Published in final edited form as:

Corrections. 2016 ; 1(4): 229–245. doi:10.1080/23774657.2016.1218804.

Youth Drug Offenders: An Examination of Criminogenic Risk and Juvenile Recidivism

Jordan Papp, Christina Campbell, Eyitayo Onifade, Valerie Anderson, William Davidson, and Dawn Foster

University of Cincinnati

Florida State University

Michigan State University

Yale University

Abstract

Understanding the criminogenic risk factors and treatment needs of juvenile drug offenders is important because of the myriad negative outcomes that befall juveniles that are involved in drugs. A widely used juvenile risk assessment tool, the Youth Level of Service/Case Management Inventory (YLS/CMI) was utilized to explore criminogenic risk factors and treatment needs to predict recidivism. Demographic differences between drug and nondrug offenders were also examined. Results suggested that of the eight YLS/CMI domains, the substance abuse domain was not predictive of recidivism for juvenile drug offenders. However, peer relationships and attitudes significantly predicted future recidivism, suggesting that case planners should pay particular attention to these domains when designing a treatment plan for this group. Cox Regression Hazard Modeling was also used to estimate risk for recidivism among juvenile drug offenders as compared to other juvenile offenders. Results revealed that while juvenile drug offenders had a significantly higher score for substance use, they were not more likely to recidivate than nondrug offenders. Implications are discussed.

Keywords

drug offenders; substance use; recidivism; youth; adolescents; correctional treatment; YLS/CMI

Introduction

Drug offenses for a juvenile is described as the possession, manufacturing, sale, or use of alcohol or narcotics (Bureau of Justice Statistics, 2007). In 2007, an estimated 195,700 juveniles were arrested for drug offenses (Bureau of Justice Statistics, 2007). While youth arrests overall have been declining, arrests of youth for drug-related crimes trend in the opposite direction (Betchel, Lowenkamp, & Latessa, 2007). Young individuals arrested for drug offenses who are not diverted out of the criminal justice system cost the system tens-of-millions of dollars a year (Justice Policy Institute, 2006). The cost to commit youth to

residential placement is substantial, and even though costs for community supervision of youth is much less in comparison, drug-offending youth remain a costly burden. Rajkumar and French (1997) and Latessa, Lovins, and Lux (2014) conducted cost-benefit analyses and found that treatment programs save thousands of dollars per client each year for both the criminal justice system and society. Thus, reducing recidivism rates through treatment among drug offenders could save the criminal justice system a significant amount of money each year.

Furthermore, juvenile drug offending has been associated with a host of varying negative outcomes (Huizinga & Jakob-Chien, 1998). Some of these negative outcomes include engagement in other forms of delinquency at a higher rate than non-drug offenders, a greater likelihood of recidivism if convicted, and a greater likelihood of offending into adulthood (Belenko & Dembo, 2003; Dembo, Williams, & Schmeidler, 1993; Hills, Shufelt, & Coccozza, 2009; Loeber, 1996). Given evidence which links drugs with other adverse outcomes it is imperative to treat juvenile drug offenders while they are young and malleable to avoid these potentially negative outcomes.

The creation of juvenile drug courts has come as a response to treating juvenile drug offenders. Traditionally, the juvenile court's response to drug offenders was more punitive than therapeutic (Palik, 2011). However, it has become more clear that punitive sanctions do not necessarily reduce recidivism for youth, and may even increase it (Andrews & Bonta, 2010; Latessa, Listwan, & Koetzle, 2014). A therapeutic response that focuses on effective intervention may be needed to reduce the myriad of problems that befall this group. More recently, court practitioners have begun recognizing the importance of providing comprehensive treatment for drug offenders that focuses less on punishment-oriented processes (cite). Further, juvenile drug courts now provide an organized therapeutic response for drug offenders that focuses on specialized treatment and recovery (cite).

The recognition that youthful drug offenders may have unique criminogenic needs beyond their issues with drugs necessitates the need for the use of risk-need assessment (Hills, Shufelt, & Coccozza, 2009).

Risk-need assessment would allow for more accurate detection of the needs for each youth which would more effectively guide case planning. Hills and colleagues (2009) recognize the tendency for case managers to only treat youth who commit a drug offense with substance abuse treatment and suggest that validated risk-need assessment tools be used to assess specific criminogenic needs that case planners should target with treatment. In other words, validating a risk assessment tool that assesses risk in a broad range of criminogenic domains is needed for this group, one that focuses on more than just assessing substance abuse.

The Youth Level of Service, Case Management Inventory (YLS/CMI) is a widely used risk-need assessment tool that could serve the purpose of assessing criminogenic needs that could be targeted by case planners. The YLS/CMI assesses need for treatment of not only substance abuse, but also seven other criminogenic domains, and as such, assesses need factors comprehensively. Findings regarding the YLS/CMI have been mixed, with some

suggesting it accurately predicts risk of general recidivism (e.g. see, Andrews & Bonta, 2010), and others suggesting it lacks predictive validity for non-violent juvenile subpopulations including youth under supervision of the juvenile justice and child welfare systems (Onifade, Barnes, Campbell, Anderson, Peterson, & Davidson, 2014; Onifade, Nyandoro, Davidson, & Campbell, 2010). The adult version of the YLS/CMI, the LSI-R, has previously been validated among drug offenders (cite); it is now important to determine if the YLS/CMI is predictive of recidivism for youth drug offenders.

The present study aims to assess the overall predictive validity of the YLS/CMI for drug offending youth compared to other offender types. It is hoped that the YLS/CMI accurately predicts risk for this group of offenders so that it can be used by juvenile drug courts for case management. The purpose of this exploratory study is to determine if juveniles who come in contact with the court for a drug-related offense are: 1) demographically different than other offender groups; 2) if there are unique differences across criminogenic YLS/CMI domains; and 3) if those who are drug offenders are at increased risk for recidivism as compared to other offenders.

Juvenile Drug Offenders

Youth drug offending is particularly concerning given the myriad problems that result from their involvement with drugs. Not only are juvenile drug offenders more likely to engage in other forms of delinquency, they are also more likely than nondrug offenders to continue offending into adulthood (Black & Ricardo, 1994; Ellickson, Saner, & McGuigan, 1997; Huizinga & Jakob-Chien, 1998). Additionally, Huizinga and Jakob-Chien (1998) also note that the higher the frequency and the more severe the drugs used is associated with more serious forms of delinquency. Similarly, through their analysis of the Pittsburgh Youth Survey, Van Kammen, Loeber, and Stouthamer-Loeber (1991) found that substance abusers were more likely to engage in delinquency relative to youth who did not use drugs, or used them infrequently. It is important to point out that it is not only drug users who engage in other forms of delinquency; youth who traffic drugs are also more likely to engage in other forms of delinquency as well (Altschuler & Brounstein, 1991). This shows that drug offenders in general, and not just specifically drug users or sellers, are more likely to engage in other forms of delinquent behavior.

Interestingly, Altschuler & Brounstein (1991) also found that juvenile drug offenders rarely engage in other forms of delinquency to support their drug habits. The commission of other delinquent acts may not be a direct result of their drug use, but rather, an indirect result of other forms of delinquency (Altschuler & Brounstein, 1991). This suggests that forces driving these youth to engage in delinquency may extend beyond their problems with drugs. Thus, it is likely that interactions occur between drug offending and other criminogenic risk factors that increase this groups likelihood of offending. It will be important to assess these forces through the use of risk assessment so as to provide effective treatment among all domains of a youth's life that need attention.

Risk Assessment

The Risk-Need-Responsivity (RNR) model is widely used as an effective conceptualization of offender treatment (cite). The RNR model dictates that the criminal justice system should assess the *risk* an offender poses for reoffending, divert those who are not moderate or high risk, assess the *needs* of those who are high or moderate risk, and create treatment plans around individual needs while taking into consideration what form of treatment the individual will be most *responsive* to. Adherence to this model has been empirically shown to reduce rates of recidivism (Andrews & Bonta, 2010; Latessa, Listwan, & Koetzle, 2014).

The crux of the RNR model is the use of a scientifically validated risk-need assessment tool, and one such tool is the YLS/CMI, supported by two meta-analyses (Olver, Stockdale, & Wormith, 2009; Schwalbe, 2008). Schwalbe (2008) found that this tool predicts recidivism moderately well (a mean weighted effect size area under the curve [AUC] of .641). Olver, Stockdale, and Wormith (2009) corroborated this finding, suggesting that this tool predict recidivism moderately well (a mean weighted correlation of .32 between risk score and recidivism). In contrast, some research shows that it is not predictive for certain subpopulations (Li, Chu, Goh, Ng, & Zeng, 2015; Onifade, Barnes, Campbell, Anderson, Peterson, & Davidson, 2014; Onifade, Nyandoro, Davidson, & Campbell, 2010).

Beyond validly predicting risk for recidivism, fourth generation risk assessment tools also guide case planning. Fourth generation tools uncover particular needs that a youth might have. This allows for case planners to design the most effective treatment plans for based on individual needs. Unfortunately, little knowledge exists on how drug offenders may differ from nondrug offenders with respect to their needs. Wilson, Mitchel, and Mackenzie (2006) found that drug offenders who were given more specialized treatment in drug courts were less likely to have continued drug problem and were less likely to recidivate. However, while the importance of treating individuals for more than just their drug problem was discussed, it was not elaborated or examined analytically (Wilson et al., 2006). This leaves a gap in the knowledge about drug offender treatment needs, one that will be important to elucidate, particularly as reducing recidivism, not just eliminating substance abuse problems, is the end goal. Therefore, the present study is needed to understand the validity of the YLS/CMI for assessing risk among drug offending youth, and type-differences therein.

Assessing Risk for Different “Types” of Offenders

One method for assessing risk is not universal for all types of juvenile drug offenders (Andrews & Bonta, 2010). Assessing risk for particular types of offenders would be problematic because individuals in these groups do not seem to share characteristics with other offenders (Andrews & Bonta, 2010). Thus, to assess risk among special groups of offenders including drug offenders, specific risk assessment tools that cater to specific risk factors are needed. Drug offenders are among the groups mentioned as difficult to assess (Andrews & Bonta, 2010). Different risk assessment measures have been validated for some groups including mentally disordered offenders (Ferguson, Ogloff, & Thompson, 2009), male batterers (Hendricks, Werner, Shipway, & Turinetti, 2006), adult and juvenile sex offenders (Prentky & Righthand, 2003; Vrana & Sroga, 2008) and adult drug offenders

(Kelly & Welsh, 2008). However, no corresponding validations have been conducted among juvenile drug offenders.

Huebner, Varano, and Bynum (2007) found that adult offenders involved with drugs may be characteristically different than offenders not involved with drugs, and thus this group may require specific or tailored assessment approaches. Offenders involved with drugs were less likely to have and maintain stable relationships with others, more likely to have more erratic routines, and were less likely to adopt positive self-narratives (Huebner et al., 2007). This study, though conducted on an adult population, may suggest that youthful offenders involved in drugs could potentially be characteristically different from youth not involved in drugs. Additional work is needed to determine if this is the case for juvenile populations.

One group in particular that has received a great deal of special attention are juvenile sex offenders. While it is recognized that sex offenders have risk factors in common with general offenders, it is also clear that they have characteristics unique to sexual offending (Prentky & Righthand, 2003; Whitaker et al., 2008). Because of this, risk assessment tools have been developed specifically for this group of offenders. One of these tools is named the Juvenile Sex Offender Protocol-II (J-SOAP-II). This tool combines risk factors common among all offender types and risk factors unique to sex offenders, such as deviant sexual preferences and prior history of sexual offenses. Given the uniqueness of some juvenile offending subpopulations, there may be a need to create more specialized assessments to better measure risk for recidivism and identify level of treatment needs.

There is some evidence regarding the uniqueness of the drug offending population of youth. Allen, Donohue, Griffin, Ryan, and Mitchel Turner (2003) found that youthful drug offending is shaped more by peer associations than by family. Attitudes of this subset of youth is also affected more by their peers than by their family. Peers were found to shape these youth more than their family, and both peer and family influence was found to moderate drug use and attitudes held by youth (Allen et al., 2003). The extra meaningfulness of peers is something that should be taken into consideration when studying the assessment of juvenile drug offenders.

Taken together, the juvenile drug offender literature suggests that assessing risk may not be universal for different types of offenders. Researchers seeking to determine efficacy of a certain tool for a specific type of offender might consider empirically validating that tool among that population of offenders. Thus, this study was designed to examine the following questions: 1) Is the juvenile drug offender demographically different compared to general delinquents?; 2) Is the YLS/CMI a valid risk assessment tool to use among drug offenders?; and 3) Are drug offenders at greater risk for recidivism as compared to other delinquent offenders?

Method

Participants

The sample included 1,647 juvenile offenders that were located in a Midwestern industrialized community and came in contact with the Juvenile Court Family Division

between August 28th, 2004 and December 9th, 2010. All juveniles were on formal probation. Juveniles ranged from age 9–18 with an average age of 14.76 years (SD=1.47).

Measures

The risk assessment tool used to assess criminogenic risk among youth in this study was the Youth Level of Service/Case Management Inventory (YLS/CMI). Juvenile Court Officers (JCOs) were trained to use this 42-item tool. The 42 items are scored dichotomously (0 and 1) which produces a summed score ranging from 0 to 42. The tool provides an estimated risk of future recidivism based on risk groupings of low (0–8), moderate (9–22), high (22–34), or very high (35–42). This tool assesses risk across eight criminogenic domains: 1) Prior/Current Offense History, 5-items ($\alpha=.67$); 2) Education/Employment, 6-items ($\alpha=.70$); (3) Leisure & Recreation, 3-items($\alpha=.61$); (4) Peer Relations, 4-items ($\alpha=.68$); (5) Substance Abuse, 5-items ($\alpha=.76$); (6) Family & Parenting, 6-items ($\alpha=.67$); (7) Attitudes & Orientation, 5-items ($\alpha=.69$); and (8) Personality and Behavior, 7-items ($\alpha=.68$).

Recidivism was based on official court records. This information was gathered from the courts computerized data system which holds records of criminal history. Information gathered from this source included: 1) Yes/No if a juvenile recidivated (received a new petition by the court) and 2) length of time in days to the receipt of the new petition. Recidivism was observed for different increments of time for each juvenile because juveniles entered and exited the court at different time points between August 28th, 2004 and December 9th, 2010. Observations of recidivism ranged from 3–9 years. Adult records were also examined to determine if an individual who turned 18 during the study recidivated as an adult.

Procedure

Archival court data was used for this study. Original data were from a larger Juvenile Court initiative known as the Juvenile Risk Assessment Project. This larger project trained Juvenile Court Officers in evidence-based practices concerning case management, treatment implementation, diversion, and assessment. The primary goals of the Juvenile Court Officers were to follow standardized procedures concerning the assessment of risk and treatment allocation for juveniles on formal probation. Juvenile Courts Officers received 20 hours of training and were mandated to administer a juvenile risk assessment instrument for every juvenile upon their initial contact with the court system. In addition to collecting risk assessment data, demographic information about the juvenile and the juvenile's family was also collected. Court staff were also responsible for gathering official recidivism data using a court reporting data system. For juveniles who aged out of the juvenile court system, official recidivism adult records were retrieved to examine if recidivism occurred at the adult level. These data were de-identified before analysis and archived. All research procedures were supervised by the Institutional Review Board.

Analysis

Data in this study was analyzed using SPSS. Survival modeling was used to analyze the data because juveniles came in contact with the juvenile court at varying times. This data analytic technique was most appropriate given our primary goal was to determine if drug offenders

were at great risk for recidivism as compared to other delinquents in the sample. These analyses were sensitive to right censoring, described as the unknown recidivism for some juveniles due to the arbitrary ending time of the study. It is important to note that for statistics not compensating for time (e.g., correlation coefficients and Area Under the Curve statistic), these statistics were calculated so that all youth were followed for exactly two years. Therefore, all youth had the same amount of time to recidivate. This reduced the sample size to 1,364 for the present analyses (not all youth in the sample were followed for two full years).

Results

Question 1: Are juvenile drug offenders demographically different than general delinquents?

Youth who come into contact with the juvenile justice system were demographically different than other offender groups in a few respects. First, they were more likely to be older than youth who were not charged with a drug offense ($p<.001$). The average age of a drug offender was 15.36 (SD=1.10) years old and the average age of a youth that was not charged with a drug offense was 14.71 (SD=1.47) years old. Also, drug offenders were less likely to be a racial minority (55%) as compared to nondrug offenders (67%) ($p<.05$). Drug offenders were also more likely to be male (84%) as compared to nondrug offenders (72%) ($p<.001$). Last, drug offenders score a higher average composite score on the YLS/CMI ($p<.05$). Drug offenders scored 16.9 (SD=7.43) on average whereas nondrug offenders scored 15.55 (SD=7.73).

Drug and nondrug offenders also differed in the nature of their reoffending and the rate at which they reoffended. Drug offenders were more likely to reoffend, however, this finding was not statistically significant ($p=.057$). Drug offenders reoffended at a rate of 47% and nondrug offenders reoffended at a rate of 40%. The nature of their reoffending differed in that drug offenders were more likely to be charged with a new drug offense, less likely to be charged with a violent offense, and more likely to be charged with a nonviolent offense¹. Drug offenders reoffended with a drug offense 11.6% of the time, a violent offense 10.1% of the time, and a nonviolent offense 25.3% of the time. Comparatively, nondrug offenders only reoffended with a drug offense 3.8% of the time, a new violent offense 14.9% of the time, and a new nonviolent offense 21% of the time.

Some statistically significant difference across domain scores existed. These domains included: criminal history, peer associations, personality and behavior, and substance abuse. The largest absolute difference between scores is that of substance abuse and the difference was statistically significant ($p<.001$). Drug offenders had an average score of 2.53 (SD=1.51) while nondrug offenders had an average score of 1.11 (SD=1.36). Interestingly though, as can be seen in Table 3, the substance abuse domain score was not significantly related to recidivism. Drug offenders also scored higher in the criminal history and peer association domain. Moreover, and interestingly, drug offenders scored significantly lower in the personality and behavior domain.

¹The nature of this recidivism is speaking to the most serious offense that a youth was charged with.

It is important to note which domains were significantly predictive of recidivism for these two groups of offenders. While all domains significantly predicted recidivism for nondrug offenders, not all of the domains were predictive for drug offenders. For drug offenders, criminal history, peer association, and attitudes and beliefs were all predictive of recidivism. This leads to the important finding that the substance abuse domain was not predictive for this group which is important for case managers as they design a treatment plan for this group.

Question 2: Is the YLS/CMI a valid risk assessment tool to use among drug offenders?

For this analysis, Receiver Operant Conditioning was used to create an Area Under the Curve (AUC) statistic for each group of offenders. This statistic is useful as it has an intuitive interpretation. That is, the AUC score tells the percent of cases that are accurately classified. AUC scores greater than .5 suggest that an assessment tool is better than simply guessing. Two AUC scores were calculated in this analysis, one for drug offenders and one for nondrug offenders. For this analysis, all offenders were followed for two years to determine if they had recidivated. Those in the sample who were not followed for two full years were not included in the analysis, this resulted in a sample size of (n=1,364). The AUC score for nondrug offenders was (AUC=.594; $p<.001$; C.I.=.565–.623). The AUC score for drug offenders was (AUC=.619; $p<.001$; C.I.=.541–.696). Thus, the YLS/CMI actually performed better at assessing risk of recidivism for drug offenders, however, this difference was not statistically significant.

Question 3: Are drug offenders at greater risk for recidivism as compared to other delinquent offenders?

To answer this question, Cox Regression Hazard Modeling was conducted. This analysis was used because participants were followed for varying amounts of time and this analysis compensates for this shortcoming of the data. Results for this analysis can be found in Table 4. Results of the Cox Regression analysis indicated that drug offenders were at no greater risk for recidivism when controlling for age, gender, race, and total YLS/CMI score. Gender, race, and YLS/CMI total score were predictive of recidivism in the model. Males, racial minorities, and those who scored higher on the YLS/CMI were at greater risk for recidivism.

Additional analyses were conducted for drug offenders who reported on the YLS/CMI that they were chronic drug or alcohol users. The findings of this analysis can be seen in Table 5. Interestingly, youth charged for a drug offense who were chronic alcohol or drug users were not more likely to recidivate as compared to nondrug offenders either, once controlling for age, gender, race, and YLS/CMI total score. Gender, race, and YLS/CMI total score were predictive of recidivism with males, racial minorities, and those who scored higher on the YLS/CMI were at greater risk for recidivism.

Discussion

The present study set out to examine if juveniles who came in contact with the court for a drug-related offense were demographically different than other offender groups, if there were unique differences across domains, if those who were drug offenders were at increased

risk for recidivism, and determine whether or not the YLS/CMI accurately predicted risk for this group. Important findings emerged that can help guide case planners as they design treatment plans for this at-risk group. Also, these results will be helpful for juvenile drug courts interested in creating more comprehensive strategies to reduce recidivism.

Two important findings were that not only do demographic differences existed between drug and nondrug offenders, but differences also exist across domain scores between these two groups. It was found that on average, drug offenders are older, more likely to be male, more likely to be white, and more likely to score higher on the YLS/CMI. The difference in average scores on the YLS/CMI between drug and nondrug offenders can be contributed to their difference in scores on the substance abuse domain. Drug offenders, on average, scored much higher in the substance abuse domain; however, this domain was not significantly related to recidivism. Rather, criminal history, peer associations, and attitudes/behavior were significantly related to recidivism. This indicates that case planners might consider targeting these needs in order to reduce recidivism. A byproduct of targeting peer associations and attitudes/behavior could likely lessen youth involvement with drugs (Allen, 2003). Thus, by targeting other criminogenic needs, involvement with drugs would be indirectly lessened. It is important to note that drug problems among youth should not be ignored, nor should substance abuse treatment be avoided. However, it could be that for this group of youth, alternate and tailored strategies are needed in order to reduce recidivism.

Lastly, as a whole, the YLS/CMI composite score was predictive of recidivism for both drug and nondrug offenders. This supports extant literature showing that risk of recidivism is not dictated by the type of crime an individual commits (e.g. Latessa et al., 2014). Rather, the focus should be put on risk scores to most accurately predict recidivism.

It is important to note that the present study should be taken into consideration with its limitations in mind. First, the nature of this sample restricts the generalizability of the study. The sample was comprised of only youth on formal probation. Thus, findings are not generalizable to other groups not under correctional control. Second, the sample of drug offenders in this groups was not very large. This lessened our ability to detect significant relationships in the analysis. Last, our definition of drug offender was somewhat broadly defined and differences among the different types of drug offenders (i.e., users, dealers, traffickers, etc.) could not be delineated. Future research will be needed to determine the differences that might be present between risk and need factors of drug users, manufacturers, and dealers. It is reasonable to believe that these groups may have different risk factors and treatment needs.

In all, this study has helped to better understand the risk factors and treatment needs for juvenile drug offenders. While it may seem apparent to most that juvenile drug offenders should receive substance abuse treatment, this may itself be ineffective in reducing recidivism, particularly as substance abuse was not significantly related to recidivism for this group. Rather, case planners should focus more attention on using validated risk assessment tools that will comprehensively assess criminogenic needs if they wish to design more appropriate treatment plans.

References

- Allen M, Donohue WA, Griffin A, Ryan D, Turner MMM. Comparing the influence of parents and peers on the choice to Use drugs a meta-analytic summary of the literature. *Criminal Justice and Behavior*. 2003; 30(2):163–186.
- Altschuler DM, Brounstein PJ. Patterns of drug use, drug trafficking, and other delinquency among inner-city adolescent males in Washington DC. *Criminology*. 1991; 29(4):589–622.
- Andrews, DA., Bonta, J. *The psychology of criminal conduct*. Routledge; 2010.
- Belenko S, Dembo R. Treating adolescent substance abuse problems in the juvenile drug court. *International Journal of Law and Psychiatry*. 2003; 26(1):87–110. [PubMed: 12554002]
- Bechtel K, Lowenkamp CT, Latessa E. Assessing the risk of re-offending for juvenile offenders using the Youth Level of Service/Case Management Inventory. *Journal of Offender Rehabilitation*. 2007; 45(3–4):85–108.
- Black MM, Ricardo IB. Drug use, drug trafficking, and weapon carrying among low-income, African-American, early adolescent boys. *Pediatrics*. 1994; 93(6):1065–1072. [PubMed: 8197009]
- Bureau of Justice Statistics. *Drug and Crime Facts*. Washington, DC: United States Department of Justice; 2007. BJS Publication No NCJ 165148
- Dembo, R., Williams, L., Schmeidler, J. Addressing the problems of substance abuse in juvenile corrections. In: Inciardi, JA., editor. *Drug treatment and criminal justice*. Newbury Park, CA: Sage; 1993.
- Ellickson P, Saner H, McGuigan KA. Profiles of violent youth: substance use and other concurrent problems. *American journal of public health*. 1997; 87(6):985–991. [PubMed: 9224181]
- Ferguson AM, Ogloff JR, Thomson L. Predicting recidivism by mentally disordered offenders using the LSI-R: SV. *Criminal Justice and Behavior*. 2009; 36(1):5–20.
- Hendricks B, Werner T, Shipway L, Turinetti GJ. Recidivism Among Spousal Abusers Predictions and Program Evaluation. *Journal of Interpersonal Violence*. 2006; 21(6):703–716. [PubMed: 16672737]
- Hills, H., Shufelt, JL., Cocozza, JJ. *Evidence-based practice recommendations for juvenile drug courts*. Delmar, NY: National Center for Mental Health and Juvenile Justice; 2009.
- Hoge, RD., Andrews, DA. *Youth Level of service/case management inventory (YLS/CMI): User's manual*. Multi-Health Systems; 2006.
- Huebner BM, Varano SP, Bynum TS. Gangs, guns, and drugs: recidivism among serious, young offenders*. *Criminology & Public Policy*. 2007; 6(2):187–221.
- Huizinga, D., Jakob-Chien, C. The contemporaneous co-occurrence of serious and violent juvenile offending and other problem behaviors. In: Loeber, R., Farrington, DP., editors. *Serious and Violent Juvenile Offenders: Risk Factors and Successful Interventions*. Thousand Oaks, CA: Sage Publications, Inc; 1998. p. 47-67.
- Justice Policy Institute, & United States of America. *Cost-Effective Youth Corrections: Rationalizing the Fiscal Architecture of Juvenile Justice Systems*. 2006
- Kelly CE, Welsh WN. The predictive validity of the level of service Inventory— Revised for drug-involved offenders. *Criminal Justice and Behavior*. 2008; 35(7):819–831.
- Latessa, EJ., Listwan, SJ., Koetzle, D. *What Works (and Doesn't) in Reducing Recidivism*. Anderson Publishing; 2014.
- Li D, Chu CM, Goh JTL, Ng IY, Zeng G. Impact of Childhood Maltreatment on Recidivism in Youth Offenders: A Matched-Control Study. *Criminal Justice and Behavior*. 2015 0093854815598598.
- Loeber, R. Developmental, continuity, change and pathways in male juvenile problem behaviors and delinquency. In: Hawkins, D., editor. *Delinquency and crime: current theories*. Cambridge, MA: Cambridge Univ. Press; 1996. p. 1-27.
- Olver ME, Stockdale KC, Wormith JS. Risk Assessment With Young Offenders A Meta-Analysis of Three Assessment Measures. *Criminal Justice and Behavior*. 2009; 36(4):329–353.
- Onifade E, Barnes A, Campbell C, Anderson V, Petersen J, Davidson W. Juvenile offenders and experiences of neglect: The validity of the YLS/CMI with dual-status youth. *Children and Youth Services Review*. 2014; 46:112–119.

- Onifade E, Nyandoro AS, Davidson WS, Campbell C. Truancy and patterns of criminogenic risk in a young offender population. *Youth violence and juvenile justice*. 2010; 8(1):3–18.
- Paik, L. *Discretionary Justice: Looking Inside a Juvenile Drug Court*. Rutgers University Press; 2011.
- Prentky, R., Righthand, S. *Juvenile sex offender assessment protocol-II (J-SOAP-II) manual*. Washington, DC: US Department of Justice, Office of Justice Programs, Office of Juvenile Justice and Delinquency Prevention; 2003.
- Rajkumar AS, French MT. Drug abuse, crime costs, and the economic benefits of treatment. *Journal of Quantitative Criminology*. 1997; 13(3):291–323.
- Schwalbe CS. A meta-analysis of juvenile justice risk assessment instruments predictive validity by gender. *Criminal Justice and Behavior*. 2008; 35(11):1367–1381.
- Van Kammen WB, Loeber R, Stouthamer-Loeber M. Substance use and its relationship to conduct problems and delinquency in young boys. *Journal of Youth and Adolescence*. 1991; 20(4):399–413. [PubMed: 24263397]
- Vrana, GC., Sroga, M., Guzzo, L. Predictive validity of the LSI-R among a sample of adult male sex assaulters. Ontario, Canada: Nipissing University; 2008. Unpublished manuscript
- Whitaker D, Le B, Hanson R, Baker C, McMahon P, Ryan G, Rice D. Risk factors for the perpetration of child sexual abuse: A review and meta-analysis. *Child Abuse & Neglect*. 2008; 32(5):529–548. [PubMed: 18513795]
- Wilson DB, Mitchell O, MacKenzie DL. A systematic review of drug court effects on recidivism. *Journal of Experimental Criminology*. 2006; 2(4):459–487.

Descriptive Statistics and t-test of Significant Differences Between Drug and Nondrug Offenders

Table 1

Measures	Drug Offenders		Nondrug Offenders		t
	M	SD	M	SD	
Average Age	15.36	1.10	14.71	1.47	-7.53***
Proportion Non-White	.55	-	.63	-	2.19*
Proportion Male	.84	-	.72	-	-4.51***
Total Risk Score	16.90	7.43	15.55	7.73	-2.39*

Note: n=1,647 and

* p<.05

**

p<0.01

p<0.001

Table 2
Average Domain Scores and t-test of Significant Differences Between Drug and Nondrug Offenders

Measures	Drug Offenders		Nondrug Offenders		t
	M	SD	M	SD	
Criminal History	.75	1.22	.52	1.02	-2.59 *
Peer Associations	2.44	1.26	2.20	1.38	-2.50 *
Personality and Behavior	2.38	1.78	2.96	1.90	4.28 ***
Attitudes and Beliefs	1.30	1.41	1.20	1.42	-1.01
Education	3.11	1.61	3.23	1.89	1.04
Leisure Time	1.65	.96	1.56	1.00	-1.20
Family	2.68	1.73	2.72	1.78	.293
Substance Use	2.53	1.51	1.11	1.36	-12.69 ***

Note: n=1,647 and

* p<.05

** p<0.01

*** p<0.001

Table 3

Point-Biserial Correlations With Recidivism

	Drug Offenders	Non-drug Offenders
Criminal History	.29	.14
Peer Associations	.17	.13
Personality and Behavior	ns	.13
Attitudes and Beliefs	.19	.09
Education	ns	.13
Leisure Time	ns	.08
Family	ns	.09
Substance Use	ns	.09

Note: n = 1,364 and

*
p<.05

**
p<0.01

p<0.001

Table 4

Cox Regression With Recidivism as Dependent Variable

	B(SE)	Wald	Exp(B)
Age	.04(.03)	2.27	1.04
Gender	.36(.10) ***	14.80	1.44
Race	.26(.09) **	9.60	1.29
Drug Offender	.10(.11)	.71	1.10
YLS Total	.03(.01) ***	38.69	1.03

Note: n=1,647 and

*
p<.05**
p<0.01***
p<0.001

Table 5

Cox Regression With Recidivism as Dependent Variable

	B(SE)	Wald	Exp(B)
Age	.04(.03)	2.11	1.04
Gender	.36(.09) ***	14.59	1.43
Race	.26(.08) **	9.74	1.29
Chronic User	.18(.14)	1.63	1.20
YLS Total	.03(.01) ***	38.80	1.03

Note: n=1,647 and

*
p<.05**
p<0.01***
p<0.001