Predicting the Cumulative Recidivism of Juvenile Detainees

Gregory J. Benner, Scott A. Stage, J. Ron Nelson, Mike Laederich & Nicole C. Ralston

Abstract

The primary purpose of this research was to identify the most robust set of factors contributing to the recidivism of juvenile detainees; including demographic, court history, mental health, substance abuse, and maltreatment variables. Recidivism in this paper is defined as having received more than one status offense or non-status offense. Status offenses are incurred because of the prohibition of various acts due to the offender’s status as a juvenile (e.g., alcohol consumption, violation of curfew, or truancy). Non-status offenses (i.e., delinquency) are incurred because of violation of the law and commitment of a crime. The study population included 761 juvenile offenders in the Northwest. Juveniles who had a history of childhood maltreatment, above average use of alcohol/drugs, and experienced traumatic experiences were four times (4.22 odds ratio) more likely to have repeated juvenile status offenses. Further, sex and suicide ideation increased the likelihood of committed repeated non-status offenses by 6.5 times. Findings, limitations, and implications are discussed.

Keywords: MASYI, Juvenile, Recidivism

Introduction

There is growing interest in identifying factors that predict juvenile detainee’s recidivism (Cottle, Lee, & Heilbrun, 2001). Recidivism in this paper is defined as having received more than one status offense or non-status offense. Status offenses are incurred because of the prohibition of various acts due to the offender’s status as a juvenile (e.g., alcohol consumption, violation of curfew, or truancy). Non-status offenses (i.e., delinquency) are incurred because of violation of the law and commitment of a crime. Identifying factors that predict juvenile detainee’s recidivism can be quite informative in designing assessment tools for screening and intervention planning with this population. Certain demographic, mental health and substance use factors place juvenile detainees at risk for recidivism (Widom & Maxfield, 2001). Cottle and colleagues (2001), for example, found that being male and from a low socioeconomic background placed youth at risk for recidivism. Youth who demonstrate conduct disorders are also at risk for recidivism (Cocozza & Skowyra, 2000). Family factors such as parental mental health and substance abuse histories, marital discord, child maltreatment and parenting styles are strong predictors of juvenile detainee’s recidivism (Cottle et al.). None of these factors alone is likely to lead to recidivism, more than likely it is the presence of several of these variables working together that leads to juvenile detainee’s recidivism. Further, there is little doubt that it is likely that there are reciprocal interactions between and among multiple factors for juvenile detainee’s recidivism. For example, a youth who has a conduct disorder may not reoffend if they have parents who have outstanding parent management skills and are not impacted by family problems (e.g., family psychopathology); whereas, such a youth may evidence recidivism if they have parents who lack parent management skills and are impacted by family problems. It is of interest to identify robust sets of factors predictive of juvenile detainee’s recidivism.

Researchers have studied the relationships between demographic variables (e.g., sex, ethnicity), offense history (e.g., age at first contact with law, age at first commitment), family and social factors (e.g., victim of physical or sexual abuse, parental pathology), educational factors (e.g., history of special education, school attendance), standardized test scores (i.e., achievement and IQ test scores), substance abuse history, and clinical factors (e.g., severe pathology such as psychosis and suicidality, nonsevere pathology such as conduct problems) on juvenile recidivism (Cottle et. al., 2001). Cottle and colleagues reported that the most predictive family and social factors contributing to juvenile recidivism was childhood maltreatment inclusive of physical and sexual abuse and childhood neglect. For example, Cottle et al reviewed five studies that found that maltreatment was a significant predictor of recidivism (Zr = .11, p < .001) (Archwamety & Katsiyannis, 1998; Dembo, Schmeidler, Nini-Gough, Sue, Borden, & Manning, 1998; Katsiyannis & Archwamety, 1997; Myner, Santman, Capelletty, & Perlmutter, 1998; Towberman, 1994). These data coincide with the work of Widom and Maxfield (2001) who found that children who had been maltreated or neglected had a 27% likelihood of being arrested as juveniles and
a 42% likelihood of being arrested as adults. Sampling from 315 arrested youth processed at a juvenile assessment center over a nearly 4 year time-span, Dembo, Schmeidler, & Childs (2007) found that physical maltreatment was associated with psychological problems and sexual victimization with being female, being older, and with substance use. Researchers have also found neglect to have more deleterious effects on recidivism than maltreatment (Kingree, Phan, & Thompson, 2003). Neglect is manifest in many ways including not accessing mental health services when warranted, not providing adequate supervision after prior detention experiences, and generally not setting behavioral expectations and monitoring compliance to them. Emotional and physical neglect increases risk for recidivism and antisocial behavior.

Although there is a growing understanding of the factors related to juvenile detainee’s recidivism, most of the factors have been studied in isolation from one another (Cottle et al., 2001). The primary purpose of this research was to identify the most robust set of demographic (i.e., sex, ethnicity), juvenile court history (e.g., age of first offense), mental health, substance abuse, and childhood maltreatment factors on the juvenile detainee’s recidivism. Specifically, generalized linear model (HGLM; Raudenbush, Bryk, Cheong, & Congdon, 2004, p. 94-139) was used to examine the contribution of these variables to two facets of recidivism: 1) the cumulative number of status offenses; and 2) the cumulative number of non-status offenses.

Method

Participants

Secondary analysis of existing mental health and juvenile justice data was conducted on 761 juvenile offenders referred to a juvenile court in the Northwest from July 1st, 2003 to July 1st, 2004. Of these, 568 youths (75%) had one juvenile status offense or non-status offense and 193 (25%) had more than one status offense or non-status offense during this timeframe. The mean age of participants was 15.3 (SD = 1.7). A total of 292 participants (38%) were female and 469 participants (62%) were male. Ethnic breakdowns were 63% Caucasian, 24% African American, 7% Hispanic, 3% Asian American, and 3% Native American.

The 761 youths accounted for a total of 6,379 juvenile status offenses. The average number of juvenile status offenses per youth was 8.4 (SD = 8.0). The average age at first offense ranged from 3.7 to 18.0, with an average age of 13.9 (SD = 2.0). Non-status offenses committed by youths ranged from 0 to 22, with an average of 3.4 (SD = 3.0). Severity of offense was measured using a scale utilized by the juvenile court participating in the study. The severity of the most current status offense or non-status offense rating scale ranged from 0 (e.g., Curfew Violation) to 9 (e.g., Aggravated Murder I). Severity of current offense ranged from 0 to 9, with an average of 2.9 (SD = 2.4). Average length of stay was 13.7 days (SD = 21.6). Descriptive statistics and tests of skewness for these variables are found in Table 1.

Measures

Juvenile Court History

Juvenile court records were searched to obtain the following information: (a) age at first offense; (b) length of stay for current offense; (c) cumulative non-status offenses; (d) cumulative juvenile status offenses; (e) the severity of the current offense, ranging from 0 (e.g., Curfew Violation) to 9 (e.g., Aggravated Murder I); and (f) documented history of maltreatment/neglect according to juvenile court records. Juveniles procure non-status offenses when incarcerated due to violation of the law and commitment of a crime. Juveniles receive status offenses in reaction to child maltreatment, truancy, and general at-risk youth behavior.
Mental Health, Substance Abuse, and Maltreatment

The Massachusetts Youth Screening Instrument-Version 2 (MAYSI-2; Grisso & Barnum, 1998) was used to screen for potential mental health, substance use, and maltreatment factors. The MAYSI-2 is a standardized, 52-item, self-report, true-false, paper-and-pencil, brief screening tool designed for youths between 12 and 17. The self-report tool is administered to referred youth at intake into the juvenile justice system. The MAYSI-2 takes 10-15 minutes to administer. The MAYSI-2 is not a diagnostic instrument; rather it serves as a "triage" tool to assist juvenile justice staff in making decisions about intervention and other service needs at time of intake. MAYSI-2 scales include Alcohol/Drug Use, Angry-Irritable, Depressed-Anxious, Somatic Complaints, Suicide Ideation, Thought Disturbance, and Traumatic Experiences. Results of these scales can indicate individuals who may be susceptible to severe mental health disorders. The MAYSI-2 is psychometrically sound. The reported test-retest reliability coefficients range from 0.53 to 0.89, whereas the internal consistency has ranged from 0.61 to 0.86. In terms of predictive validity, MAYSI-2 scores were found in several studies to predict future behaviors, including assignment to mental health professionals, facility maladjustment, and staff interventions necessary for assault, suicide risk, and sexual offenses (Grisso, Vincent, & Seagrave, 2005).

Data Collection Procedures

Hard copies of the criminal records of each offense were printed. These data were combined with the MAYSI-2 scores and entered into a Statistical Program for the Social Sciences (SPSS) database. Agreement checks were conducted on all data entered into the SPSS database. Research assistants checked all data entered for accuracy following initial data entry and corrected any errors. Initial inter-rater agreement was 98%.

The MAYSI-2 was administered to 761 juvenile offenders from July 2003 to July 2004. It was administered within 48 hours of intake into a juvenile detention facility in the Northwest. The 52 items were read to each youth by the facility therapist. The youth responded to each question by circling a yes or no on the answer sheet as to whether the item has been true for them within the last few months.

Results

Statistical Analysis Strategy

The primary statistical method used in this study was a hierarchical generalized linear model (HGLM; Raudenbush, et al., 2004, p. 94-139) predicting the two recidivism measures (i.e., the number of prior status offenses and the number of prior non-status offenses), which were separately treated as 'count' outcome measures using a Poisson sampling model in a two-level HGLM model. The two-level HGLM is described below:

For Level-1, ‘Y’ is the number of offenses divided by ‘B’, the event rate fitted to a Poisson distribution, yielding ‘L’, the expected value of the offenses. The same equation is used to derive the error variance component ‘V’, yielding ‘L’ in regard to variance about the event rate. These two component equations are then used to derive the log of the event rate which is dependent measure, ‘B0’, predicted by the Level-2 variables. The equations for the Level-1 Model are presented below:

Level-1 Model

\[ E(Y|B) = L \]
\[ V(Y|B) = L \]
\[ \log(L) = B_0 \]

The Level-2 prediction variables included six of the seven MAYSI-2 Clinical Subscales. The Thought Disturbance subscale was not used due to the very limited number of participants who responded to the items. In addition, the covariates utilized were prior history of maltreatment, age of first offense, nonwhite (as a generic marker of ethnicity), and sex. The last term (i.e., U0) in the equation is the error in the prediction of the outcome.
measure. The first term was the intercept (i.e., G00) of all the prediction Level-2 model variables prior to the additive effects of the other covariates and MAYSI-2 subscales (i.e., G01 through G010). This is shown below:

Level-2 Model
\[ B_0 = G00 + G01*(\text{Alcohol/Drug}) + G02*(\text{Angry/Irritable}) + G03*(\text{Depression/Anxiety}) + G04*(\text{Somatic Complaints}) + G05*(\text{Suicide Ideation}) + G06*(\text{Traumatic Events}) + G07*(\text{Maltreatment}) + G08*(\text{Age of First Offense}) + G09*(\text{Nonwhite}) + G10*(\text{Male}) + U0 \]

Table 1 Descriptive Statistics of Continuous Variables including Z-score Tests of Skewness

<table>
<thead>
<tr>
<th>Variables</th>
<th>Min.</th>
<th>Max.</th>
<th>Mean</th>
<th>SD</th>
<th>Skewness</th>
<th>SE</th>
<th>Skewness</th>
<th>Z-score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol/Drug</td>
<td>0</td>
<td>8</td>
<td>2.10</td>
<td>2.37</td>
<td>.809</td>
<td>.086</td>
<td>9.4</td>
<td></td>
</tr>
<tr>
<td>Angry/Irritable</td>
<td>0</td>
<td>9</td>
<td>3.97</td>
<td>2.77</td>
<td>.095</td>
<td>.086</td>
<td>1.1</td>
<td></td>
</tr>
<tr>
<td>Depressed/Anxious</td>
<td>0</td>
<td>9</td>
<td>2.20</td>
<td>2.04</td>
<td>.799</td>
<td>.086</td>
<td>9.3</td>
<td></td>
</tr>
<tr>
<td>Somatic Complaints</td>
<td>0</td>
<td>6</td>
<td>2.53</td>
<td>1.94</td>
<td>.205</td>
<td>.086</td>
<td>2.4</td>
<td></td>
</tr>
<tr>
<td>Suicide Ideation</td>
<td>0</td>
<td>5</td>
<td>1.19</td>
<td>1.73</td>
<td>1.144</td>
<td>.086</td>
<td>13.3</td>
<td></td>
</tr>
<tr>
<td>Thought Disturbance</td>
<td>0</td>
<td>9</td>
<td>0.59</td>
<td>1.01</td>
<td>2.771</td>
<td>.108</td>
<td>25.7</td>
<td></td>
</tr>
<tr>
<td>Traumatic Experiences</td>
<td>0</td>
<td>5</td>
<td>1.97</td>
<td>1.59</td>
<td>.334</td>
<td>.086</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Age at first Offense</td>
<td>3.7</td>
<td>18</td>
<td>13.90</td>
<td>2.03</td>
<td>-.491</td>
<td>.088</td>
<td>-5.6</td>
<td></td>
</tr>
<tr>
<td>Prior Status Offenses</td>
<td>0</td>
<td>42</td>
<td>8.38</td>
<td>7.95</td>
<td>1.651</td>
<td>.088</td>
<td>18.8</td>
<td></td>
</tr>
<tr>
<td>Prior Juvenile Non-Status Offenses</td>
<td>0</td>
<td>22</td>
<td>3.37</td>
<td>3.03</td>
<td>2.116</td>
<td>.088</td>
<td>24.0</td>
<td></td>
</tr>
</tbody>
</table>

\( N = 761 \)

The descriptive statistics of the variables used in the HGLM two-level model are shown in Table 1. The statistics include the minimum, maximum, mean, standard deviation, and skewness measures. By dividing the skewness statistic by the standard error, the corresponding z-score transformation is provided. Z-scores over ± 3.0 would suggest a distribution that is extremely skewed and could influence the results of multivariate statistical analyses that might yield Type I or Type II errors (i.e., falsely rejecting the null hypothesis or accepting the alternative hypothesis when they are wrong) (Tabachnick & Fidell, 2007). Results in Table 1 show that 8 of the 10 measures were significantly skewed. Age of first offense was negatively skewed and the remainder of the skewed variables were positively skewed (i.e., with extreme scores or potential outlier scores obtained in the positive numerical direction). In addition, three dichotomous variables (i.e., male, nonwhite ethnicity, and presence of prior abusive treatment) were not included due to the nature of distribution of these variables. Therefore, additional statistical procedures were conducted to determine the influence of the outliers.
Table 2 Prediction of the Number of Status Offenses using Demographic and MAYSIC Clinical Subscale Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>SE</th>
<th>T-ratio</th>
<th>Event Rate</th>
<th>Confidence Ratio</th>
<th>Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>4.69</td>
<td>0.22</td>
<td>21.38***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.06</td>
<td>0.06</td>
<td>1.003</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nonwhite</td>
<td>0.06</td>
<td>0.06</td>
<td>0.996</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of First Offense</td>
<td>-0.21</td>
<td>0.01</td>
<td>-14.626***</td>
<td>0.81</td>
<td>(0.79, 0.84)</td>
<td></td>
</tr>
<tr>
<td>Maltreatment</td>
<td>0.22</td>
<td>0.09</td>
<td>2.418*</td>
<td>1.24</td>
<td>(1.04, 1.5)</td>
<td></td>
</tr>
<tr>
<td>Alcohol/Drug Use</td>
<td>0.11</td>
<td>0.01</td>
<td>8.548***</td>
<td>1.11</td>
<td>(1.09, 1.14)</td>
<td></td>
</tr>
<tr>
<td>Anger/Irritable</td>
<td>-0.02</td>
<td>0.01</td>
<td>-1.273</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression/Anxiety</td>
<td>-0.03</td>
<td>0.02</td>
<td>-1.617</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Somatic Complaints</td>
<td>-0.02</td>
<td>0.02</td>
<td>-1.198</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Suicide Ideation</td>
<td>-0.04</td>
<td>0.02</td>
<td>-1.889</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Traumatic Experiences</td>
<td>0.06</td>
<td>0.02</td>
<td>2.791**</td>
<td>1.06</td>
<td>(1.02, 1.10)</td>
<td></td>
</tr>
</tbody>
</table>

N = 761, approximate degrees of freedom = 750, * p < .05, ** p < .01, *** p < .001

Multivariate regression procedures offer several different ways to statistically test for outliers. The Mahalanobis distance is one of the most used and accepted procedures for the detection of outliers (Tabachnick & Fidell, 2007). It is the distance of a case from the centroid of the remaining cases. The centroid is the point created at the intersection of the means of all the variables in the multivariate statistical procedure. In essence, it creates a ‘swarm’ of case specific data points about the multidimensional space created by the means of the variables in the analysis. Tabachnick and Fidell (2007, p. 74) suggest a conservative probability estimate of p < .001 for the ?² value is appropriate for detecting case specific outliers. The statistical equation for deriving the statistical significance using a ?² distribution for each case is as follows:

\[ p\text{-value} = \frac{\text{Mahalanobis distance}}{N - 1} + \frac{1}{N} \]
Two separate multiple regression equations were conducted: one using the dependent measure prior status offenses and the second prior number of juvenile non-status offenses and the variables described in the Level-2 HGLM Model. Results of these analyses yielded no case that was statistically significant at \( p < .001 \). Therefore all the cases were retained and the results of the two HGLM regressions using prior status offenses and prior juvenile non-status offenses were conducted.

Predicting the Probability of Prior Juvenile Status Offenses

The results of the HGLM analysis of prediction of the probability of prior status offenses are presented in Table 2. The intercept coefficient is the average number of prior status offenses absent the additive effects of the other variables in the model. The intercept was statistically significant, indicating that average number of prior status offenses was reliably greater than zero. The additive effects of the event rates for being male and of non-white ethnicity did not statistically contribute to the prediction. However, both prior history of maltreatment and age of first status offense did significantly contribute to the prediction. Prior history of maltreatment added to the events ratio at a rate of 1.24:1. Age of first offense was negatively associated with the prior probability of status offenses, indicating that as age of first status offense increased, the number of prior status offenses decreased. Therefore, the event rate ratio was less than one at .81:1.

Regarding the MAYSI-2 clinical scales, both the Alcohol/Drug Use scale and Traumatic Experiences scales added to the prediction of prior status offenses. This indicated that scores greater than the average score of 2.10 on the Alcohol/Drug Use scale and of 1.97 on the Traumatic Experiences scale positively contributed to the prediction of probability of prior status offenses at a rate of 1.11:1 and 1.06:1, respectively. When the additive components in the model are summed, juveniles with a prior history of maltreatment, elevated scores above the average on the MAYSI-2 scales of Alcohol/Drug Use and Traumatic Experiences would increase their odds of having more prior status offenses by a ratio of about 3.45:1 above the event ratio of 4.69 status offenses.

Table 3 Prediction of the Number of Prior Adjudicated Juvenile Non-Status Offenses using Demographic and MAYSI Clinical Subscale Variables

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coef.</th>
<th>SE</th>
<th>T-ratio</th>
<th>Event Rate</th>
<th>Confidence Ratio</th>
<th>Confidence Interval</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intercept</td>
<td>3.34</td>
<td>0.23</td>
<td>14.705***</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>0.19</td>
<td>0.06</td>
<td>3.40***</td>
<td>1.2</td>
<td>(1.1, 1.3)</td>
<td></td>
</tr>
<tr>
<td>Nonwhite</td>
<td>0.04</td>
<td>0.05</td>
<td>0.732</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age of First Offense</td>
<td>-0.18</td>
<td>0.01</td>
<td>-13.288***</td>
<td>0.8</td>
<td>(0.82, 0.86)</td>
<td></td>
</tr>
<tr>
<td>Maltreatment</td>
<td>0.25</td>
<td>0.11</td>
<td>2.32*</td>
<td>1.3</td>
<td>(1.0, 1.6)</td>
<td></td>
</tr>
<tr>
<td>Alcohol/Drug Use</td>
<td>0.07</td>
<td>0.01</td>
<td>6.109***</td>
<td>1.1</td>
<td>(1.0, 1.1)</td>
<td></td>
</tr>
</tbody>
</table>
Predicting the Probability of Prior Juvenile Non-Status Offenses

Table 3 shows the results of the same statistical model using prior juvenile non-status offenses as the dependent measure. The intercept of the probability of prior juvenile non-status offenses was statistically significant and greater than zero. Being male, age of first status offense and a history of maltreatment all statistically contributed to the prediction. Being male and a history of maltreatment contributed, 1.2:1 and 1.3:1 to the prediction of prior juvenile non-status offenses, respectively. Again, age of first offense was inversely related to the odds .8:1.

Regarding the MAYSI-2 scales, both the Alcohol/Drug and Traumatic Experiences scales positively contributed to the prediction of a prior history of juvenile non-status offenses at a rate of 1.1:1. However, the Suicide Ideation scale negatively contributed at a rate of .96:1 in association of the ratio of prior juvenile non-status offenses, suggesting that juvenile offenders with a 3.34 or more prior non-status offenses was less likely to endorse items on the Suicide Ideation scale above 1.19.

Discussion

Several findings from this study warrant discussion. First, age at first offense was predictive of status offenses and non-status offenses. Coinciding with the present investigation, Cottle and colleagues found that younger age at first commitment ($Z_r = -.35, p < .001$) and first contact with the law ($Z_r = -.34, p < .001$) were the two biggest predictors of recidivism. These data align with a body of research on antisocial boys. Researchers have found that youth who start offending at age 12 or younger (i.e., early starters) tend to be those with the greatest number of non-status offenses, status offenses, and the most recalcitrant, “life course persistent” antisocial behavior patterns (Moffitt, 1993; Phillips et al., 2005; Piquero, Paternoster, Brame, Mazerolle, & Dean, 1999; Walker, Ramsey & Gresham, 2004). For example, Patterson, Reid and Dishion (1992) found that 100% of boys arrested before age 10 had at least 3 arrests before reaching age 17. Similarly, in a longitudinal investigation of 80 boys who were at risk of antisocial behavior, Walker and colleagues (1987) found that the severity of the first offense and the age of the first arrest were the best predictors of recidivism. Our findings coincide with this body of research.

Second, MAYSI-2 Alcohol/Drug Use and Traumatic Experiences predicted status offense and non-status offenses. This indicated that scores greater than the average score of 2.10 on the Alcohol/Drug Use scale and of 1.97 on the Traumatic Experiences scale positively contributed to the prediction of probability of prior status offenses at a rate of 1.11:1 and 1.06:1, respectively. Moreover, both scales positively contributed to the prediction of a prior history of juvenile non-status offenses at a rate of 1.1:1. Researchers have found that at least half to two-
thirds of youths in the juvenile justice system have substance abuse problems (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002). Despite the large numbers of youths in the juvenile justice system with substance abuse problems, approximately 75% to 80% of youths receive no substance abuse services (National Mental Health Association, 1999). Moreover, researchers have found suicidality and substance dependency influence rates of recidivism (Office of Juvenile Justice and Delinquency Prevention, 1998; Stoolmiller & Blechman, 2005). The findings of the current investigation coincide with this body of research. However, in contrast to the positive direction of the relationships between both Traumatic Experiences and Alcohol/Drug Use and our measures of recidivism, MAYS1-2 Suicide Ideation was inversely related to non-status offenses. Stated differently, we found that as MAYS1-2 Suicide Ideation scores increase (greater risk of suicide), the likelihood of cumulative non-status offenses reduces and vice versa.

Third, maltreatment/neglect predicted status offenses and non-status offenses. This finding aligns with a body of research indicating childhood maltreatment predicts recidivism, including the meta-analysis conducted by Cottle and colleagues (Archwamety & Katsiyannis, 1998; Dembo et al., 1998; Katsiyannis & Archwamety, 1997; Myner et al., 1998; Towberman, 1994). Moreover, researchers have found that maltreatment is strongly associated with criminal offending. For example, Widom and Maxfield (2001) found that maltreated children had a 27% likelihood of being arrested as juveniles and a 42% likelihood of being arrested as adults.

Finally, being male contributed, 1:2:1 to the prediction of prior juvenile non-status offenses. Researchers have found that males are more likely to recidivate than females (Barrett, Katsiyannis, & Zhang, 2006; Dembo et al., 1998), although studies of trends of juvenile recidivism indicate that while juvenile crime rates decreased over the past two decades, the number of female youths involved in the juvenile justice system has risen dramatically (American Bar Association and National Bar Association, 2001; Snyder, 2001; Snyder and Sickmund, 2006). Therefore, although being male predicted non-status offenses in the present investigation, one may question whether this will be the case a decade from now. Moreover, researchers have indicated that female juvenile detainees are more likely to be detained for status offenses (e.g., runaway, truancy, underage drinking) than their male counterparts (Bergsmann, 1994; Chesney-Lind, 1989; Loper, 2000; Prescott, 1998; Snyder & Sickmund, 1999; U.S. Department of Justice, 1997). We did not find sex to predict cumulative status offenses.

Limitations

This study was limited in several ways. First, the mental health of juvenile offenders was studied with the MAYS1-2. This measure is technically adequate and a widely used self-report screening tool in the juvenile justice system, but the results of this study may have changed if caregiver or professional reports and diagnostic assessments of mental health functioning were used. Moreover, our only measure of mental health was the MAYS1-2. Additionally, given that we used existing data we were unable to assess the mental health of juvenile offenders using other methods, scales, and informants such as parents or teachers of these youth. Replications are necessary using different measures and informants of youth mental health functioning, including measures that incorporate the mental health records of juvenile offenders. Such research should incorporate both deficit-oriented and strength-oriented instruments. Second, the range of variables available to enter into the repeated-measures multivariate analysis of covariance profile analyses was relatively restricted. A more complete set of demographic, developmental, contextual, and biological set of variables may have revealed more about the factors that influence the recidivism of juvenile offenders. Third, the retrospective nature of our research does not allow us to make causal comparisons. Longitudinal research is needed to identify the most robust set of factors that predict juvenile detainee’s recidivism. Fourth, participants were from one Northwestern juvenile court and were therefore not representative of youth in the juvenile justice system nationwide. Fifth, the study was limited by the analyses used to examine the purposes of our research. Researchers of future studies on this topic may consider examining the interrelationships between demographic, juvenile history, recidivism, and mental health; and should use techniques such as structural equation modeling. This technique allows for the simultaneous examination of a series of interrelated dependence relationships (Hair, Black, Babin, Anderson, & Tatham, 2006). Finally, the findings of the study are restricted to those factors that predict juvenile detainee’s recidivism. A similar line of research should be conducted to identify the most robust set of protective factors that increase the
resilience of juvenile detainees. A clear understanding of the characteristics, variables, and conditions present in individuals that enhance their resiliency and increase resistance recidivism would serve to advance assessment and intervention procedures for this population.

**Implications**

A clear message of the present study is that there are some factors that are reasonably accurate predictors of juvenile detainee’s recidivism. Indeed, in the present study, among a host of factors, a relatively few number of factors (i.e., childhood maltreatment, age of first status offense, substance use, traumatic experiences, suicide ideation, sex) were found to be the most accurate predictors of juvenile detainee’s recidivism. This suggests that juvenile professionals and developers of early screening tools for recidivism should consider including items that address these variables. The results of the present study suggest that these items will be highly predictive of juvenile detainee’s recidivism and guide the development of strategic treatments when the first offense is made.

Second, the findings from the present investigation highlight the need for primary prevention and effective, gender-appropriate treatment for juvenile offenders. As discussed in the introduction, female offenders are at higher risk of mental health disorders than their male counterparts. The National Mental Health Association (2004) has articulated key components of programming for female juvenile detainees, with strong focus on cultivating strong social support networks and developing healthy, positive social relationships. The reader is encouraged to examine model and promising prevention and treatment programs that align with the findings of NMHA to provide effective and gender-specific programming. Clearinghouses such as Blueprints for Violence Prevention (http://www.colorado.edu/cspv/blueprints/), Centers for Disease Control and Prevention (http://www.cdc.gov/violenceprevention/youthviolence/), and the Office of Juvenile Justice and Delinquency Prevention (http://www2.dsgonline.com/mpg/) are useful online resources to identify such programs. The reader can search for gender-specific programs and compare their relative effectiveness, cost-benefit, and feasibility. A randomized clinical trial of one model prevention program, Multidimensional Treatment Foster Care (MTFC; Chamberlain, 2003), on 81 female juvenile offenders demonstrated efficacy of MTFC in preventing delinquency not only following the study, but two years later. Delinquency was measured by days in locked settings, number of criminal referrals, and self-reported delinquency (Chamberlain, Leve, & DeGarmo, 2007). Chamberlain and colleagues also found that older girls exhibited less delinquency over time relative to younger girls.

We underscore the importance of making useable and psychometrically sound screening measures of mental health functioning in juvenile justice populations business as usual. In alignment with extant literature, our findings indicate that alcohol/drug use and traumatic experiences predict cumulative recidivism. Given that mental health records of youth are rarely available to juvenile detention centers at intake, the need for juvenile justice systems to provide appropriate mental health screening and assessment becomes essential to meeting treatment needs and to reducing the likelihood of further status and non-status offenses (Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001). Mental health screening should occur within 24 hours of admission to a juvenile facility (Teplin et al., 2002). Unfortunately, the National Report for Juvenile Victims and Offenders found that in 2002, mental health screening tools were used to evaluate every juvenile admitted in only 53% of facilities, while 13% of such organizations failed to evaluate any juveniles admitted (Snyder & Sickmund, 2006). Our findings underscore the importance of pinpointing mental health treatment needs and addressing them when the first offense or arrest is made.

**References**


Author Contact Information

Gregory J. Benner, Ph. D.
Associate Professor University of Washington - Tacoma
1900 Commerce St. WCG-324
Tacoma, WA. 98402-3100
(253) 692-4621 office
(253) 692-5612 fax
gbenner@u.washington.edu

---

**Behavior Analyst Online Is Looking For Financial Support**

The Behavior Analyst Online organization is seeking donors to support its cause. By contributing to the cost of the journals, you will help to keep our journals free.

We plan to list our donors (if they desire) on the BAO site.

The categories of donors are:

Champion - $500.00, Elite - $250.00, Fellow - $150.00, Friend - $50.00

If you would like to contribute please contact Halina Dziewolska at halinadz@hotmail.com. Please make check payable to Halina Dziewolska site funder raiser and send the check to 535 Queen St., Philadelphia, Pa. 19147