services these agencies/facilities provide.
11. What is the approximate number of youths served by this agency/facility per year?
12. Does your agency/facility have specialized caseloads/programs?

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☐ No ☐ Yes ☐ Don't Know

a. If yes, what types of specialized caseloads/programs do you have? [CHECK ALL THAT APPLY]

☐ Drug/Substance Abuse Offender	☐ High Risk
☐ Sex Offender	☐ Truancy
☐ Family	☐ Electronic Monitoring
☐ Mentally Disordered	☐ Violent Offender
☐ Diversion	☐ Other (*please specify*)
☐ Low Risk	

13. What is the process by which juveniles reach your agency/facility (i.e., how are youths referred to your agency/facility or how do they get to your agency/facility)?

14. Do you think this process runs smoothly?

***Note other concerns raised in this section:*

General Agency/Facility Approach to Youths Assessment

The first few questions in this section will focus on your general thoughts regarding risk and needs assessment. The remaining items will focus on your agency's/facility's broader risk and needs assessment practices specific to the OYAS.

15. On a scale from 1 to 5, with 1 being you do not at all agree and 5 being you completely agree, rate your level of agreement with the following statement: risk and needs assessments enhance fairness in decision-making in the juvenile justice process (i.e., reduces bias)?

    a. What are some reasons that you rated this question at this level?

16. On a scale from 1 to 5, with 1 being you do not at all agree and 5 being you completely agree, rate your level of agreement with the following statement: the OYAS benefits the youths in your agency/facility?

    a. What are some reasons that you give that value?

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17. On a scale from 1 to 5, with 1 being you do not at all agree and 5 being you completely agree, rate your level of agreement with the following statement: the OYAS benefits your agency/facility?
    a. What are some reasons for your level of agreement (disagreement) with that statement?
18. Please describe your agency's/facility's history using risk and needs assessment tools prior to their implementation of the OYAS.
19. From your standpoint, how did the agency/facility first get involved with the OYAS assessment process? [MONTH AND YEAR IMPLEMENTED]
20. Did anyone tell you the reasons for using the OYAS? If so, what are some of those reasons?
21. Do you or other members of the agency/facility do anything specific to facilitate staff buy-in? If so, please explain what was done?
    a. In what ways did the buy-in process work/not work?
22. On a scale from 1 to 5, with 1 being not at all supportive and 5 being very supportive, how would you rate overall level of staff support for use of the OYAS in processing, supervising, managing, and/or treating youths?
    a. What are some reasons that you would rate the support as a ____?
23. How much attention is given to the OYAS assessment at formal staff meetings?

    ☐ Every Meeting ☐ Occasionally ☐ Seldom ☐ Never
24. How frequently does the OYAS assessment come up in informal meetings?

    ☐ All of the time ☐ Occasionally ☐ Seldom ☐ Never
25. What are some of the concerns raised by staff about the OYAS?
    a. How are such concerns typically handled (i.e., how do you address these concerns raised by staff about the OYAS)?

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26. Generally, what are the strengths of the OYAS and where is there room for improvement?

***Note other concerns raised in this section:*

Implementing the OYAS

The following questions are related to implementation. By implementation, we are talking about a variety of concepts related to how the OYAS *was rolled out and is being maintained including training, quality assurance, and challenges you have faced during implementation.*

27. Were there particular resources introduced to help ease or promote the rollout of the OYAS?

28. What challenges has your agency/facility faced concerning implementation of the OYAS (e.g., technological, training, reassessment processes, override processes)?

    a. How could the implementation of the OYAS be improved?

29. If an agency had to roll out a new assessment system in the future, what would you recommend they do differently?

30. Have there been any modifications to usage or implementation practices within the agency/facility since the OYAS was first introduced?

    ☐ No ☐ Yes

    a. If so, could you give me some examples?

31. Are staff members formally trained on how to use the OYAS?

    ☐ No ☐ Yes

    a. If yes, could you briefly describe the process?

    b. Is certification required as part of this process?

32. Is this training required of everyone, even if they do not personally administer the tools?

33. Is re-certification required?

    ☐ No ☐ Yes

    a. If so, how frequently must staff members be re-certified?

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b. How does someone get recertified as an OYAS assessor?

34. Are there any quality assurance processes that your agency/facility engages in concerning the OYAS?

35. Has the agency/facility looked at all of the OYAS data and used that to make any agency/facility wide decisions? (i.e., aggregate data)

    a. If so, please describe this process.

36. Have you had any experience working with the *automated* OYAS system (i.e., the online web-based OYAS system)?

    ☐ No ☐ Yes

    a. If so, what do you like most about the automated system?

    b. What do you like the least about the automated system?

    c. Do you have other databases/automated systems (e.g., case management systems) that are integrated with the OYAS automated system? If so, has this "all-in-one" system been beneficial? Why or why not?

***Note other concerns for this area:*

Youth Assessment Practices

This section is related to which tools you use and how you use the assessment information.

37. Does the agency/facility have written documentation regarding the policies and practices of using the youths assessment tools?

    ☐ No ☐ Yes ☐ Don't Know ☐ N/A

    a. If yes, how closely do you follow this written documentation?

38. Which OYAS assessment tool(s) does your agency/facility use (*please check all that apply*):

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☐ Diversion Tool ☐ Residential Tool ☐ Disposition Tool

☐ Detention Tool ☐ Reentry Tool ☐ Don't Know

☐ N/A

a. How and when are the tool(s) used?

39. Which OYAS assessment tool(s) does you personally administer (*please check all that apply*)?

☐ Diversion Tool ☐ Residential Tool ☐ Disposition Tool

☐ Detention Tool ☐ Reentry Tool ☐ Don't Know

☐ N/A

40. What is the average time it takes to complete the interview?

41. In addition to what the youth tells you in the interview, what other sources of information do you consult when scoring the assessment?

a. What priority do you give these sources of information?

42. How is the OYAS used in your agency/facility/court?

a. Do you believe that the information from the OYAS is a valuable part of the decision-making process? Why or why not?[83]

43. Do you or does your agency/facility use the OYAS assessment information to…

	No	***Yes***	***Don't Know***	***Explanation:***
a. Match youths to staff ?	☐ No	☐ Yes		
b. Allocate resources to particular parts of the agency/facility?	☐ No	☐ Yes	☐ DK	

[83] The interview guide was revised after the State 1 interviews had already begun. Therefore, eight State 1 interviewees answered the following instead: "Do you think the OYAS provides valuable information?"

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c. Develop specialized caseloads?	☐ No	☐ Yes	☐ DK
d. Determine supervision level?	☐ No	☐ Yes	☐ DK
e. Measure youths progress in reducing risk and needs?	☐ No	☐ Yes	☐ DK
f. Match youths to appropriate treatment services?	☐ No	☐ Yes	☐ DK
g. Assist in diversion / disposition / release decisions?	☐ No	☐ Yes	☐ DK
h. Does your agency/facility use the assessment information for any other purposes? If so, please elaborate:	☐ No	☐ Yes	☐ DK

44. Does the agency/facility allow for overrides?

☐ No ☐ Yes

a. If yes, what does the agency/facility allow to be overridden?

b. If yes, what are common reasons for overrides?

c. If yes, what is the process for overriding an OYAS?

d. Are there particular types of juvenile offenders or specific offenses that must be overridden regardless of the results of the OYAS (e.g., sex offenders, gun spec. cases, first time offenders, etc.)?

☐ No ☐ Yes

1. If so, what process is used for determining that?

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e. Based on your understanding, roughly what percentage of cases are overridden?

f. Is there anything specific in the OYAS that you perceive as a limitation that leads to these overrides?

45. Are there particular types of juvenile offenders or specific offenses that you do not conduct an OYAS on at all?

☐ No ☐ Yes

a. If so, please explain this process further.

46. Do you use any additional assessments aside from the OYAS?

☐ No ☐ Yes

a. If yes, what assessment(s)?

b. How do you use the results of these additional assessments?

47. Does the OYAS assessment provide useful information regarding a juvenile's *criminogenic needs*?

a. In what ways is the information about specific criminogenic need areas used?

48. Does the OYAS assessment provide useful information regarding a juvenile's non-criminogenic needs?

a. In what ways is the information about specific non-criminogenic need areas used?

49. Do you incorporate both the youth's criminogenic and non-criminogenic needs into their case plan?

☐ No ☐ Yes

a. If so, how is this done?

50. Does the agency/facility have a policy in place for youths reassessment?

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☐ No ☐ Yes

a. If so, what is the policy?

b. Is this reassessment policy consistently followed throughout the agency/facility (i.e., is there a process in place to ensure that staff follow the reassessment process and an assessment is completed for every youth)?

c. Are there any instances when a youth would leave the agency/facility without a reassessment?

51. Does your agency/facility share OYAS assessment information/results with other stakeholders, agencies, and/or departments?

☐ No ☐ Yes

a. If so, who receives this information and what specific information is shared?

b. Are there any issues with sharing this information? If so, explain.

c. If the agency/facility does not share assessment information/results with other stakeholders, agencies, and/or departments, do you know why they do not do this?

52. Based on how your agency/facility/court currently use the OYAS, what do you see as the strengths?

53. Based on how your agency/facility/court currently use the OYAS, what do you see as weaknesses?

54. Given everything we have discussed, I'd like you to rate your overall satisfaction with the OYAS. On a scale from 1 to 5, with 1 being you are not satisfied and 5 being you are completely satisfied, please rate your overall satisfaction with the assessment system.

a. What are some reasons that you would rate your overall satisfaction a____?

55. Is there anything else that you want to tell me about the OYAS that I did not ask you?

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Appendix B. Juvenile Justice Personnel Web-Based Survey[84]

1. Which of the following best describes your current job title? *(please select only one)*

☐ State Level Administrator ☐ Probation Officer
☐ Judge/Magistrate ☐ Parole Officer
☐ Supervisor ☐ Detention Officer
☐ Intake Officer/Intake Staff ☐ Case Manager
☐ Unit Manager ☐ Court Administrator
☐ Other (specify) _____

2. Do you administer any of the OYAS instruments? (Yes/No)
If No, continue to question 7. If Yes, answer questions 3-6.

3. Which of the following OYAS assessment tool(s) do you administer regularly? *(check all that apply)*

☐ Diversion Instrument ☐ Residential Instrument
☐ Detention Instrument ☐ Reentry Instrument
☐ Disposition Instrument

4. Have you personally conducted reassessments of youths using any of these tools? (Yes/No)

5. If yes, approximately how often do you administer these assessments?

☐ Once a day or more frequently ☐ Once a week
☐ Once every two weeks ☐ Once a month
☐ Less than once a month

6. On average, how long does it take to administer the OYAS tool(s)?

Assessment Tool	***Minutes***	***N/A***
Diversion		
Detention		
Disposition		

[84] This version of the web-based survey most closely reflects that which was distributed to most of the survey respondents. Judges/magistrates received a more streamlined version of the survey that accounted for their unique relationship to the OYAS (i.e., they do not administer the tool or carry a youth caseload, but they likely use the OYAS information in case decision-making). Questions pertaining only to judges/magistrates are noted. Those identifying as Court Administrators also received a number of skip patterns, based on the relevancy of a given question to their job role.

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Assessment Tool	*Minutes*	*N/A*
Residential		
Reentry		

7. Do you or your agency use the OYAS assessment information to…

	Explanation:
i. Assign staff to cases? (Yes/No)	
j. Allocate resources to particular parts of the agency/facility? (Yes/No)	
k. Develop specialized caseloads? (Yes/No)	
l. Determine supervision level? (Yes/No)	
m. Measure youths progress in reducing risk and needs? (Yes/No)	
n. Match youths to appropriate treatment services? (Yes/No)	
o. Assist in diversion / disposition / release decisions? (Yes/No)	
p. There is a quality assurance process concerning the tool(s)? (Yes/No)	
Does your agency/facility use the assessment information for any other purposes? (Yes/No)	

8. Have you received formal training on how to use the tool(s)? (Yes/No)

9. Were you formally certified on the tool(s) (i.e., were you required to pass a certification test in order to conduct the OYAS assessment)? (Yes/No)

10. Have you received any retraining on the tool(s) (i.e. attended a recertification or booster session)? (Yes/No)

    a. If yes, approximately how often do these trainings occur?

☐ Never ☐ Once per year
☐ More than once per year ☐ Once every two years
☐ Once every three years ☐ Once every four years

11. On a scale from 1 to 5, with 1 being you are not satisfied and 5 being you are completely satisfied, please rate your overall satisfaction with the assessment tool(s).

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1	2	3	4	5
Not Satisfied				*Completely Satisfied*

Optional Comments:

12. Do you or your agency/facility conduct additional assessments besides the OYAS? (Yes/No)
    a. If yes, please list the additional assessments used by you and your agency/facility:

13. Does your agency/facility allow for overrides concerning supervision level and/or risk level (e.g. professional discretion when raising/lowering youth's risk levels)? (Yes/No)

14. Is there a policy concerning overrides (i.e., written documentation)? (Yes/No)

15. Approximately what percentage of cases are overridden in your agency/facility?

16. Approximately what percentage of cases have you overridden?

17. Please list the types of juveniles where professional discretion or override is most often used (e.g. sex offenders):

Section I: Implementing the OYAS

18. Please indicate your level of agreement with the following statements related to the OYAS assessment results *(choose one):*

The Youth Assessment Tool:	***Disagree Strongly***	***Disagree***	***Uncertain***	***Agree***	***Agree Strongly***
a. Helps to determine appropriate interventions based on youths' risk levels	☐	☐	☐	☐	☐
b. Helps identify youths' criminogenic needs	☐	☐	☐	☐	☐
c. Helps to make treatment planning decisions for youths	☐	☐	☐	☐	☐
d. Helps establish a common language regarding youths' risks and needs for our agency/facility	☐	☐	☐	☐	☐
e. Reduces our agency's/facility's use of overrides by considering youths' risks, needs, and barriers to supervision and/or treatment services	☐	☐	☐	☐	☐
f. Increases consistency in rules, policies, and procedures regarding assessment practices	☐	☐	☐	☐	☐

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The Youth Assessment Tool:	***Disagree Strongly***	***Disagree***	***Uncertain***	***Agree***	***Agree Strongly***
g. Reduces variation in decision-making across individual staff and juvenile justice agencies/facilities	☐	☐	☐	☐	☐
h. Helps our agency/facility make proper decisions regarding youths' supervision levels	☐	☐	☐	☐	☐
i. Reduces bias in juvenile justice decision-making	☐	☐	☐	☐	☐
j. Helps our agency/facility determine whether a youth is appropriate for community supervision versus residential placement	☐	☐	☐	☐	☐

19. Please indicate your level of agreement with the following statements related to the *usefulness* of the OYAS *(choose one):*

The OYAS is useful for…	*Disagree Strongly*	*Disagree*	*Uncertain*	*Agree*	*Agree Strongly*
a. Assigning staff to cases	☐	☐	☐	☐	☐
b. Allocating resources to particular parts of the agency/facility	☐	☐	☐	☐	☐
c. Developing specialized caseloads	☐	☐	☐	☐	☐
d. Determining youths' supervision levels	☐	☐	☐	☐	☐
e. Measuring progress in addressing youths' risks and needs	☐	☐	☐	☐	☐
f. Matching youths to appropriate treatment services	☐	☐	☐	☐	☐
g. Assisting in diversion, disposition, placement, or release decisions	☐	☐	☐	☐	☐
h. Providing information to develop comprehensive case plans	☐	☐	☐	☐	☐

19a. Does your agency/facility use the OYAS for any other purpose? If so, please describe.

20. Please indicate your level of agreement with the following statements related to *implementing* the OYAS in your agency *(choose one)*:

	Disagree Strongly	***Disagree***	***Uncertain***	***Agree***	***Agree Strongly***

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a. The use of the OYAS has made my job easier	☐	☐	☐	☐	☐
b. The OYAS benefits youths	☐	☐	☐	☐	☐
c. There is staff support for implementing the OYAS	☐	☐	☐	☐	☐
d. There are clear guidelines for when to use the OYAS	☐	☐	☐	☐	☐
e. There is a protocol for how to use the OYAS	☐	☐	☐	☐	☐
f. Staff buy-in for the OYAS is hard to achieve	☐	☐	☐	☐	☐
g. Formal training in the OYAS is *not* routinely offered	☐	☐	☐	☐	☐
h. Implementation of the OYAS is *not* consistent	☐	☐	☐	☐	☐
i. Finding resources to properly address the needs identified from the OYAS is difficult	☐	☐	☐	☐	☐
j. The OYAS instruments are easy to read, interpret, and use	☐	☐	☐	☐	☐

21. On a scale from 1 to 5, with 1 being you are not confident and 5 being you are completely confident, please rate how confident you are that the scores produced by the OYAS tools accurately represent the likelihood of a juvenile engaging in delinquent behavior again.

1	2	3	4	5
Not Confident				*Completely Confident*

Optional Comments:

22. On a scale from 1 to 5, with 1 being you are not confident and 5 being you are completely confident, please rate how confident you are that an offender will receive the same score no matter which staff member conducted the OYAS assessment.

1	2	3	4	5
Not Confident				*Completely Confident*

Optional Comments:

23. Based on how your agency/facility currently uses the OYAS, what do you see as the strengths in the process? *(Please list up to 3 strengths)*

24. Based on how *your* agency/facility currently uses the OYAS, what do you see as the limitations in the process? *(Please list up to 3 limitations)*

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25. Please provide any specific suggestions for improving the OYAS and/or process in your agency/facility:

26. Do you use the state's automated system for the OYAS? (Yes/No)
If No, continue to question 28. If Yes, answer question 27.

27. On a scale from 1 to 5, with 1 being you are not satisfied and 5 being you are completely satisfied, please rate your overall satisfaction with the OYAS automated system.

1	2	3	4	5
Not Satisfied				*Completely Satisfied*

Optional Comments:

Section II: Applying the OYAS

28. The following depicts a hypothetical case. Please score and comment on the vignette using the provided OYAS tool. Click on the following link to access the scoring guide: *scoring guide* [NOTE: ONLY THOSE WHO ADMINISTER THE OYAS ARE ASSIGNED A VIGNETTE. RESPONDENTS ARE GIVEN ONE VIGNETTE AT RANDOM.]

Vignette Option 1:
Shelly is a 16-year-old female coming before the court on her 3rd adjudication. Her previous adjudications are for theft of means of transportation and shoplifting. She was successfully released from probation 4 months ago. Her first contact with the police was at age 13, but the police warned her and let her go. Her first referral to the juvenile court was at age 14, for shoplifting. She was placed on probation which she successfully completed. At age 15, she reoffended and was referred for the theft and continued probation.

1.1) Documented Contact with the Juvenile Justice System
0 = 14 or older
1 = 13 or younger

1.2) Previous Adjudications
0 = No priors
1 = 1 prior adjudication
2 = 2 or more priors

Total:_____

Vignette Option 2:
Anthony and his peers engage in physical fights with other teens when they feel bullied by others. Engaging in these fights have lead Anthony and his peers to get into trouble. During your interview with Anthony, he reports that he has 10 close friends, all of which have been in trouble with the law. When you inquire further about his troubled friends, you determine that 9

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of them have been officially arrested. Anthony further reports that 3 out of 10 of these friends have been arrested and detained with him. Anthony explains the altercations are with other teens they go to school with. He feels that these other boys disrespect him and his friends and he wants to make sure they stand up for themselves. Anthony reports he and his friends also work together to steal cars. They have stolen about 20 cars to sell them for parts. He also reports that 6 of his friends have been suspended from school for 3 days for fighting. He says that his friends are important but that he sees himself as more important.

3.1) Friends Fight
- 0 = Friends do not fight
- 1 = Friends fight

3.2) Friends Arrested
- 0 = Less than 50%
- 1 = 50% or more

3.3) Friends/Family Associated with Gang Activity
- 0 = No
- 1 = Yes

3.4) Arrested with Friends
- 0 = No
- 1 = Yes

3.5) Friends Susp./Exp. from School
- 0 = Less than 50%
- 1 = 50% or more

3.6) Friends are Important
- 0 = Friends are very important
- 1 = Friends are not very important

Total:_____

Vignette Option 3:

Hank is currently on probation for possession of marijuana. Hank indicates that he can stop using any time. He is asked by his friends to go to the park after school. These are the friends Hank hung around with when he used to smoke pot. He doesn't really think about it and agrees to go. Hank walks to the park with his friends, but once he gets there, he thinks about the fact that he is on probation and that he has a drug test in a couple days. He decides that he does not want to look bad in front of his friends so he goes ahead and smokes the weed but tries to make an excuse and leaves as soon as he can.

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5.1) Can identify triggers/high risk situations
0 = Identifies high risk situations
1 = Does not identify high risk situations

5.2) Weighs pros/cons of a situation
0 = Weighs the pros/cons of a situation
1 = Does not weight the pros and cons of a situation

5.3) Pro-social decision making
0 = Demonstrates pro-social decision making
1 = Does not demonstrate pro-social decision making

Total:_____

Section III: Staff Information

Tell us more about yourself. This last section is strictly for descriptive purposes.

29. Gender: (Male/Female)

30. Race:

☐ White ☐ Black or African American
☐ Asian ☐ Pacific Islander
☐ American Indian/Alaska Native ☐ Other (*specify*)_____

31. Ethnicity: (Hispanic/Non-Hispanic)

32. What is your highest level of education completed? *(choose one)*

☐ GED ☐ Bachelor's degree
☐ High school diploma ☐ Graduate degree
☐ Associate's degree

33. If you have a college degree, in what field did you receive your highest degree?

☐ Criminal Justice ☐ Social Work
☐ Psychology ☐ Sociology
☐ Law ☐ Other (*please specify*)_____

34. How long have you been working in the field?

35. How long have you been working at your current agency/facility?

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36. Do you carry a caseload? (Yes/No)
If no, continue to question 40. If yes, answer question 37.

37. How many youths are currently on your caseload?

38. Do you see juvenile delinquency cases? *(Judges/magistrates only)*
If no, continue to question 41. If yes, answer question 39.

39. On average, how many delinquency cases do you see a month? *(Judges/magistrates only)*

40. The juvenile offender population you currently work with includes: *(check one)*
☐ Males ☐ Females ☐ Both ☐ N/A

41. Please provide any additional comments or concerns regarding the OYAS. *(optional)*

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Appendix C. Code Definitions for Personnel-Generated Strengths of the OYAS (Interviews and Surveys)

Code	Definition	Present in Interviews?	Present in Surveys?
1. Helps decision-making or service provision	Any mention of support for the assessment as helpful for guiding/directing the supervision/case management decision-making process (including placement decisions, which needs to prioritize, diversion, treatment referrals, provider collaboration, etc.).	x	x
2. Fair, consistent, or objective	Any mention of support that characterizes the assessment as encouraging fairness, credibility, objectivity, and/or consistency in the supervision decision-making process or quality of service provision.	x	x
3. Identifies needs	Any mention of support that characterizes the assessment as helpful in identifying a youth's needs.	x	x
4. Useful or comprehensive information	Any mention of support that characterizes the assessment as useful and/or comprehensive in gathering information on a youth.	x	x
5. Identifies risk level	Any mention of support that characterizes the assessment as useful for identifying risk score or level.	x	x
6. Establishes baseline and/or monitors progress	Any mention of support that characterizes the assessment as useful in establishing a youth's baseline level of functioning or risk, and/or monitoring youths progress through supervision, treatment, or otherwise.	x	x
7. Easy/clear/quick to administer	Any mention of support for the assessment in that it is widely available, easy to use/access, and/or well-organized or quick to administer.	x	x
8. Helpful with case plans/treatment planning	Any mention of support that characterizes the assessment as helpful in creating case plans. These segments mention case plans or case planning specifically, not just service provision. Any mention of guiding case management priorities is captured instead under the 'helps decision-making/service provision' code.	x	x
9. Evidence-based, validated, or reliable results	Any mention of support for the assessment due to its base in	X	x

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	research/evidence/validation/validity/reliability.		
10. Good implementation, training, or support	Any mention of support for the assessment that characterizes the implementation process, administrative support, training, or supervision as good or valuable.	x	x
11. Helpful (NOS)	Any mention of support that characterizes the assessment, assessment process, or its results as generally helpful, but does not indicate a specific reason for why, or in what capacity (i.e., is 'not otherwise specified' [NOS]).	x	x
12. Dictates level of supervision	Any mention of support that characterizes the assessment as useful in identifying the appropriate level of supervision (frequency) or length of supervision (time).	x	Combined with 'dictates risk level' code.
13. Builds rapport	Any mention of support that characterizes the assessment as helpful in establishing practitioner-youth rapport, or involving youths in their own treatment process.	x	
14. Automated system useful	Any mention of support for the assessment that categorizes its automated system as useful. Any mention of the automated case plans are captured instead under the 'helpful with case plans' code.	x	
15. Reduces workload	Any mention of support for the assessment that characterizes it as helpful in reducing the workload.	x	

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Appendix D. Code Definitions for Personnel-Generated Limitations of the OYAS (Interviews and Surveys)

Code	Definition	Present in Interviews	Present in Survey
1. Lack of validity or reliability	Any mention of concern regarding the validity or reliability of the assessment. This includes any mention of uncertainty or subjectivity in scoring, but does not include any mention of concern about sex offenders, which are captured in the 'inaccurate for sex offenders' code.	x	Validity and reliability concerns are both present, but coded separately in the survey data.
2. Items on the assessment	Any mention of concern about specific items on the assessment. This includes the lack of certain items on the assessment.	x	x
3. Poor implementation or training	Any mention of concern about the implementation or training process associated with the assessment. This includes a lack of clarity or communication on policies and procedures regarding the OYAS. Training concerns regarding case planning should be coded as "Difficulty in case planning."	x	x
4. Difficulty in case planning	Any mention of concern about case planning in reference to the assessment. This also includes any concerns with automated system's case plan mechanism, as well as concerns about training specific to case planning.	x	x
5. Time-consuming	Any mention of the concern about the time necessary to complete the assessment interview or scoring process. This does NOT include any concerns about the automated system, which are captured in the "Automated system issues" code.	x	x
6. Inaccurate for sex offenders	Any mention of concern for the accuracy, usefulness, or applicability of the assessment results for youths with sex offenses.	x	x

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7. Utilization	Any mention of concern about the lack of utility for the information gathered from the assessment. This includes assessment information not being used by an agency/facility advantageously.	x	Similar, but unique code used for surveys, see “Poor usage practices”
8. Automated system issues	Any mention of concern regarding the assessment's automated system (e.g., technical issues, user-friendliness issues, etc.). This does NOT include concerns regarding the automated system's case planning mechanism, which are captured in the “Difficulty in case planning” code.	x	
9. Lack of buy-in	Any mention of concern regarding buy-in to the assessment. This can be on behalf of staff members, or parents of the youths.	x	x
10. Youths/family manipulate scores	Any mention of concern regarding the youths or their family lying or purposefully manipulating their score on the assessment.	x	x
11. Other limitation (NOS)	Any mention of concern regarding the OYAS that does not fit in to one of the aforementioned codes.		x
12. Poor usage practices	Any mention of concern that the OYAS information is not used as designed.	Similar, but unique code used for interviews, see “Utilization” above.	x
13. Lack of resources available for treatment	Any mention of concern for a lack of community resources to treat youths (as suggested by OYAS information)		x

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Appendix E. Standardized Results for OYAS Usefulness Confirmatory Factor Analysis

	Estimate	S.E.	Est./S.E.
OYAS Usefulness BY			
Identify criminogenic needs	.79***	.02	36.9
Determining supervision levels	.77***	.02	36.6
Develop comprehensive case plans	.83***	.02	50.9
Determine appropriate interventions	.83***	.02	45.4
Matching youth to treatment	.86***	.01	60.4
Measuring youth progress	.83***	.02	51.9
Diversion/disposition/placement/release decisions	.78***	.02	40.8
OYAS has made my job easier	.76***	.02	34.5
Fit Statistics			
Chi-Square Test of Model Fit	$97.79_{(20)}$***		
Chi-Square Test for Baseline Model	$7464.70_{(28)}$***		
Root Mean Square Error of Approximation	.08		
Confirmatory Fit Index	.99		
Tucker Lewis Index	.99		
Weighted Root Mean Square Residual	.86		
Kaiser-Meyer-Olkin Measure	.93		
Residual Variances			
Identify criminogenic needs	.62	.03	18.5
Determining supervision levels	.60	.03	18.3
Develop comprehensive case plans	.69	.03	25.4
Determine appropriate interventions	.68	.03	22.7
Matching youth to treatment	.73	.02	30.2
Measuring youth progress	.69	.03	26.0
Diversion/disposition/placement/release decisions	.61	.03	20.4
OYAS has made my job easier	.58	.03	17.2

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

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Appendix F. OYAS Administrator Sample Characteristics for Vignette and Usefulness Analysis

Variable		
Gender	*n*	%
Male	175	28.0
Female	279	44.6
Race	*n*	%
White	381	60.9
Non-White	71	11.3
Ethnicity	*n*	%
Hispanic	38	6.1
Non-Hispanic	385	61.5
Job Title	*n*	%
Supervisor	64	10
Probation or Parole Officer	456	73
Intake Officer/Intake Staff	38	6
Other Job Title	101	16
Education Level	*n*	%
GED	1	.2
High School Diploma	10	1.6
Associate's Degree	11	1.8
Bachelor's Degree	315	50.3
Graduate Degree	119	19.0
Work Experience	*n*	%
Years ($\bar{x}$ and *sd)*	14.9	8.4
Retraining	270	43
State	*n*	%
State 1	249	40
State 2	195	31
State 3	182	29

Due to missing data, totals are less than reported sample size (N = 626).

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Appendix G. Overview of Requested Record Data Fields

Data Category	Variable	Variable Description
Youth Information Provided	Youth ID Date of Birth First Name Middle Name Last Name DYS/DOC ID Number SSN Assessment Type County of Commitment Assessment Date Assessment ID	**Youth ID**, **DOB**, **First Name**, **Middle Name**, **Last Name**, **DYS#**, **SSN**, **Assessment Type**, **County**, **Date Updated**, and **Assessment ID** have all been provided as supplemental identifying information.
Focal Offense Information Requested	Arrest or Referral Date	**Arrest or Referral Date** is the date of arrest or referral associated with the assessment date listed in the current spreadsheet.
	First Court Date	**First Court Date** is the date of the youth's first court appearance associated with the offense(s) and the OYAS assessment date listed in the current spreadsheet. If a youth's case was handled informally by the court, the referral date can be used here instead.
	Case Number	**Case Number** is the case number associated with the offense and the OYAS assessment date listed in the current spreadsheet. Note, this variable may not apply if the case has not been filed formally with the court.
	Youth Status	**Youth Status** is whether the youth is active, inactive, successfully completed supervision/program, or was terminated from supervision/ program for highest level offense and OYAS assessment date listed in the current spreadsheet.
	Adjudication Status	**Adjudication Status** concerns whether the youth was adjudicated for the highest level offense associated with the OYAS assessment date in the current spreadsheet.
	Adjudication Date	**Adjudication Date** is the date of adjudication (if applicable) associated with the highest level offense and the OYAS assessment date listed in the current spreadsheet.

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Data Category	Variable	Variable Description
		If a case did not result in an adjudication or was handled informally, please note the date in which the case was disposed of, regardless of the disposition.
	Case Disposition	**Case Disposition** is the initial placement or referral type (e.g., probation, residential placement, diversion, etc.) that was made for the youth associated with the offense and OYAS assessment date listed in the current spreadsheet.
	Name of Treatment/Program Provider	**Name of Treatment/Program Provider** is the name of the *specific provider* or *agency* (e.g., Horizons Recovery Center) that was responsible for providing treatment to the youth associated with the offense and OYAS assessment date listed in the current spreadsheet. If there are multiple treatment/program agencies, please list them all here.
	Name of Treatment/Program	**Name of Treatment/ Program** is the specific treatment or program *name* (e.g., Thinking for a Change, Aggression Replacement Training) that the youth participated in associated with the offense and date of OYAS assessment listed in the current spreadsheet. If there are multiple treatment/program names, please list them all here.
	Type of Treatment/Program Received	**Type of Treatment/Program Received** is the *type* of treatment or program a youth received (e.g., cognitive behavioral, education, substance abuse, etc.) that is associated with the offense and OYAS assessment date listed in the current spreadsheet If there are multiple treatment/ program types, please list them all here.
	Treatment/Program Start Date	**Treatment Start Date** is the date the youth started treatment or was admitted to a program that is associated with the offense and OYAS assessment date listed in the current spreadsheet If there are multiple treatment/program start dates, please list them all here.
	Treatment/Program End Date	**Treatment End Date** is the date the youth ended treatment or was terminated from a

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Data Category	Variable	Variable Description
		program that is associated with the offense and OYAS assessment date listed in the current spreadsheet If there are multiple treatment/program end dates, please list them all here.
	Other Referrals/Sanctions	**Other Referrals/Sanctions** is any other non-treatment referrals or sanctions (e.g., restitution, community service, etc.) associated with the offense and OYAS assessment date listed in the current spreadsheet.
Recidivism Information Requested	Was the Youth Subsequently Arrested for a New Offense(s)?	**Was the Youth Subsequently Arrested for a New Offense(s)?** This question pertains to whether the youth recidivated (i.e., was arrested) *after* his/her OYAS assessment date listed in the current spreadsheet. If the youth was arrested, please list the date of arrest for the highest level of offense in the cell. If the youth was *not* arrested, please simply put "no" in the cell.
	Was the Youth Subsequently Adjudicated for a New Offense(s)?	**Was the Youth Subsequently Adjudicated for a New Offense(s)?** This question pertains to whether the youth recidivated (i.e., was adjudicated after his/her OYAS assessment date listed in the current spreadsheet. If the youth was adjudicated, please list the date of adjudication for the highest level of offense in the cell. If the youth was not adjudicated, please simply put "no" in the cell.
	Was the Youth Subsequently Incarcerated for a New Offense(s)?	**Was the Youth Subsequently Incarcerated for a New Offense(s)?** This question pertains to whether the youth recidivated (i.e., was incarcerated after his/her OYAS assessment date listed in the current spreadsheet. If the youth was incarcerated, please list the date of incarceration for the highest level of offense in the cell. If the youth was not incarcerated, please simply put "no" in the cell.
	Was the Youth Subsequently Charged with a Probation Violation or Technical Violation?	**Was the Youth Subsequently Charged with a Probation Violation(s) or Technical Violation(s)?** This question pertains to whether the youth recidivated (i.e., received a probation violation or violation of a court order) after his/her OYAS assessment date listed in the current spreadsheet.

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Data Category	Variable	Variable Description
		If the youth was charged with a violation, please list the date of charge for the highest level of violation in the cell. If the youth was *not* charged with a violation, please simply put "no" in the cell.
	Offense Code	**Offense Code** is the state criminal code associated with the highest level of offense for which the youth recidivated.
	Offense Code Description	**Offense Code Description** is the description of the state criminal code associated with the highest level of offense for which the youth recidivated.
	Offense Level	**Offense Level** is related to the level of the offense (e.g., felony, misdemeanor, or status offense). Please note the highest level of offense for which the youth recidivated.
	Offense Type	**Offense Type** is whether the offense is conspiracy related, deemed as complicity, or attempt for the highest level of offense for which the youth recidivated.
	Degree	**Degree** is the degree of the felony (e.g., F1, F2, F3, etc.) or misdemeanor (e.g., Class A, Class B, etc.) for the highest level of offense for which the youth recidivated.
	Offense Count	**Offense Count** is the number of counts associated with the highest level of offense for which the youth recidivated.

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Appendix H. Youth Follow-Up Interview

Name of Interviewer: _____ Date of Interview: _____

ID Number #: _____ Month (circle one): 12 month / 24 month

Section I: Education/Employment

Interview prompt: Hello. My name is _____ and I am with the University of Cincinnati. Today we are going to talk about your experience with the juvenile justice system and things that have happened in your life since you [either they were involved with the system for the particular instant offense of focus or since their last interview].

I would like to start by asking you a few questions about your education and employment background.

1. Highest grade completed (*check only one response*):

   ☐ 8th grade or below
   ☐ 9th grade
   ☐ 10th grade
   ☐ 11th grade
   ☐ HS diploma
   ☐ GED
   ☐ Some college

Comments:

2. Are you currently in school? (If *no, continue to question 9. If yes, ask questions 3-8.)*

   ☐ No ☐ Yes

Comments:

3. If yes, how many days have you skipped school/classes in the past month?

Comments:

4. How many times have you been suspended from school in the past 12 months? *(To be counted, the youth must have been suspended for at least 1 full day.)*

Comments:

5. How many times have you been expelled from school in the past 12 months?

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Comments:

6. Would you say that you get along with your teachers or other school staff:

☐ Always
☐ Sometimes
☐ Never

Comments:

7. What is your average letter grade in school?

☐ A
☐ B
☐ C
☐ D or below

Comments:

8. On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please indicate your level of agreement for each of the following statements (*choose one response):*

8a. My schoolwork is worthwhile.

1	2	3	4	5

8b. I feel committed to school.

1	2	3	4	5

8c. I put a lot of effort into school.

1	2	3	4	5

8d. I am satisfied with my schoolwork.

1	2	3	4	5

8e. Even though school can be difficult, it's worth it in the long run.

1	2	3	4	5

Comments:

9. Are you currently employed? (*If No, continue to question 16. If Yes, answer questions 10-15.)*

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☐ No ☐ Yes

Comments:

10. On average, how many hours per week do you work?

Comments:

11. Do you get along with your coworkers?

☐ Always
☐ Sometimes
☐ Never

Comments:

12. Do you get along with your boss?

☐ Always
☐ Sometimes
☐ Never

Comments:

13. Have any of your coworkers been in trouble with the law? (*If no or don't know, continue to question 14. If yes, answer question 13a.)*

☐ No ☐ Yes ☐ Don't Know

Comments:

13a. Do you consider those coworkers who have been in trouble with the law friends?
☐ No ☐ Yes

Comments:

14. Have you ever been in trouble at any job? (*If no, continue to question 15. If yes, answer question 14a.)*

☐ No ☐ Yes

Comments:

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14a. What happened to you as a result?

☐ Fired

☐ Reprimanded

☐ No Consequences

Comments:

15. On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please indicate your level of agreement for each of the following statements (*choose one response):*

15a. My work is worthwhile.

1 2 3 4 5

15b. I feel committed to my work.

1 2 3 4 5

15c. I put a lot of effort into my work.

1 2 3 4 5

15d. I am satisfied with my job.

1 2 3 4 5

15e. Even though work can be difficult, it's worth it in the end.

1 2 3 4 5

Comments:

Additional Comments Regarding Education/Employment

Section II: Family, Living Arrangements, and Neighborhood

Interview prompt: Now I would like to talk to you about your family and living arrangements.

16. Who do you currently live with?

☐ Biological or adoptive parent(s)

☐ Other family member(s)

☐ State residential facility

☐ Community residential facility

☐ Friend(s)

☐ Other _____ (specify)

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Comments:

17. Do you have contact with your biological/adoptive parent(s)?

☐ No ☐ Yes

Comments:

18. How long have you lived in your current home?

☐ 1 year or less
☐ 2-3 years
☐ Over 3 years

Comments:

19. How many times have you moved in the last 12 months, not including moves to or from a juvenile or adult justice facility?

Comments:

20. How many of your immediate family members have been arrested in the past 12 months?

Comments:

21. On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please indicate your level of agreement for each of the following statements: (*choose one response):*

21a. My family is important to me.

1 2 3 4 5

21b. My family wants me to stay out of trouble.

1 2 3 4 5

21c. My family would do anything for me.

1 2 3 4 5

21d. I feel safe with my family.

1 2 3 4 5

21e. I feel safe in my neighborhood.

1 2 3 4 5

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21f. It is easy to get drugs in my neighborhood.

1 2 3 4 5

21g. If I need something, I have at least one person I can turn to.

1 2 3 4 5

Comments:

Additional Comments Regarding Family, Living Arrangements, and Neighborhood:

Section III: Peer Associations

Interview prompt: Now I am going to ask you a few questions about your friends.

22. How many close friends do you have? *(This can include family members considered close friends).*

22a. Of those friends, how many use alcohol?

22b. How many use drugs (note, this can be common illicit drugs or prescription drugs used illegally)?

22c. How many have been arrested?

Comments:

23. On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please indicate your level of agreement for each of the following statements: (*choose one response):*

23a. My friends are important to me.

1 2 3 4 5

23b. My friend wants me to stay out of trouble.

1 2 3 4 5

23c. My friends stay out of trouble.

1 2 3 4 5

23d. I spent most of my time with friends.

1 2 3 4 5

23e. My friends are good role models.

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1 2 3 4 5

Comments:

Additional Comments Regarding Peer Associations:

Section IV: Situational Awareness

Interview prompt: I am going to provide you with a set of scenarios for the next three questions Please answer as you would normally act in each situation.

24. A friend asks you to go to a party. Would you go to the party knowing there are drugs and/or alcohol there?

☐ No ☐ Yes

Comments:

25. If you found a wallet with $100, would you try to return the wallet and all its contents to the rightful owner?

☐ No ☐ Yes

Comments:

26. If you knew your friend was driving a car that was not his/hers, would you get in the car?

☐ No ☐ Yes

Comments:

27. On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please indicate your level of agreement for each of the following statements: (*choose one response):*

27a. I am confident that I can walk away from a fight.

1 2 3 4 5

27b. I am confident that I can find ways to reduce stress that do not involved alcohol or drugs.

1 2 3 4 5

27c. I am confident that I can remain calm when things get heated.

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1 2 3 4 5

27d. I am confident that I can resist pressure from friends to do things that may get me in trouble.

1 2 3 4 5

27e. I am confident that I can avoid situations and people where alcohol or drugs are present.

1 2 3 4 5

27f. I am confident that I can resist the urge to give up easily when I run into problems.

1 2 3 4 5

27g. I am confident that I can handle tough situations in ways that will keep me out of trouble.

1 2 3 4 5

Comments:

Additional Comments Regarding Situational Awareness:

Section V: Beliefs

Interview prompt: Now I am going to ask you a series of questions about your feelings and attitudes toward the illegal behavior and the juvenile justice system.

28. On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please indicate your level of agreement for each of the following statements: (*choose one response):*

28a. The juvenile justice system is fair.

1 2 3 4 5

28b. If you get in trouble, it's usually because you are with the wrong crowd.

1 2 3 4 5

28c. People should be allowed to use illegal drugs without any legal consequences.

1 2 3 4 5

28d. There are some good things about gangs.

1 2 3 4 5

28e. You have to get even with people who do no respect you.

1 2 3 4 5

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28f. If you really want something, it does not matter how you get it.

1 2 3 4 5

28g. It is okay to hit someone else if they hit you first.

1 2 3 4 5

28h. Sometimes you have to lie to get what you want.

1 2 3 4 5

28i. Fighting is the best way to solve problems.

1 2 3 4 5

28j. A kid in a gang should not be blamed for the trouble the gang causes.

1 2 3 4 5

28k. If people are careless where they leave their things, it is their own fault if they get robbed.

1 2 3 4 5

28l. It is alright to fight when someone you love or care for is threatened.

1 2 3 4 5

Comments:

Interview prompt: You have been in trouble with the past, now I am going to ask you a series of questions about your feelings and attitudes about trying to change.

29. On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please indicate your level of agreement for each of the following statements: (*choose one response):*

29a. I am worried I may go back to my old ways, so I am seeking help with things.

1 2 3 4 5

29b. I am really working hard to change.

1 2 3 4 5

29c. I can stop breaking the law.

1 2 3 4 5

Comments:

Additional Comments Regarding Beliefs:

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Section VI: Substance Use

Interview prompt: Now we are going to talk about any alcohol or drugs you may have used. This includes beer and liquor, cigarettes, illegal drugs, prescription drugs not prescribed to you, and synthetic drugs, such as salvia or K-2.

30. Tell me about the drugs and/or alcohol you have used. *If no drug or alcohol use, continue to question 34. If drug or alcohol use, ask questions 31-33.*

Type of Drug	Used Yes or No?	Sold Yes or No?	How Often have you Used in the Past 12 Months (daily, weekly, etc.)?	How Much?	Last Use (date or about how long ago)?
Cigarettes					
Alcohol (beer or liquor)					
Marijuana					
Cocaine (crack or powder)					
Heroin					
Other (*specify*)					
Other (*specify*)					
Other (*specify*)					

Comments:

31. In the past 12 months, has someone complained about your use of alcohol or drugs?

☐ No ☐ Yes

Comments:

32. Has your use of alcohol/drugs caused you any problems at school, work, home, or in the community in the last 12 months?

☐ No ☐ Yes

Comments:

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33. How likely are you to quit using drugs?

Never used Highly unlikely Unlikely Likely Highly Likely

Comments:

Additional Comments Regarding Substance Abuse:

Section VII: Contact with the Criminal Justice System and Assessment

Interview prompt: Now I'm going to ask you a few questions about your contact with the criminal justice system.

34. In the past 12 months (or since the time of your termination from probation or release from an institution/facility) how many times have you been:

Type of Involvement	Number of Times
Stopped by police?	
Arrested?	
Adjudicated on a criminal charge?	
Placed on probation?	
Sent to detention/an institution?	

Comments:

35. Tell me about these most recent offenses:

Comments:

36. Were you with your friends at the time of the offense?

☐ No ☐ Yes

Comments:

37. Were your friends arrested too?

☐ No ☐ Yes

Comments:

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38. Have you done anything else in the past 12 months that could have gotten you into trouble besides what we have already talked about? *List activities and circumstances.*

Comments:

Additional Comments Regarding Contact with the Criminal Justice System and Assessment:

Section VIII: Treatment Services

Interview prompt: Now I am going to ask you a few questions about any treatment you may have received as a result of your contact with the criminal justice system.

39. Have you been on probation in the past 12 months? *If no, continue to question 41, if yes ask questions 40a-40d.*

☐ No ☐ Yes

Comments:

40. If yes, have you:

40a. Received a technical violation?
☐ No ☐ Yes

40b. Received a positive drug screen?
☐ No ☐ Yes

40c. Met with your probation officer as required?
☐ No ☐ Yes

40d. Been required to wear an electronic monitoring device?
☐ No ☐ Yes

Comments:

41. Have you been in a facility/institution at any point during the past 12 months? *If no, continue to question 43, if yes ask questions 42a-42d.*

☐ No ☐ Yes

Comments:

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42. If yes, have you:

42a. Been written up?
☐ No ☐ Yes

42b. Received a positive drug screen?
☐ No ☐ Yes

42c. Been in physical fights with staff?
☐ No ☐ Yes

42d. Been in trouble for trying to leave a facility without permission?

Comments:

43. Were you required to attend treatment after your most recent contact with the system? *If no, continue question 46. If yes, ask question 44-45.*

☐ No ☐ Yes

Comments:

44. Tell me about any treatment you've received and/or participated in during the last 12 months:

Interview prompt: For example, have you participated in Thinking 4 a Change, skill-building, substance abuse, or an anger management class or received any other service?

Treatment type/Program name	Length of treatment	Receive certificate of completion?	Practice new skills	Engage in role play?

Comments:

45. Tell me about what you learned during treatment. Describe any skills you learned that you can use in real life or any ways to avoid trouble.

Comments:

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46. On a scale of 1-5, with 1 being strongly disagree and 5 being strongly agree, please indicate your level of agreement for each of the following statements: (*choose one response):*

46a. I am receiving (or received) the kind of help I need.

1	2	3	4	5	N/A

46b. The services I received have helped me turn my life around.

1	2	3	4	5	N/A

46c. The services I have received helped me to stay out of trouble with the law.

1	2	3	4	5	N/A

46d. Juvenile justice personnel have helped me get the services I need.

1	2	3	4	5	N/A

46e. I am required to get services that I do not need.

1	2	3	4	5	N/A

46f. I thought once I received treatment I would stay out of trouble, but sometimes I still find myself struggling.

1	2	3	4	5	N/A

Comments:

Additional Comments Regarding Treatment Services

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Appendix I. Variation of Substance Use Indicators on the Disposition, Residential, and Reentry Tools

Assessment		
Disposition	**Reentry**	**Residential**
Age of Onset	Age of Onset	Age of Onset
Used Drugs Recently	Other's Complaints	Most Recent Use
Used Alcohol Recently	Positive Test Last 6 Months	Other's Complaints
(Un)Likely to Quit	Caused Problems in Major Areas	Positive Test Last 6 Months
	Used While in Residential	Caused Problems in Major Areas

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