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# Suicidal ideation and attempts among court-involved, non-incarcerated youth

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#### **Abstract**

Over the past decade, suicide remains one of the leading causes of death among adolescents and a public health priority. Court-involved non-incarcerated juvenile justice youth frequently present with risk factors for suicide. Among these court-involved youth, 14% (n=50) endorsed a lifetime history of suicide ideation and attempts. Three main factors were associated with increased risk: prior offense, substance use, and childhood sexual abuse histories. This study highlights the importance of understanding suicidal behavior among non-detained juvenile justice populations. Community-based court involvement provides a rare opportunity to coordinate screening and suicide prevention efforts for youth and their families.

#### **Keywords**

suicide:	screening;	iuvenile	iustice:	adol	escents:	mental	heal	lth	
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#### Introduction

Within the general adolescent population, suicide is the second leading cause of death in the United States (US) among youth ages 10 to 24(Prevention, 2013). Between 1991 and 2009, a nationwide survey of high school students observed a decrease in suicide-related behaviors with a low of 13.8% of youth reported seriously considering attempting suicide in 2009 (YRBSS, 2013). Those rates steadily began increasing since 2009 and, by 2013, 17% reported seriously considering attempting suicide, 13.6% made a plan about how they would attempt suicide, and 8% attempted suicide one or more times during the 12 months before the survey (Kann et al., 2014; YRBSS, 2013). Detained youth are at even greater risk for suicidal ideation and attempts than their non-justice involved peers. Prevalence rates of suicide attempts among detained youth are estimated to be between two and four times higher than non-detained youth (Gallagher & Dobrin, 2006). Studies report that up to 51 percent of youth in detention facilities report suicidal ideation (Cauffman, 2004; Goldstein et al., 2003; Shelton, 2000), depending on the assessment tool and reporting timeframe; all of

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which has led to federal policy level recommendations to implement standardized suicide screening for detained youth (Skowyra & Cocozza, 2007). Yet, 79% of arrested youth are not detained (Hockenberry & Puzzanchera, 2014) and thus little is known about rates of suicidality among court-involved, non-incarcerated (CINI) youth (Wasserman & McReynolds, 2006) for whom other studies have demonstrated rates of high-risk behaviors (e.g., substance use, sexual risk) similar to those of detained youth (Tolou-Shams, Conrad, Louis, Shuford, & Brown, 2014; Tolou-Shams et al., 2012).

#### Risk factors for suicide among juvenile justice youth

In a sample of 1,829 detained youth, Abram and colleagues (2008) found that one out of every ten juveniles had a history of attempted suicide placing them at significant increase risk for future attempts. Among detained youth suicide risk is associated with having a psychiatric disorder including internalizing disorders (e.g., depression and anxiety), externalizing disorders (e.g., Oppositional Defiant Disorder [ODD] and Conduct Disorder [CD]) and Substance Use Disorder (Abram et al., 2008). Rates of psychiatric diagnoses (Teplin, Abram, McClelland, Dulcan, & Mericle, 2002), substance use (McClelland, Elkington, Teplin, & Abram, 2004) and trauma exposure (Abram et al., 2004) also appear to contribute to suicide risk among detained youth. Much of the literature related to understanding suicide risk factors among young offenders focused on these pre-adjudicated detainee samples with the exception of Wasserman and McReynolds (2006) who found that among juveniles processed through probation intake departments, 13% of youth had a lifetime suicide attempt.

Racial majority status and female gender are associated with increased suicide risk among non-justice involved youth but have inconsistent relationships in studies of detained youth. For example, Cauffman (2004) and Abrams et al. (2014) reported higher rates of suicidal ideation among white youth while Esposito and Clum (1999) reported no racial/ethnic differences. Additionally, some research suggests gender differences in ideation with rates higher among young female detainees (Abram et al., 2008; Cauffman, 2004), while other studies report no gender differences(Sanislow, Grilo, Fehon, Axelrod, & McGlashan, 2003). Consistent with detainee youth, Wasserman and McReynolds (2006) found that risk factors for lifetime suicide attempts among CINI (probation) youth included being female, past involvement in the justice system, having a violent offence, Major Mood Disorder and Substance Use Disorder.

# **Juvenile Court Clinics**

One subsample of CINI youth who merit increased attention are those referred for juvenile court clinic evaluation. Juvenile court clinics provide a wide array of mental health services to CINI youth, including court-ordered forensic assessment and linkage to care (Grisso & Quinlan, 2005) to help the courts determine ways to address the high prevalence of mental health problems in the juvenile justice system. The majority of CINI juveniles receiving evaluations are non-violent offenders who are formally court ordered for evaluation by the judge/magistrate subsequent to at least one court appearance. The Juvenile Court Clinic (JCC) evaluates approximately 16% of all CINI juveniles processed through the Rhode Island Family Court (RIFC) juvenile intake department each year. Judges, magistrates, and

intake workers refer only those youth who report and/or display mental health symptoms (e.g., depression, anxiety, oppositional behaviors, etc.) and, for whom, the court believes a full mental health evaluation may aid in identifying appropriate rehabilitative needs of the juvenile. As court mental health clinics receive referrals for some of the most vulnerable juvenile justice involved youth, this setting provides an ideal environment to explore the associations between factors common to a juvenile justice setting (e.g., increased psychiatric concerns, sexual abuse and substance abuse) and risk of suicide attempt. Thus, the goal of the present study was to determine rates of suicidal ideation and/or attempts as well as psychiatric, substance use and legal factors associated with suicidality in a sample of CINI juveniles court-ordered for comprehensive non-emergency forensic mental health evaluations.

#### **Methods**

#### **Participants**

Between 2006–2008, 454 juvenile offenders, ages 10 to 18, were referred for a forensic mental health evaluation at a Juvenile Court Clinic (JCC) in the Northeast. Of those, 353 juveniles received a full mental health evaluation. The remaining sample included 34 emergency evaluations (for suicidal or homicidal risk), 3 educational evaluations, and some juveniles who were not evaluated due to missed appointments. The current study focused on the 353 juveniles who completed full, non-emergency mental health evaluations at the JCC. The full mental health evaluations offered more comprehensive clinical data and included the variables of interest for the current study.

The JCC sample includes status (e.g., truancy, curfew violations, consumption of alcohol) and criminal juvenile offenders ages 10 to 18 who were court-ordered by judges and magistrates to receive a comprehensive forensic mental health evaluation. Typical evaluation visits lasted 3 to 4 hours and included the following: 1) forensic interview of the juvenile (separate from parent), 2) forensic interview of the parent (separate from child), 3) completion of evidence-based self-report psychological assessment measures by both parent (regarding the juvenile's symptoms and behaviors) and the juvenile (self-report of symptoms and behaviors), 4) record review (legal and other relevant records, such as school, outside treatment providers) and 5) obtaining any other relevant collateral information (e.g., through interview of collateral informants). All forensic evaluations are conducted by licensed mental health professionals (i.e. psychologists, psychiatrists, social workers) and evaluations incur no cost to the families.

The majority of the juveniles who received forensic mental health evaluations were male (61%), and had an average age of 15. Most juveniles identified their race as White/not Hispanic (62%), with the remainder identifying as Hispanic (15%), African American (5%), Asian (2%), and Other (9%). Six percent of evaluated juveniles declined to report race or ethnicity (See Table 1). Eighty-three percent of juveniles also presented with at least one Axis 1 diagnosis.

# **Study Design and Procedures**

For this study, court mental health clinic records were reviewed to obtain demographic, psychiatric, and substance use data on juveniles (see Tolou-Shams et al., 2014 for a full description of retrospective chart review data). These data were collected from both adolescent and parent vis-à-vis clinical interviews with a licensed mental health professional and standardized measures. The Institutional Review Board of the Principal Investigator's hospital affiliation approved this as a retrospective chart review study and authorized a waiver of the usual requirement for informed consent.

#### Measures

**Demographics**—Demographic information including age, gender, and race/ethnicity were collected using a standard intake form. This form was completed by parent/guardian(s) prior to the forensic mental health assessment.

**Legal**—The court clinic maintains a database of legal information relevant to each juvenile referred for evaluation that is extracted from a larger court database of all juveniles processed through the Family Court. Data include source of referral (e.g. truancy, drug, delinquency petition), number and type of charges (criminal vs. status), and history of social service (child welfare) involvement.

Psychiatric Diagnosis—Each mental health evaluation included a full Diagnostic and Statistical Manual for Mental Disorders – Fourth Edition (DSM-IV) axial diagnostic formulation. This information was used to code the presence or absence of psychiatric disorders, such as mood disorder, substance use disorder, anxiety disorders, posttraumatic stress disorder, and attention deficit hyperactivity disorder, disruptive behavioral disorders. The history of psychiatric disorders was accordingly coded as either "yes" or "no" for each juvenile.

**Lifetime Child Sexual Abuse**—History of child sexual abuse (CSA) was coded "yes" if either the caregiver or the juvenile endorsed that the juvenile had any lifetime CSA experience in the forensic interview. A code of "no" was entered if the evaluation included a statement indicating that lifetime CSA was assessed and denied by both juvenile and caregiver.

**Lifetime Child Physical Abuse**—History of child physical abuse (CPA) was coded "yes" if either the caregiver or the juvenile endorsed that the juvenile had any lifetime CPA experience in the forensic interview. A code of "no" was entered if the evaluation included a statement indicating that lifetime CPA was assessed and denied by both juvenile and caregiver.

**Lifetime Homicidal Ideation**—History of homicidal ideation was coded "yes" if the caregiver or juvenile endorsed that juvenile had any lifetime homicidal ideation in the forensic interview.

**Lifetime History of Substance Use**—As part of the mental health evaluation, juveniles and their caregiver were asked to report the youth's history of substance use including alcohol, marijuana, or other drug use. A code of yes or no was used to indicate parental or juvenile endorsement of each category.

**Lifetime History of Significant Life Stressors**—History of significant life stressors was coded "yes" if the juvenile endorsed a major life event that impacted their functioning including a death in the family, parental/caregiver separation or divorce, or dating violence during the mental health evaluation. A code of "no" indicated that significant life stressors were not endorsed by the juvenile.

Lifetime Suicidal Ideation and/or Attempt—History of lifetime suicidal ideation/ attempt (SI/A) was coded "yes" if either the caregiver or the juvenile endorsed that the juvenile had any lifetime SI/A in the forensic interview. Due to the nature of retrospective chart review studies (i.e., data originally collected for clinical and not research purposes), as written in the majority of reports, suicide ideation and attempts could not be reliably coded as separate variables and are therefore collapsed. A code of "no" was entered if the evaluation included a statement indicating that lifetime SI/A was assessed and denied by both juvenile and caregiver.

#### Statistical Analyses

All analyses were made utilizing IBM® SPSS® Statistics (version 22) program. Frequency distributions, chi-square, and the effect of independent variables on lifetime suicidal ideation/attempts were evaluated by logistic regression. The present study examined the rates of SI/A as well as explored the relationship of several risk factors including the presence of psychiatric diagnoses, history of CSA, history of substance abuse, and prior justice system involvement on self-report of lifetime SI/A in a sample of CINI juveniles court-ordered for forensic mental health evaluation. For all study variables, evaluations that did not include any mention of the variable were coded as "missing." Interrater reliability for all variables was acceptable (k=.71-.97).

# Results

Among youth referred to the mental health clinic who completed a full mental health evaluation (N=353), 14% (n=50) endorsed a lifetime history of SI/A. There were no significant differences by sex, race, or ethnicity (see Table 2).

#### Relationship of Suicidal Ideation/Attempts with Psychiatric Disorders

Of the youth reporting a history of SI/A, only 30% received a primary court clinic diagnosis of mood disorder. Other primary diagnoses included behavioral disorders (24%), substance use disorder (14%), anxiety disorders (8%), posttraumatic stress disorder (8%), and attention deficit hyperactivity disorder. Six percent of youth reporting SI/A did not receive a psychiatric diagnosis. While 14% received a primary substance use disorder diagnosis, 66% reported a lifetime history of alcohol use and 78% a lifetime history of marijuana use compared to 45% and 54% of youth with no history of SI/A.

# History of Abuse/Neglect and Suicidal Ideation/Attempts

Youth with a lifetime history of SI/A reported CSA (18%) at higher rates than youth with no history of SI/A (7%) (p<.05). There were no significant between-group differences in rates of physical and emotional abuse. Youth with SI/A history had a higher rate of lifetime child welfare involvement relative to those without SI/A history (54% vs. 46%).

#### **History of Prior Juvenile Offenses**

Of the total sample, 19% of juveniles reported at least one prior status offense and 13% reported at least one prior delinquency offense. Among those with a history of reported SI/A, 40% had a prior status offense and 26% had a prior non-status offense (p<.001).

# **Logistic Regression**

A logistic regression (LR) analysis was used to examine associations of SI/A for 353 juveniles using diagnosis (mood versus all other diagnoses), prior offense history (yes/no), lifetime history of marijuana and/or alcohol use (yes/no), history of CSA (yes/no), and history of significant life stressors (yes/no) as factors. Variables with significant *p* values were entered into the model to identify most salient associations of risk factors and suicidality. Regression coefficients are shown in Table 3.

The LR demonstrated a significant association between individual-level factors of current psychiatric diagnosis, CSA, substance use, lifetime stressors, and offense history and history of SI/SA and accurately classified 85% of the cases [ $X^2$  (6, N=268) = 41.09, p<.0001]. Being a repeat offender (OR = 3.76), having a history of substance use (OR = 3.07) and a history of childhood sexual abuse (OR = 3.54) were significantly associated with SI/SA, having a current mood disorder diagnosis and/or multiple life stressors were not associated with SI/SA.

# **Discussion**

In this study, court-involved, non-incarcerated (CINI) juveniles, who present to a juvenile court clinic for general, comprehensive (not imminent risk) evaluations report a history of SI/A (14%) at rates within the wide ranges of previously reported SI/A lifetime prevalence for adolescents in juvenile detention facilities (10.0% to 25.5%, Abram et al., 2008; Bhatta. Jefferis, Kavadas, Alemagno, & Shaffer-King, 2014; Freedenthal, Vaughn, Jenson, & Howard, 2007; Morris et al., 1995) and general adolescent populations (10.0% to 58.3%) (Chapman & Ford, 2008; Morris et al., 1995; Bhatta et al., 2014; Freedenthal et al., 2007). However, CINI youth differ from general population adolescents in that they have limited access to and engagement with community mental health and medical settings (Skowyra & Cocozza, 2007) and may never reach detention, where routine screening for suicidality has become increasingly implemented (Grisso, Barnum, Fletcher, Cauffman, and Peuschold, 2001). Additionally, our study found that CINI juveniles with a history of suicidality had greater odds of having a prior offense history, a history of marijuana and/or alcohol use, and a history of sexual abuse, than their juvenile counterparts without a history of suicidality. These findings support previous research identifying substance use and childhood sexual abuse as risk factors for suicidal behaviors among juvenile detainees (Bhatta, 2014;

Freedenthal, 2007; Morris, 1995). Contrary to some previous adolescent juvenile justice and general population research, we did not observe any significant difference in the prevalence of SI/A by sex, race or ethnicity (Abram et al., 2008; Kann et al., 2014; Morris et al, 1995; Vincent, Grisso, Terry, & Banks, 2008). In part, this may be due to the shared risk that all youth, regardless of sex or race or ethnicity, had in common by being referred to the court clinic secondary to raising a judge's concerns about their mental health status.

Court diversion/intake centers, probation departments and/or juvenile court clinics may represent a juvenile's first contact with a mental health professional; based on SI/A rates found in this study, further attention in considering implementation of suicide screening and assessments within these diversion settings is warranted. The present study provides an empirical basis for considering systematic screening for suicidal behavior for youth presenting to the court with mental health concerns regardless of whether concerns about suicidality are raised. Our study found that suicidality was not necessarily associated with having a major mood disorder, such as depression or dysthymia. Thus, youth presenting to the court with major disruptive and/or substance use disorders appear to have equal likelihood of past suicidal ideation/attempts. Screening is critical for prevention by identifying at-risk adolescents; having a history of suicidal behavior represents one of the strongest known risk factors for future suicidal behavior (McIntosh, 2006). In a national study of suicide among incarcerated and detained youth, two-thirds of the suicide victims made prior attempts, reported suicide ideation, made suicidal threats, or physically harmed themselves (Hayes, 2004). Screening for suicidality may be overlooked in this diversion population of youth with other mental health concerns outside of major mood or internalizing symptoms. Ultimately, an ideal mental health-screening tool for use in court settings would be an instrument that is brief, easily administered and interpreted by nonclinical staff, and proven to identify the need for immediate or emergency intervention, such as the Massachusetts Youth Screening Instrument Second Version (MAYSI-2)(Grisso, Barnum, Fletcher, Cauffman, & Peuschold, 2001); a 52-item tool commonly used among juvenile justice populations, that identifies potential mental health and substance use needs.

However, such brief screens that can be administered by paraprofessionals typically do not screen for the presence of child abuse history or substance use that is not problematic. Our study found that among juveniles for whom the judge has concerns about their mental health, a history of any marijuana or alcohol use and a history of any childhood sexual abuse was significantly associated with increased odds of having a history of suicidal ideation or attempt. Thus, while screening for suicidality may be important and necessary, it should be accompanied by an understanding that any substance use and history of sexual abuse can confer increased risk for these vulnerable youth. Court staff and legal professionals throughout the juvenile justice court system should be systematically offered trainings to increase their understanding of: the high-risk of suicidal behavior among juvenile justice populations; the protective and risk factors for suicidal behavior among juvenile justice populations; ways to recognize and respond to warning signs of suicide among juvenile justice populations (Youth in Contact with the Juvenile Justice System Task Force, September 2013). For those juvenile or family court and/or probation settings that have the resources of an in-house juvenile court clinic (see Grisso & Quinlan, 2005), they may be

well positioned to offer such trainings and supports for families of diversion youth with mental health concerns.

With increased screening of risk factors and active suicidality comes the responsibility of intervention. To our knowledge, no brief interventions addressing suicidal behavior have been developed or tested for CINI juveniles. Efforts to understand ways to effectively implement brief evidence-based intervention for suicide prevention within juvenile court and probation systems could prove to be highly efficient and cost-effective for multiple systems. However, further research with broader samples of CINI youth are required to fully understand the scope of the public health problem in order to develop efficient, effective screening and intervention approaches to reducing suicidality in this population.

#### Limitations

This study should be understood in the context of several limitations. First, these data were part of a chart review study and were not collected for the purposes of research. Rigorous chart and database review procedures were employed, however, patterns of missing data were inconsistent, and measures used to arrive at certain diagnoses differed, depending on clinical need. Thus, these data could be an underestimate of suicidality in this vulnerable adolescent population. In addition, analysis of existing clinical data did not allow us to tease apart the rates of suicidal ideation versus attempt, which would be important to consider for future research, Clinicians often combined description of past suicidal ideation and attempt when describing history of or imminent risk. Second, data were only collected from one juvenile court clinic in the northeastern US, limiting generalizability. Furthermore, because juveniles included in this study were referred for a forensic mental health evaluation by a judge our findings may not be generalizable to the larger juvenile justice population. Lastly, our measure of suicide risk was dependent on self-report by the youth and/or their caregiver. Using face-to-face interviews instead of a comprehensive and detailed clinical measure may underestimate the prevalence of SI/A (Kaplan et al., 1994; Klimes-Dougan, 1989). Despite these limitations, the present study strengthens our understanding of the prevalence and related factors of SI/A among an understudied at-risk population, by drawing on a large sample size.

# Conclusions

This study expands current understandings of suicidal behavior among juvenile justice populations by exploring suicidal ideation and/or attempts among an understudied, high-risk subgroup: court-involved non-incarcerated (CINI) juvenile offenders with mental health concerns. Our findings reinforce the appropriateness of conducting screening for suicidal behaviors among CINI youth with mental health difficulties regardless of their presenting problem since mood and internalizing symptoms are not necessarily related to a history of past suicidality. In fact, more comprehensive screening that targets history of offending, substance use, and childhood physical or sexual abuse or neglect is critical in addition to assessing imminent risk of self-harm, as these factors may be illuminating in understanding a juvenile's past and current risk. Juvenile courts provide a rare opportunity for youth and their families and juvenile justice stakeholders to coordinate the appropriate screening and

assessment of justice-involved youth who raise the attention of the court due to mental and behavioral health concerns. Future research is necessary in order to ascertain whether these rates are similar among larger and broader samples of psychiatrically impaired youth diverted from incarceration and whether the associations between the risk factors for suicidality found in this study are replicated in these broader samples. Nevertheless, this study provides a novel understanding of rates of suicidality and risk factors for past suicidal ideation/attempts among CINI youth with mental health concerns and provides an innovative contribution on ways to improve public health outcomes among juvenile justice youth.

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Table 1

Prevalence of Lifetime Suicidal Ideation and Attempt among Juveniles in the Community Referred to Court Mental Health Clinic, 2006 to 2008 (N=353)

	Total $(n=353)^{1}$	No Lifetime Suicidal Ideation/ Attempt Reported	Lifetime Suicidal Ideation/ Attempt Reported
Male	60.6%	61.2%	56.0%
Race	•	•	•
Caucasian (not Hispanic)	62.0	59.9	78.0
African American (not Hispanic)	5.0	5.4	4.0
Hispanic	14.4	14.2	12.0
Asian	2.0	2.0	0.0
Other	9.1	10.2	2.0
Lifetime Homicide Ideation/Attempt	2.3	1.4	8.0
History of Child Sexual Abuse (CSA)	8.8	7.5	18.0
History of Physical Abuse	11.3	10.2	18.0
History of Emotional Abuse or Neglect	14.7	14.6	16.0
History of Significant Life Stressors	59.2	56.8	76.0
Lifetime DCYF <sup>2</sup> Involvement	47.0	46.3	54.0
Lifetime Alcohol Use	47.9	44.9	66.0
Lifetime Marijuana Use	55.5	53.5	78.0
Primary Diagnosis	•	•	•
Mood Disorder	15.9	13.6	30.0
Anxiety Disorders	10.8	11.6	8.0
PTSD	2.0	1.0	8.0
Behavioral Disorders $^{3}$	33.4	35.4	24.0
ADHD	4.2	4.1	4.0
Substance Use Disorder (Alcohol/Marijuana)	11.0	10.6	14.0
No Primary Diagnosis	17.0	18.7	6.0
Prior Status Offense	19.0	15.0	40.0
Prior Non-Status Offense	13.3	10.5	26.0
Incarcerated – 12 months post evaluation	20.4	18.4	34.0

Note:

 $<sup>{\</sup>it ^{I}}{\rm The~original~sample~included~353~reports,~but~9~reports~did~not~contain~data~on~lifetime~suicidal~ideation/attempts.}$ 

 $<sup>^2\!</sup>_{\rm DCYF}$  stands for Department of Children Youth and their Families.

 $<sup>^{\</sup>it 3}{\rm Behavioral}$  Disorders includes Oppositional Defiant Disorder, Conduct Disorder, and DBD.

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Table 2

Results of Chi-Square Analysis by Suicidal Ideation/Attempts among Adolescents Referred for Court-Ordered Mental Health Evaluations, 2006 to 2008

Prior Offense History         21.5           Marijuana and/or Alcohol Use History         57.5           Psychiatric Diagnosis (Mood)         16.7           Significant Life Stressors         61.4           History of CSA         8.1           History of Physical Abuse         11.0           History of Emotional Abuse or Neglect         15.8           Gender (Male)         61.2			
	53.1	21.597 1	** 000.
	84.1	11.288	.001
	31.9	5.826 1	.016**
	79.2	5.596	.018
	19.0	5.301	.021
	0.61	2.272	.132
	16.7	.022	.881
	56.0	.488	.485
Race/Ethnicity (Caucasian) 63.6	74.0	2.033	.154

Note:

\* p < .05;\*\* p < .001

Table 3

Logistic Regression Analysis of Predictors for Suicidal Ideation/Attempts with Adolescents Referred for Court-Ordered Mental Health Evaluations, 2006 to 2008 (N=353)

Predictor	β	$SE \beta$	$SE \beta$ Wald's $\chi^2 (df=1)$	d	Exp (β)
Constant (Referent Group)	-3.753 0.607	0.607	38.195	0.000	(not applicable)
Prior Offense History (Y)	1.325 0.372	0.372	12.714	0.000	0.000 3.764 (1.816–7.799)
Marijuana and/or Alcohol Use History (Y) 1.121 0.461	1.121	0.461	5.900	0.015	0.015 3.067 (1.242–7.576)
Psychiatric Diagnosis (Mood)	.742	.742 0.419	3.137	0.077	0.077 2.101 (0.924–4.776)
Significant Life Stressors (Y)	0.757 0.456	0.456	2.748	0.097	0.097 2.131 (.871–5.214)
History of Child Sexual Abuse (Y)	1.264 0.502	0.502	6.345	0.012	0.012 3.540 (1.324–9.466)