Identifying Victims of Abuse Using the Personality Inventory for Children: I. Applications for Adolescent Runaways.

The physical and sexual abuse of children and adolescents has been gaining attention as a national problem of social and clinical significance. In this study a model was developed in order to identify abuse (victimization) in an adolescent population (n=52). Four scales (Adjustment, Delinquency, Family Relations, and Anxiety) of the Personality Inventory for Children (PIC) correctly classified 90.4% of the criterion group with only 9.6% misclassified. Over 97% of the control sample (non-victims) were correctly classified with only 2.6% being misclassified. The model was cross-validated with a sample of adolescent runaways. Ninety-five percent of the allegedly abused runaways were correctly classified with only 5% misclassified. The reliability of the model was further bolstered by the finding that the PIC scale profile of the adolescent victims, whose abuse had been substantiated, was not significantly different from the alleged runaways' PIC scale profile. The findings lend support for establishing a psychologically oriented assessment component within programs that work with runaways, and for taking a pro-active position toward abuse. Two tables present data. Contains 33 references. (Author/TS)
Identifying victims of abuse using the Personality Inventory for Children: I. applications for adolescent runaways

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Running head: IDENTIFYING VICTIMS OF ABUSE
Abstract

The purpose of this study was to develop a model that would identify abuse (victimization) in an adolescent population. Four scales (Adjustment, Delinquency, Family Relations, Anxiety) of the Personality Inventory for Children (PIC) correctly classified 90.4% (47) of the criterion group (substantiated) with only 9.6% (5) misclassified. Over 97% (37) of the control sample (non-victims) were correctly classified with only 2.6% (1) being misclassified. The model was cross-validated with a sample of adolescent runaways. Ninety-five percent (19) of the allegedly abused runaways were correctly classified with only 5.0% (1) misclassified. The reliability of the model was further bolstered by the finding that the PIC scale profile of the adolescent victims, whose abuse had been substantiated, was not significantly different from the alleged runaways' PIC scale profile. Brier's (1992) methodological concerns regarding abuse sequelae research were used to critique the study. Recommendations were made regarding limitations, application and implementation of the findings, as well as for future research.
The physical and sexual abuse of children and adolescents has been gaining attention as a national problem of social and clinical significance. Straus, Gelles, & Steinmetz (1980) cited estimates of 1.4 million to 1.9 million maltreated youth with the American Association for Protecting Children (1986) tallying 1,727,000 reports of alleged maltreatment in 1984, of which forty-two percent were substantiated. Despite methodological concerns regarding the accuracy of reporting the above statistics, Powers and Eckenrode (1988) reported that one-third of maltreated cases were adolescents. Other investigators have reported that as many as 42% (Blum & Runyan, 1980) to 47% (USDHHS, 1981) of documented cases were adolescents.

Since victimization was seemingly prevalent among the adolescent population, this study sought to develop a model of adolescent victimization. By using a screening measure of adolescent psychopathology, whose scales were representative of the behaviors associated with adolescent abuse.
victims, this study investigated whether selected scales could possibly identify victimized adolescents and specifically those among high risk groups such as adolescent runaways.

**Physical abuse**

Williamson, Borduin, and Howe (1991) found that physical abuse was closely related to disturbed family and individual functioning. Adolescents who had been abused exhibited physical and verbal aggression, intrusiveness, non-compliance, and impaired interpersonal relations. Socialized aggression, attention problems, and rigid family functioning also characterized the abused adolescent. When compared to sexually abused adolescents, the physically abused adolescent evidenced more conduct problems. When compared to neglected adolescents, the physically abused adolescent also evidenced more family life event changes (stessors).

**Sexual abuse**

Conduct problems, attention problems and stessors characterized the sexually abused adolescent also. When compared to a physically abused adolescent the sexually abused adolescent evidenced more
internalizing behaviors. Anxiety-withdrawal symptoms relating to fear and depression were also present (Williamson, Borduin, and Howe, 1991).

Armsworth and Holaday (1993) noted that recent studies on abuse/trauma have focused on the commonalities of response to traumatic events in general: responses by adolescents to physical and sexually abusive events were similar. They included memory impairment (defense mechanism), futurelessness, fatalistic viewpoint, lower tolerance for stress and overwhelmed by life in general, low self-esteem, poor self-concept, negative body image, lack of self confidence, impulsivity, hyperactivity, and inattentiveness.

The psychosocial sequelae of the physically and sexually abused adolescent may frequently be masked as other problems such as delinquency, self destructive behavior, school dysfunction and running away (Powers, Jaklitsch, & Eckenrode, 1989). Untreated victimization in childhood and adolescence may manifest in psychopathological conditions (van der Kolk, 1987a). Specifically, Lewis et al (1989) found that severe physical abuse was associated with subsequent extremely violent behavior. Borderline Personality
Disorder (Bryer et al, 1987) and Post Traumatic Stress Disorder (Kiser et al 1991) were diagnoses which have been given to adolescent victims. Goodman (1988) reported that being physically or sexually abused was a precipitant to running away from home.

**Abuse and the adolescent runaway**

The reported incidence of physical and sexual abuse among runaways has varied, but has increased over the years. In 1983 the U. S. Department of Health and Human Services (USDHHS, 1983) surveyed 235 programs and agencies, in 14 states, that provided services to over 75,000 runaway and homeless youth. The programs estimated that 36% of the runaway youth had left home due to alleged physical or sexual abuse (USDHHS, 1983). The National Network of Runaway and Youth Services (NNRYS) surveyed 210 runaway programs that served approximately 51,000 youths. The programs reported that 18% of their clients alleged physical or sexual abuse (NNRYS, 1985). The General Accounting Office (USGAO, 1989) during the years 1985-1988, gathered data from runaway programs on 34,000 youths served at those programs. Twenty-nine percent of the runaway youth alleged abuse. Finally, in 1991 the NNRYS surveyed 146 runaway programs that provided
services to over 50,000 runaway youths. Fifty-two percent of the adolescent runaways had made allegations of physical and/or sexual abuse.

In many runaway programs the estimate of abuse had been underreported by the youth due to their fear of the potential involvement of child protective services (NNRYS, 1991). Since victimization issues often remained undisclosed and misdiagnosed, within the adolescent runaway population, there has been an increased need to identify those youth who may have been victimized.

Poignantly, in a study (Cavaiola & Schiff, 1988) of 150, 13 through 18 year old chemically dependent, physically and/or sexually abused adolescents, only 32% had any prior intervention for their abuse. A full 68% of this abused sample had never disclosed their history of abuse until they were well into their current treatment intervention (Cavaiola & Schiff, 1988) and then only because they were interviewed specifically for this history. Remarkably, the abused sample had a higher incidence of prior psychological evaluations and psychotherapy. The abused sample evidenced significantly more suicidal ideations, suicide attempts, legal problems, animal cruelty,
accidents, homicidal ideations, sexual acting out, and runaway behavior compared to a group of just chemically dependent adolescents and a group of non-chemically dependent adolescents.

Since the incidence of adolescent abuse was of social and clinical concern, an assessment technique to identify adolescent victims seemed warranted. A computer literature search and review of ERIC and PSYCHLIT databases found no empirical studies that used a known adolescent measure of psychopathology to identify adolescent victims. In fact, no empirical studies were found that attempted to identify victimization among runaways either.

Therefore, this study sought to determine a model that could adequately identify adolescent victims of physical and/or sexual abuse and to apply this model to a sample of adolescent runaways. Specifically, could selected scales of the Personality Inventory for Children (PIC) discriminate a sample of abused adolescents from a non-abused adolescent comparison sample. This model was to be cross-validated with a sample of adolescent runaways who had alleged abuse. With runaways being a high risk population (NNRYS, 1985, 1991; Rohr, 1994), mental health professionals
need the ability to try to objectively as possible identify those adolescents who may have experienced physical and/or sexual abuse.

Method

Subjects

Criterion group (Abused). The adolescent subjects for the abused group were a subsample taken from 320 consecutive child and adolescent admissions to two university affiliated Day Treatment Programs (partial-hospitalization) between the years 1987 and 1992. Inclusion in the criterion group was based on valid PIC protocols, history of physical and/or sexual abuse, and no history of running away. The level of psychopathology was moderate to severe (Pruitt & Kiser, 1992). There were 52 subjects of which 29 (55.8%) were male and 23 (44.2%) were female. They ranged in age from 13 to 17 with a mean age of 14.5. Seventy-three percent (38) were Caucasian and twenty-seven percent (14) were African-American. Thirty (57.6%) had been physically abused, fifteen (28.8%) had been sexually abused and six (11.5%) had been both physically and sexually abused. Twenty-four (46.1%) of the cases of abuse were substantiated and twenty-eight (53.9%) of the cases had been alleged. An incident of
abuse was determined to be substantiated if the
perpetrator either admitted to the abuse or if the
Tennessee Department of Human Services substantiated
the allegation. If neither of the above two criteria
were met, the incident was classified as alleged.

Control group. The control group consisted of 38
adolescent subjects, 13 through 17, with a mean age of
14.9. Thirty-five (92%) were Caucasian and 3 (8%) were
African-American. There were 14 (36.8%) males and 24
(63.2%) females. The PIC protocols were collected from
subjects who were members of various youth groups in
Memphis, Tennessee. Leaders of the youth organizations
were contacted in the Fall of 1989 and asked to
distribute introductory letters and permission forms
explaining the purpose of the study to the adolescent
members. Those parents who signed and returned the
permission forms were mailed the PIC and were asked to
complete and return the inventory. The parents
reported that the subjects had never run away from
home, had never seen a professional for mental health
services, had never made any allegations of physical
and/or sexual abuse, and had no juvenile court
contact.
Cross-validation group (Runaways). The runaway group consisted of subjects who were active runaways (living at home prior to running away) at a runaway program in Memphis, Tennessee between the years 1986 and 1988. The PIC protocols had been collected prior to their first family therapy session at the runaway program. That is, the PIC was administered before the parent knew their child had alleged abuse. Of the approximately 250 possible subjects, only 63 parents consented to complete the PIC, of which 61 were scored as valid. Of this sample of 61, there were 20 subjects (32.7%), who had made allegations of physical and/or sexual abuse. The allegedly abused subjects' ages ranged from 13 through 17, with a mean age of 15.1. Two (10%) were male and 18 (90%) were female. Fourteen (70%) were Caucasian and 6 (30%) were African-American. Nine (45%) had made an allegation of physical abuse, 9 (45%) had alleged sexual abuse and 2 (10%) had alleged both physical and sexual abuse. For 9 (45%) this was their first runaway episode. Eleven (55%) had run away from home more than once.
Identifying victims

Instrumentation

Detailed information regarding test construction, validity, reliability, and use of the PIC with runaways can be obtained from the following sources: Forbes (1986); Lachar (1982); Lachar, Gdowski, & Snyder (1982); Rohr, 1991; and Wirt et al. (1984)

PIC scale selection

Based upon prior research (Alexander, 1992; Armsworth & Holaday, 1993; Briere, 1992; Browne & Finkelhor, 1986; Gelardo & Sanford, 1987; Kiser et al, 1991; and Williamson, Borduin & Howe, 1991) the following PIC scales were identified as indicators of abuse related behaviors: Adjustment (ADJ), Delinquency (DLQ), Hyperactivity (HPR), Withdrawal (WDL), Family Relations (FAM), and Anxiety (ANX).

Hypotheses

Armsworth & Holaday (1993) concluded that the psychological sequelae to abuse was similar regardless of the precipitant. It was hypothesized that there would not be any significant differences between adolescent victims of physical and/or sexual abuse regardless of the abuse being substantiated or not.
Identifying victims

Since a victim's response to trauma could result in psychopathological behavior, it was hypothesized that abuse victims were significantly different diagnostically than adolescents who had not been abused.

Selected scales of the PIC were identified as representative of abuse victims. It was hypothesized that these scales could discriminate victims from non/victims and would identify alleged runaway victims. It was further hypothesized that the personality profile (PIC scales) of the Substantiated victims would not be significantly different from the Alleged runaway victims.

Results

Within the criterion group, the subgroup that alleged both physical and sexual abuse had only 1 subject, therefore a ONEWAY ANOVA was conducted only on the subgroups of alleged physical abuse and alleged sexual abuse. The results indicated that there were no significant differences between the two groups on any of the selected PIC scales: ADJ-F(1,19)=1.769; FAM-F(1,19)=.843; DLQ-F(1,19)=.081; WDL-F(1,19)=1.073; ANX-F(1,19)=.398; HPR-F(1,19)=.477.
A ONEWAY ANOVA was conducted on the Substantiated groups of physical abuse, sexual abuse, and both physical and sexual abuse. The results indicated that there were no significant differences between the three groups on any of the selected PIC scales: ADJ-F(2,20)=.588; FAM-F(2,20)=.415; DLQ-F(2,20)=.237; WDL-F(2,20)=.341; ANX-F(2,20)=.603; HPR-F(2,20)=.062.

The results indicated that the Alleged physical and sexual abuse subjects could be combined. (The 1 subject in group Both was added to this group because the PIC scale elevations were similar to the mean profile of the other two groups). The three Substantiated groups were also combined, resulting in two groups, those whose abuse was Alleged and those whose abuse was Substantiated. A ONEWAY ANOVA was conducted on the 2 groups. The results indicated that there were no significant differences between the two groups on any of the selected PIC scales: ADJ-F(1,43)=2.349; FAM-F(1,43)=1.444; DLQ-F(1,43)=.496; WDL-F(1,43)=.151; ANX-F(1,43)=.395; HPR-F(1,43)=.130.

Since the results indicated that no significant differences existed between the Alleged and Substantiated groups, they were combined into one group, Abused. A Ford Step-Wise Discriminant Analysis
Identifying victims

was conducted to determine if selected scales of the PIC (ADJ, FAM, DLQ, WDL, ANX, HPR) could discriminate between a group of Abused adolescents and a group of adolescents who had no history of abuse (Control).

The results indicated that the PIC scales Adjustment (ADJ), Delinquency (DLQ), Family Relations (FAM), and Anxiety (ANX) were able to correctly classify 93.33% of the total subjects (Table 1). The scales Hyperactivity (HPR) and Withdrawal (WDL) did not significantly add predictive power and were not part of the final equation. Over ninety percent (90.47%) of the abused group were correctly classified (47). While 97.4% (37) of the control group were correctly classified (Table 1). The canonical correlation was .86 and the Chi-Square was significant ($X^2 (4) = 119.99, p < .001$). These findings indicate that there was a strong relationship between the variables and group membership.

A ONEWAY ANOVA was conducted on the Runaway cross-validation subjects who alleged physical abuse, sexual abuse, and both physical and sexual abuse. The results indicated that there were no significant differences
between the 3 groups on any of the selected PIC scales: ADJ-F(2,17)=.614; DLQ-F(2,17)=.831; HPR-F(2,17)=1.097; WDL-F(2,17)=.846; FAM-F(2,17)=1.064; ANX-F(2,17)=1.947. The 3 groups were combined as a result.

When using Discriminant Analysis, a cross-validation procedure may be necessary because the total correct classification rate could be inflated. This inflation may happen because the function equation coefficients were derived from the same group from which they were applied. The canonical function equation coefficients were applied to runaway cross-validation. The results indicated that 95.0% (19) of the alleged Runaways were able to be correctly classified (Table 2).

A ONEWAY ANOVA was conducted on the two groups, criterion sub-group Proven (substantiated abuse) and the Runaway cross-validation group. The results indicated that there were no significant differences between the two groups on any of the identified PIC scales: ADJ-F(1,42)=1.908; FAM-F(1,42)=.205; DLQ-F(1,42)=2.178; WDL-F(1,42)=.045; ANX-F(1,42)=3.483; HPR-F(1,42)=.121.

{INSERT TABLE 2 ABOUT HERE}
Identifying victims

Discussion

The purpose of this study was to construct a model that could identify abuse and cross-validate it on a runaway sample. The findings from this study demonstrated that the hypothesized model, for discriminating and identifying adolescent abuse victims, was quite adequate: a total correct classification rate of 93.3%, with 90.4% (47) of the abused sample correctly identified with only 9.6% (5) misclassified. The PIC variables ADJ, DLQ, FAM, and ANX provided a mean personality profile of an adolescent victim that was significantly different from a non-abused adolescent. This model and profile more than adequately generalized to a group of adolescent runaways who had alleged abuse: 95% (19) were correctly classified with only 5% (1) misclassified. The reliability of the model was further bolstered by the finding that the PIC scale profile of the adolescent victims, whose abuse had been substantiated, was not significantly different from the alleged runaways' PIC scale profile.
Application

Obviously, just because a runaways' PIC T-score profile is statistically and diagnostically similar to a known group of victims, this does not mean they have been abused. But, this does mean that the individual, parental, and familial dynamics present in a very dysfunctional manner (moderate to severe psychopathology) (Rohr, 1996). The responsibility of the Runaway Program is not to substantiate an allegation. That is the responsibility of State Department of Human Services' or its' equivalent. The responsibility of those programs working with runaways is to assess and to interview for presenting problems characteristic of the population for which they provide services. Since some of the runaways/victims' dynamics preclude disclosure, by interviewing and assessing for associated clinical phenomena, other issues may be addressed, thus perhaps reducing the chance of future victimization, possible revictimization, and even psychopathology (van der Kolk, 1987a).
These findings lend support for establishing a psychologically oriented assessment component within programs that work with runaways. Since Runaway Programs are crisis oriented, the use of the PIC would at least allow for qualified and competent personality screenings, which would be expeditious. Upon discharge and referral, the follow-up reports and summary of contacts can mention the profile configuration, alerting other professionals to the risk status of the child and family and thus helping determine mental health interventions in the future.

Additionally, the PIC supports taking a pro-active and youth centered position toward abuse. Diagnostically, an adolescents' statements regarding abuse must be taken seriously and assessed for, regardless of the validity of the abuse. The results from this study indicate that there were no significant differences between substantiated and alleged physically abused adolescents, sexually abused adolescents, or both with the criterion group. This finding was also demonstrated with the cross-validation group of Runaways. Tentatively, these findings suggest that regardless of the type of abuse (physical, sexual, or both) or status (substantiated
or alleged) the dynamics perhaps manifest in a similar manner. Armsworth and Holaday (1993), in their review on psychological trauma of children and adolescents, report that regardless of the precipitating event, the variety of responses to the trauma are similar. Horowitz (1976) and van der Kolk (1987a) also report recent research focusing on the commonalities of response to traumatic events in general.

In summary, many treatment programs can benefit from this organized approach to assessing presenting problems and allegations of abuse. The PIC is useful for those professionals working with abused adolescent runaways. It is a psychometrically sound personality measure that does identify adolescent victims and their associated behaviors and emotional characteristics more than adequately. It has great potential to meet some of the assessment needs of runaway programs. The clinical utility of the PIC for treatment planning and follow-up recommendations would be especially useful.
Limitations

Recently, Briere (1992) has discussed the methodological issues in studying sexual abuse effects. His issues will serve as an outline to guide the discussion of the limitations of the current study.

In retrospective research, report bias is a major concern. The passage of time may mitigate against accurate recall of prior trauma. This effect is perhaps reduced for the Substantiated group by having the abuse allegations substantiated by the Tennessee Department of Human Services or admission by the perpetrator. Also, by using adolescent subjects, the duration of time is considerably shortened as opposed to retrospective research with adults. Additionally, the measure used in this study is the PIC. It is a parent-informant test. The reliance on the victims memory is avoided because the parent completes the test prior to the first family therapy session before the disclosure of abuse is raised and discussed.

Concurrent with reporter bias is the definition of abuse used in studies. The Tennessee Code Annotated's definition of abuse is used in this study (see Kiser et al, 1991). By using this standard definition, at
least generalization to other states using a similar
definition could occur. Perhaps if researchers adhere
to already in-place definitions (state or national
organizations), for which abuse reports are already
taken, correlating and generalizing findings may be
less problematic.

Briere (1992) notes that abuse is a very complex
variable and trying to match groups on all the
numerous variables found to be correlated with abuse
is highly problematic with retrospective and
longitudinal research. The ideal matched comparison
groups may be methodologically impossible. Though
matching on relevant research variables and attending
to this with the comparison group may be in order with
predictive studies. In this study the relevant
variables to control for are psychopathology, abuse
status, runaway history, and adolescent. The purpose
is to identify variables that adequately discriminate
the abused subjects from the non-abused subjects. Once
this is done, it still could be argued that there are
methodological limitations present (groups not matched
on other seemingly relevant variables). But, are those
limitations valid if, as in discriminant analysis, the
findings are replicated (cross-validated) with a
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sample drawn from another population? Perhaps not, which lends some methodological support to matching only on relevant research variables as opposed to matching on the many research variables studied. This may be especially true when using multivariate analysis. Discriminant analysis helps determine which research variables are most relevant and predictive.

Another concern in abuse research is the use of valid and reliable instruments as opposed to home-spun or generic measures that are not sensitive to abuse specific symptomatology. This is the first study of abuse using the PIC. It is chosen not only for the established validity and reliability but for the scale representativeness of the behaviors associated with abuse/trauma. The results of this study support the use of the PIC with research on abuse sequelae. The PIC was also chosen because it is a known measure of child and adolescent psychopathology and family dysfunction. This test, with its' clinical emphasis, which measures across dimensions (home, family, school, social), also helps with the matching dilemma. For instance, perhaps the variable of family functioning/dysfunction could be controlled for by having the groups not be significantly different on
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the Family Relations (FAM) scale as opposed to administering a separate measure on this variable. Socioeconomic status (SES) might also be controlled for on the FAM scale.

A similar sort of logic can be applied to the other PIC scales which are representative of the abuse correlated research variables. For example, to investigate parental psychopathology, correlate it with the validity scales of the PIC (Lie, Frequency, Defensiveness). These scales measure the informants' (parent) response style: fake good, fake bad, and being defensive about their child's behavior. Perhaps the volatile and chaotic nature of the home environment (the contribution of parental psychopathology) could be detected via these scales if they are correlated with a parent measure of psychopathology such as the MMPI or MCMI.

A concern in abuse sequelae research is univariate versus multivariate analysis. In this study, discriminant analysis is used with a single instrument, whose variables (subscales) encompassed a significant amount of the theoretical and empirically correlated variables associated with abuse sequelae.
When using discriminant analysis, cross-validation is suggested (Klecka, 1980). The replication adds additional support to the initial findings, and helps in generalization.

A final methodological concern mentioned by Briere (1992) was to investigate other forms of abuse and their copresence with sexual abuse. Briere & Runtz (1990) found that the type of abuse does not tend to have a large number of unique psychological correlates. This finding is similar to Armsworth and Holaday's (1993) conclusion that the psychological response to abusiveness/trauma is similar regardless of the precipitant. In this study, there were no significant differences found between physical abuse, sexual abuse, or both on selected scales of the PIC. This finding is consistent across two samples drawn from different populations (partial - hospitalization and runaways) whether the abuse is substantiated or alleged.

Methodological concerns have also been frequently associated with research on adolescent runaways (Adams & Monroe, 1979; Rohr, 1991; Walker, 1975). Regarding the current study, future research efforts may want to consider the following: One, comparison groups should
be drawn from the same population which would control for the variables competing for the alternative explanation of the findings, such as psychopathology, SES, family functioning, etc. Two, cross-validation groups should be used to bolster generalization and help in determining abuse-specific symptom patterns. This would help clinicians more accurately diagnose post-abuse disturbance. Three, there has been some recent research investigating behavioral similarities in response to abuse/trauma and post-abuse sequelae (PTSD). Attachment theory may provide a conceptual explanation for this from a developmental psychopathological perspective (Alexander, 1992). Similar efforts could be made regarding understanding runaway behavior. The main presenting psychopathological problems of adolescent runaways are depression, alcohol & drug abuse, physical & sexual abuse, suicidal tendencies, and severe psychological problems (NNRYS, 1985). These behavior patterns could be conceptualized as a response to a disrupted attachment process.
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References


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Rohr, M. E. (in press). Identifying the presence, severity, and chronicity of psychopathological behaviors associated with adolescent runaways using the Personality Inventory for Children. ERIC DOCUMENT.


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TABLE 1
Classification Results for Cases Selected for Use in the Discriminant Analysis

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<th>Cases</th>
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<td>Abused</td>
<td>52</td>
<td>47</td>
<td>5</td>
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<td>90.4%</td>
<td>9.6%</td>
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<td>Group</td>
<td>38</td>
<td>1</td>
<td>37</td>
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<tr>
<td>Control</td>
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<td>2.6%</td>
<td>97.4%</td>
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Percent of "Grouped" Cases Correctly Classified:
93.33%
TABLE 2

Classification Results for Predicted Group Membership Using Function Equation Coefficients

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<th>Group</th>
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<tr>
<td>Control</td>
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<tr>
<td>Run/Abuse</td>
<td>19</td>
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