

Fire-setting, Psychotic Symptoms and Histories of Abuse in Hospitalized Adolescents with Psychiatric Disorders

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Abstract

Even though deliberate fire-setting is associated with a range of psychiatric disorders, there are few evidence-based guidelines for the psychological treatment of adolescents who set fires. Studies that investigate psychiatric disorders and histories of maltreatment in adolescent fire-setters often emphasize externalizing disorders, such as Oppositional Defiant Disorder (ODD), Conduct Disorder (CD), Attention Deficit Hyperactivity Disorder (ADHD), and Antisocial Personality Disorder (ASPD), especially since fire-setting is one of the criteria for CD, and impulsivity, a strong interest in fires and antisocial personality features are all very positively correlated, but fire-setting is also associated with psychotic disorders and substance abuse. Studies of adult psychiatric inpatients note a 20% incidence of psychotic disorders among fire-setters as well as diagnoses of personality disorders. Although Kolko & Kazdin found that 30% of adolescent inpatients had a history of fire-setting, the prevalence rates of fire-setting in youth with psychiatric disorders have been difficult to establish, and the relationship between severe psychopathology and fire-setting is not well understood.

Keywords: Fire-setting, Psychopathology, Psychiatric disorders, Mood disorders, Adolescence

Introduction

Community studies of adolescents who set fires reveal a strong relationship between fire-setting, adverse life experience, such as maltreatment, and limited emotion regulation ability. In fact, histories of physical abuse, sexual abuse and emotional abuse in childhood are all associated with fire-setting as well as with an increased vulnerability for psychotic disorders, mood disorders and internalizing disorders. A history of sexual abuse is particularly prevalent among individuals with psychotic disorders, but there is a paucity of research that examines psychotic symptoms among child and adolescent inpatients with a history of fire-setting. Although studies of adolescent inpatients reveal a strong association between a history of sexual abuse and psychotic disorders, to date fire-setting has not been included in such investigations. Nevertheless, fires set by children and adolescents result in considerable physical and psychological injury and financial damage. Even though recidivism rates are generally low for adolescents who set fires, those with histories of sexual and physical abuse have higher rates of future antisocial behavior and a greater risk for repeatedly setting fires [1-8].

Risk Factors for Fire-setting in Childhood and Adolescence

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Although risk factors for episodes of fire-setting appear to be different for clinically referred and non-referred youth, a history of fire-setting is often identified as a salient predictor of future fire-setting behavior. Few reliable demographic characteristics of juvenile fire-setters have been found other than male gender, but investigators have reported that adverse life events, family dysfunction, involvement with the child welfare system, and low socioeconomic status may all be contributing factors. The combination of an interest in fires and antisocial personality traits has likewise been identified as a strong risk factor for fire-setting. Additionally, 13- to 18-year-old adolescents who set fires are more likely to have psychiatric disorders and to be responding to crises and less likely to be merely curious about fires than 8 to 12-year-old fire-setters whose behavior tends to be associated with psychosocial conflicts [8-13].

In community based self-report surveys, fire-setting in adolescence has been associated with shyness, aggressiveness, and peer rejection. Among child and adolescent psychiatric outpatients, the extent of early involvement in fire-setting and antisocial behavior are predictors of recidivism, while an increased risk of repeated fire-setting is also associated with heightened family dysfunction. Follow-up studies of child and adolescent outpatients with a history of fire-setting similarly suggest that family variables, such as domestic violence and substance abuse tend to increase the likelihood of children's fire-setting and delinquent behavior [14-18].

Fire-setting and History of Physical, Sexual and Emotional Abuse

Studies that examine histories of abuse among children and adolescents who set fires have yielded inconsistent findings. For example, Martin et al., found a positive relationship between

fire-setting and sexual abuse while Becker et al., failed to find a similar relationship. Some retrospective studies indicate that nearly one half of child and adolescent outpatients with histories of fire-setting have experienced maltreatment and suggest that maltreatment contributes to the risk of fire-setting by interfering with the development of emotional regulation ability. There have been few large studies of childhood maltreatment and fire-setting in hospitalized adolescents with psychiatric disorders, and the relationships between childhood abuse, psychotic symptoms and fire-setting has not been previously explored [19-21].

Fire-setting and Psychiatric Disorders in Childhood and Adolescence

In studies of child and adolescent outpatients, fire-setting has been linked to ADHD, depression, suicidal behavior and ASPD traits. Fire-setting in adolescence has also been associated with an increased risk of schizophrenia later in life. In one of the few studies to assess hospitalized children and adolescents (Mean age = 11.09 years) that compared fire-setters with non-fire-setters, there were no significant differences in ethnicity, social history, intelligence, or history of abuse and neglect between the fire-setters and non-fire-setters. In a similar study of fire-setting among hospitalized latency age children (Mean age = 9.9 years), the fire-setters with CD had more delinquency, hyperactivity and aggression and less social competence than the non-fire-setters with CD. In a comparison of adolescent outpatients with a history of fire-setting with adolescent fire-setters in residential treatment, the only significant between group differences were that the youth in residential treatment had greater depression, aggression and serious delinquent behaviors. Summarizing the literature about children and adolescents who engage in fire-setting, Lambie and Randell observed that there have been so few comprehensive studies of the trajectories of fire-setting in youth that the understanding of fire-setting lacks an empirical foundation. However, in general, fire-setting can be viewed as pathological when it occurs more than three times and is associated with substantial life stressors and marked psychosocial dysfunction [12,22-27].

This present study aimed to identify the prevalence of a history of fire-setting among hospitalized adolescents in an intermediate care, inpatient state psychiatric facility and to examine possible relationships between fire-setting, psychotic symptoms, a history of abuse, behavioral problems, and diagnosis. In order to explore these relationships, a de-identified, retrospective records review was conducted for 1,487 discharged inpatients (Mean age = 14.3 years) who were admitted consecutively to a state psychiatric center for children and adolescents between January of 1999 and February of 2005. Youth who are treated in a state psychiatric hospital frequently have chronic psychiatric disorders, self-injurious or dangerous behavior and multiple hospitalizations [28-30].

On the basis of Kolko et al.'s, Kolko & Kazdin's and Becker et al.'s findings, our first hypothesis had two parts. The first part of our first hypothesis was that among our sample of 1,487 mostly adolescent inpatients, CD, ODD, and ADHD would be the prevalent diagnoses among those with a history of fire-setting. Based on the findings of Kolko & Kazdin, the second part of our first hypotheses was that 30% of the inpatients would have histories of fire-setting. Our second hypothesis was that the fire-setters would more likely be

male, have greater histories of physical abuse, and sexual abuse, as well as more substance abuse, aggressive behavior, suicidal behavior and externalizing behaviors, such as sexual offending, running away, and truancy. To our knowledge, there have been no studies that have examined the prevalence of both psychotic symptoms and histories of abuse among adolescent child and adolescent inpatients who have deliberately set fires. Based on the findings of Lindberg et al. with adult inpatients, our third hypothesis was that 20% of the adolescent fire-setters would have psychotic symptoms [31-33].

Method

Participants and Study Design

Since archival data on inpatient admissions and discharges to a state psychiatric hospital for children and adolescents between January of 1999 and February of 2005 were available, data on all of the 1,854 admitted patients were initially considered in this study. The youth were between 9 and 17 at the time of admission and all had a psychiatric disorder. Histories of deliberate fire-setting and other behavioral problems were included on the basis of history, family corroboration, and court records at the time of admission, but independent rating scales of fire-setting weren't utilized. The diagnoses were made on admission by the treating psychiatrists based on DSM-IV criteria as a result of clinical interviews, reviews of the histories and court records and the Stony Brook Symptom Inventory-Adolescent Version 4, which was standardized with the DSM-IV. Of the 1,854 admissions from January of 1999 through February of 2005, 1,487 were included in the logistic regression analysis; 367 were rejected because of incomplete data. During this time period, 115 inpatients had documented histories of fire-setting. The mean length of stay (LOS) for the patients without a history fire-setting was 77.46 days while the mean LOS for those with a history of fire-setting was 94.06 days, and this difference was not significant ($t = -1.77$, ns). The mean age for the patients without a history of fire-setting was 14.91 years while the mean age for the patients with a history of fire-setting was 14.13 years. This difference was significant ($t = 4.51$, $p < .001$). Legal status on admission showed that 52.2% of the patients with a fire-setting history were Minor Voluntary admissions while 45.9% of the admissions without a history of fire-setting were admitted on Minor Voluntary status, this difference was not statistically significant (Chi-square = 1.63, ns). The youth were 1% Asian, 1% Indigenous American, 14%, Hispanic, 21% African American and 63%, Caucasian, non-Hispanic. Among the 115 fire-setters, 90 (78.9%) were male, and 24 (21.1%) were female. Among the 1,658 non-fire-setters, 869 (52.4%) were male; 789 (47.6%) were female [33-37].

Procedure and Statistical Analysis

Since this study aimed to determine which variables were associated with having a history of fire-setting, admission data were utilized in obtaining correlation coefficients and other analyses. Since the dependent variable (history of fire-setting) and the predictor variables were all discrete variables, logistic regression was the analytic method of choice.

There was considerable variability in the diagnoses, presented in Table I, among the youth with and without a history of fire-setting. For purposes of analysis these diagnoses were therefore collapsed

into four larger groups. Data for individuals diagnosed with CD and ODD were combined into one group because of their common clinical features. Those with ADHD comprised the second large group. Subjects diagnosed with Mood Disorders were combined into the third group, and a fourth group contained diagnoses indicating psychotic symptoms, such as Schizophrenia and Psychosis Not Otherwise Specified. Since many of the patients had more than one Axis I diagnosis, those with multiple diagnoses were counted in each group for which they had a diagnosis. Patients with multiple Axis I diagnosis that fell within one group were only counted once [38-41] [Table 1].

Results

Fire-setting and Psychiatric Disorders

As shown in Table 1, 69% of the youth who were fire-setters had a diagnosis of CD or ODD while 55% of the non-fire-setters had these diagnoses. Forty-seven percent of the youth who were fire-setters had a diagnosis of ADHD, while 28% of the non-fire-setters had this diagnosis. Thus, in support of our first hypothesis, the fire-setters were more likely to have diagnoses of CD and/or ODD (Chi-square = 8.28, $df = 1$, $p < .01$) and also more likely to have diagnoses of ADHD (Chi-square = 18.06, $df = 1$, $p < .001$). For the non-fire-setters, 55% had a diagnosis of mood disorders or depression while 43% of the fire-setters had these diagnoses. Table 1 shows that the non-fire-setters were more likely to have diagnoses of mood disorders or depression than the fire-setters (Chi-square = 6.96, $df = 1$, $p < .01$). Twelve percent of the non-fire-setters had psychotic symptoms, while 15% of the fire-setters had psychotic symptoms (Chi-square = 0.90, $df = 1$, ns) [Table 2].

Fire-setting, Psychotic Symptoms and History of Abuse

To test for multicollinearity, correlations were computed between variables (see Table 3) included in the Logistic Regression equation. Since the largest correlation between variables was .451, multicollinearity was not a problem in this analysis. Relatively large correlations were found between having a history of runaway behavior and a history of truant behavior ($r = .451$, $p < .01$), and between having a history of substance abuse and truancy ($r = .402$, $p < .01$). Gender was significantly related to all the variables except having a history of psychotic symptoms and having a history of taking psychotropic medication [41-44] [Table 3,4].

The full model was used in the logistic regression equation, which means that all variables were entered into the logistic regression equation at the same time. While the Chi-square for the model was significant (Chi-square = 65.86, $df = 11$, $p < .001$), Nagelkerke R^2 , shows a significant but weak relationship (Nagelkerke $R^2 = .12$) between fire-setting and the predictor variables. Table 4 shows the results of the logistic regression analysis. Five variables were significantly related to having a history of fire setting; they were: gender ($p < .0001$), a history of running away behavior ($p < .005$), a history of psychotic symptoms ($p < .005$), a history of having been sexually abused ($p < .005$), and a history of displaying aggressive behavior ($p < .05$). An examination of the odds ratios (ORs) shows that those inpatients with a history of fire-setting were: 4.78 times more likely to be male, 2.31 times more likely to have a history of runaway behavior, 2.48 times more likely to have a history of psychotic symptoms, 2.21 times more likely to have been sexually

abused, and 2.28 times more likely to have a history of displaying aggressive behavior than those admitted without a history of fire setting.

Discussion

The first part of hypothesis one was confirmed. The results lend support to the findings of many researchers who have reported a prevalence of CD, ODD and ADHD among adolescents with histories of fire-setting. The high prevalence of CD, ODD and ADHD in our sample likewise supports the view that CD and ADHD differentiate hospitalized adolescents who are fire-setters from non-fire-setters.

The second part of hypothesis one was not supported. In contrast to the fire-setting prevalence rate of 30% among child psychiatric inpatients reported by Kolko & Kazdin, we found that 6% of our sample of 1,487 9- to 18-year-old inpatients had documented histories of fire-setting, but our subjects were hospitalized in an intermediate care state psychiatric facility and had a mean age of 14.13 years, while those assessed by Kolko et al. had a mean age of 9.9 years and were hospitalized for acute psychiatric symptoms. Kuhnley et al. found a prevalence of close to 50% with their sample of inpatient fire-setters, but these subjects had a mean age of 11.03 years and also weren't treated in an intermediate care state hospital. Our finding of a 6% prevalence rate suggests that fire-setting might be relatively rare among child and adolescent psychiatric inpatients who often have histories of multiple hospitalizations and comorbidity. It is likewise in accord with the finding that fire-setting is more widespread among adolescents who have acute psychiatric admissions and younger children with psychiatric disorders as the U.S. Fire Administration Report indicated. However, since this study involved a retrospective data review based on admission records and court documents and didn't include a fire-setting scale, the possibility that there might be some number of false negatives cannot be ruled out [45-48].

Our second hypothesis was partially confirmed. The preponderance of males among the discharged patients with a history of fire-setting was expected and is consistent with the findings of many investigators. In support of the results of Kuhnley et al., Kolko & Kazdin, Kolko et al., Becker et al., and MacKay et al., we also found an increased likelihood of runaway and aggressive behavior in the youth who were fire-setters, which was consistent with the possibility that a history of trauma and impulsivity may both contribute to fire-setting among hospitalized adolescents. Although unlike Martin et al. and Root et al. we did not find a significant relationship between history of physical abuse and fire-setting, our finding of an increased likelihood of a history of sexual abuse among our sample of inpatient fire-setters highlights the importance of posttraumatic phenomena in the etiology of adolescents' fire-setting and the particularly important role of sexual abuse in psychopathology. Our finding that the adolescents with a history of sexual abuse were 2.21 more likely to have histories of fire-setting also lends support to Martin et al.'s, Bebbington et al.'s and Burnett & Omar's, conclusions that there is a strong relationship between history of sexual abuse and fire-setting and to Root et al.'s and Tanner's conclusions that maltreatment interferes with children's developing emotion regulation ability. However, any conclusions about their interrelationship must be considered preliminary, particularly since

the database lacked information about the age, duration, frequency, perpetrator and severity of the sexual abuse. Our finding that 43% of the adolescent inpatient fire-setters had a mood disorder lends support to Kolko and Kazdin's, Harkness & Lumley's and Pollinger et al.'s findings about the prevalence of depression and suicidality among adolescent fire-setters.

Although the third hypothesis was not confirmed, our finding that 15% of our adolescent inpatient fire-setters had psychotic related diagnoses may be one of the first such findings in the literature. It is analogous to Lindberg et al.'s (2005) finding of a 20% incidence of psychotic diagnoses among adult inpatient fire-setters and lends support to Tyrka et al.'s, Stockburger & Omar's, and Dalhusien et al.'s findings of an association between psychotic symptoms and fire-setting. It is interesting that in our sample, a history of psychotic symptoms was related to fire-setting, but there wasn't a significant relationship between fire-setting and psychotic related diagnoses. A closer examination of the data showed that 12% of our sample had psychotic related diagnoses while 15% had histories of psychotic symptoms. A small number of patients with a history of psychotic symptoms did not meet the criteria for a psychotic diagnosis at the time of their admission. Nevertheless, the finding that the fire-setters in our sample were almost two and a half times more likely than the non-fire-setters to have had a history of psychotic symptoms warrants a further investigation into the relationship between psychotic symptoms and fire-setting behavior.

A note of caution is necessary in generalizing about the higher percentages of ODD, CD and ADHD in our sample. Our analyses were based on the total number of the subjects' Axis I diagnoses which allowed for some comorbid Axis I diagnoses to be included in the data [25,29,45-50].

Strengths and Limitations

Among the advantages of this study are the large sample of adolescent inpatients, it being the first to simultaneously examine psychotic symptoms and histories of abuse in adolescent inpatients who have set fires, and the inclusion of diagnosis, documented history of deliberate fire-setting and important clinical variables, such as externalizing behaviors and mood disorders. Our finding of significant relationships between fire-setting and history of sexual abuse, running away, aggressive behavior, and male gender corroborates the work of investigators, such as Chen et al., and Martin et al., who have emphasized multifactorial variables in fire-setting in the context of trauma and externalizing behavior. Among the limitations of this study are those of a retrospective records review, the lack of independent rating scales of fire-setting behavior, the absence of detailed information about the duration, frequency, severity, and the perpetrator of the sexual abuse, and the absence of objective scales that might have better delineated personality variables among the fire-setters.

Since the data in this study was gathered from a hospital database designed to provide relevant clinical information and no fire-setting scale was used, the relatively low number of inpatient admissions with histories of fire-setting must be viewed with caution. While some patients with histories with fire-setting may have been missed, it is unlikely that the patients without a history of fire-setting were wrongly identified as having engaged in fire-setting behavior.

Conclusion

The results offer noteworthy, preliminary findings about psychiatrically hospitalized children and adolescents who deliberately set fires, an under investigated clinical population. The fact that hospitalized adolescents with histories of fire-setting are nearly two and a half times more likely to have psychotic symptoms is an important finding that warrants further study as does the finding that these youth are also 2.21 times more likely to have experienced sexual abuse. Although the correlations between childhood maltreatment and externalizing behaviors have long been well established, the results point to the need for additional research about the clinical characteristics and treatment planning needs of adolescents with psychiatric disorders who set fires. Future studies on prevalence rates of fire-setting in child and adolescent psychiatric inpatients and the impact of abuse will need to assure that fire-setting histories are obtained from multiple sources. Although significant relationships were found between a number of the predictor variables and fire-setting in our study, the strength of these relationships were fairly weak which suggests that a good deal of the variance in fire-setting behavior remains unexplained and should be the subject of future research. Nevertheless, the incidence of psychotic symptoms and histories of sexual abuse in the adolescents who were fire-setters suggests the importance of posttraumatic phenomena and the need for trauma informed care and psychotherapy in treatment planning with adolescents who deliberately set fires.

Conflict of Interest

No external funding was associated with this study. The authors have declared that they have no competing or potential conflicts of interest.

Data Sharing

The data that support the findings of this study are available from an archival deidentified data base from Sagamore Children's Psychiatric Hospital. Restrictions apply to the availability of these data, which were used under license for this study, and were comprised of deidentified archival data. Deidentified data are available through archival records with the permission of Sagamore Children's Psychiatric Hospital.

Table 1: Diagnoses of Patients with and without a History of Fire-setting.

Diagnostic Group		Non-Fire setters	Fire-setters	Chi-Square	P
Conduct Disorder & Oppositional Defiant Disorder	Yes	911	79	8.28	<.01
	No	748	36		
Attention Deficit Hyperactive Disorder	Yes	469	54	18.06	<.001
	No	1190	61		
Mood Disorders & Depressive Disorders	Yes	917	49	6.96	<.01
	No	742	66		
Psychotic Related Disorders	Yes	196	17	0.9	>.05

Table 2: Presents descriptive statistics for the variables included in the regression analysis, length of hospitalization, age at admission, and legal status at admission.

Descriptive Statistics	N	Minimum	Maximum	Mean	Standard Deviation
Age of Patients at Admission	1854	9.21	17.97	14.86	1.79
Length of Stay	1853	0	578.48	78.4	81.63
Admitting Legal Status	1848	0 Minor Voluntary	1 Court Remand	0.54	0.5
History of Fire Setting Behavior	1774	0	1	0.06	0.25
History of Sexually Offending Behavior	1756	0	1	0.04	0.2
History of Truant Behavior	1789	0	1	0.42	0.49
History of Runaway Behavior	1800	0	1	0.34	0.47
History of Psychotic Symptoms	1765	0	1	0.15	0.36

History of taking Psychotropic Medication	1797	0	1	0.72	0.45
History of Aggressive Behavior	1820	0	1	0.76	0.43
History of Suicidal Behavior	1789	0	1	0.49	0.5
History of having been Sexually Abused	1732	0	1	0.29	0.45
History of Substance Abuse	1796	0	1	0.42	0.49
History of Physical Abuse	1741	0	1	0.28	0.45
Gender of Patient	1852	0 Female	1 Male	0.54	0.5
Valid N (listwise)	1487				

Note: Since the variables were coded as 0 if the behavior or condition was not present and as 1 if the behavior or condition was present, the means presented in Table 2 show the percentage of patients demonstrating a given behavior. Only six percent of the patients admitted during this interval were identified as having a history of fire setting.

Table 3: Pearson Correlations Between Variables.

		History of Sexually Offending Behaviour	History of Truant Behaviour	History of Firesetting Behaviour	History of Run away Behaviour	History of Psychotic Symptoms	History of taking Psychotropic medication	History of Aggressive behaviour	History of Displayin Suicidal Behaviour	History of Having been Sexually Abused	History of Substance Abuse	History of Physical Abuse	Gender
History of Sexually Offending Behaviour	Pearson 1	1	.89**	.090**	0.034	0.003	0.013	0.032	0.044	0.058*	0.099	0.015	.138**
	N	1756	1729	1736	1734	1721	1712	1736	1727	1643	1725	1652	1754
History of Truant Behaviour	Pearson 1	.089**	1	0.037	.451**	.136**	.351**	.118**	0.004	0.023	.402**	0.045	.170**
	N	1729	1789	1754	1774	1741	1743	1771	1752	1674	1767	1683	1787
History of Firesetting Behaviour	Pearson 1	.090**	0.037	1	0.017	.070**	0.025	.090**	0.022	0.025	0.037	0.018	.131**
	N	1736	1754	1774	1762	1746	1732	1757	1750	1661	1748	1668	1772
History of Run away Behaviour	Pearson 1	0.034	.451**	0.017	1	.109**	.198**	0	0.021	.119**	.369**	.069**	0.262**
	N	1734	1774	1762	1800	1750	1754	1781	1763	1685	1775	1694	1798
History of Psychotic Symptoms	Pearson 1	0.003	.136**	.070**	.109**	1	.227**	0.038	.109**	0.051	.091**	.063**	0.035
	N	1721	1741	1746	1750	1765	1725	1748	1743	1654	1741	1662	1763
History of taking Psychotropic medication	Pearson 1	0.013	.351**	0.025	.198**	.227**	1	.093**	.149**	.093**	.173**	0.042	0.046
	N	1712	1743	1732	1754	1725	1797	1772	1744	1679	1750	1689	1795
History of Aggressive behaviour	Pearson 1	0.032	.118**	.090**	0	0.038	.093**	1	.206**	.049*	0.012	0.038	.235**
	N	1736	1771	1757	1751	1748	1772	1820	1771	1703	1775	1712	1818
History of Displayin Suicidal Behaviour	Pearson 1	0.044	0.004	0.022	0.021	.109**	.149**	.206**	1	.113**	.062**	0.035	.210**
	N	1727	1752	1750	1763	1743	1744	1771	1789	1674	1758	1682	1788

History of Having been Sexually Abused	Pearson 1	.058*	0.023	0.025	.119**	.051*	.093**	.049*	.113**	1	0.045	0.230**	.316**
	N	1643	1674	1661	1685	1654	1679	1703	1674	1732	1679	1706	1730
History of Substance Abuse	Pearson 1	0.099	.402**	0.037	.369**	.091**	.173**	0.012	.062**	0.045	1	0.038	.126**
	N	1725	1767	1748	1775	1741	1750	1775	1758	1679	1796	1688	1794
History of Physical Abuse	Pearson 1	0.015	0.045	0.018	.069**	.063**	0.042	0.038	0.035	.230**	0.038	1	0.076**
	N	1652	1683	1668	1694	1662	1689	1712	1682	1706	1688	1741	1739
Gender	Pearson 1	0.138	.170**	.131**	.262**	0.035	0.046	0.235	.210**	.316**	.126**	.076**	1
	N	1754	1787	1772	1798	1763	1795	1818	1788	1730	1794	1739	1852

Correlation is significant at the 0.01 level(2-tailed). Correlation is significant at the 0.05 level(2-tailed).

Table 4: Variables in the Equation.

Variable	B	Wald	Sig	Exp(B)
Sexual Offending	-5156	1.3854	.2392	1.6746
Truancy	.7094	1.2992	.2544	.7094
Running Away	.8365	9.2967	.0023	2.3082
Psychotic Symptoms	.9093	10.4618	.0012	2.4825
Psychotropic Medications	-.0832	.0818	.7749	.9202
Aggressive Behavior	.8256	4.4797	.0343	2.2832
Suicidal Behavior	-.1404	.3335	.5636	.8690
Sexual Abuse	.7949	8.5158	.0035	2.2142
Substance Abuse	.0366	.0184	.8921	1.0372
Physical Abuse	-.2847	1.0722	.3005	.7523
Gender	1.5636	23.8992	.0000	4.7760

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