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Abstract

The variables found in violence prediction research were applied to a chronic psychiatric patient population. The data collected resulted in many findings that were parallel with the previous research such as length of stay and age. Other variables of dangerousness were found to be not significant in the study which led to further conclusions being drawn. As a result of this study, implications of importance and the need for further study in the variables of charge type, treatment compliance, and number of hospitalizations are needed to further assess a patient's violence potential.

The Accuracy of Predictors of Violence in a Chronic Inpatient Psychiatric Population

The potential for violence in psychiatric patients is of great concern for mental health workers. Surveys of staff members have indicated that 30% to 75% of mental health workers have been attacked by the persons with mental illness (Plutchik & van Praag, 1990). Also, 30% of patients have been assaulted by other patients (Plutchik & van Praag, 1990). Research in the area of violence prediction and prevention is warranted, and it also has important applied implications for violence management in institutionalized settings.

The prediction of violence has, in the last few years, become increasingly important in published research. Some researchers believe it is not possible to predict violence before it occurs (Megargee, 1981). Others, believe it is possible, but researchers must be aware of and attempt to control the risk of false positives and false negatives (Monahan, 1981; Limandri & Sheridan, 1995; Klassen & O'Connor, 1988). Feinstein (1990) believes that violence within a short-term frame can be predicted, but instruments are poorly structured to make reliable long-term predictions about violence.

Many factors have been examined and several indicators of violence have been suggested. The characteristics of age, race, gender, and socioeconomic status have all been shown to be related to increased risk of violence (Brizer, 1989; Hall, 1982; Klassen & O'Connor, 1994: Monahan, 1981; Steadman, 1981; Weatherly, 1984). Klassen and O'Connor (1988) found that a diagnosis of schizophrenia combined with other factors resulted in a high correlation with violence potential. It has been estimated that between 8% up to 45% of patients with schizophrenia have violent tendencies (Krakowski & Volavka, 1989). Other mental illnesses such as mania and depression have also been associated with increased probability of violence (Greenfield, McNiel, & Binder, 1989). A history of drug abuse has been reliable in predicting who would become violent in a

hospital environment (Feinstein, 1990; Klassen & O'Connor, 1994; Limandri & Sheridan, 1995; Monahan, 1993; Weatherly, 1984; Yesavage & Brizer, 1989).

In addition to drug abuse being a determining factor in the prediction of violence, some studies have found that alcohol abuse is also a determining factor (Coleman & Weinman, 1981; Monahan, 1993). Any measure of past criminal offending such as previous arrests can be expected to predict future violence (Klassen & O'Connor, 1994). Also, the presence or availability of weapons increases the violence and lethality of an encounter (Monahan, 1981). Crowner (1989) also found that the timing of the incident (around meal times) and the location (hallways and cafeterias) were also factors that may lead to violence prediction. Other factors that have found to be significant in predicting violence are length of hospitalization (Brizer, 1989; Greenfield, McNiel, & Binder, 1989), cooperation or lack of cooperation with treatment (Feinstein, 1990), marital status, and history of prior suicide attempts (Mullen & Dudly, 1987).

Perhaps the most consistent predictor of violence is a previous history of violence (Feinstein, 1990; Limandri & Sheridan, 1995; Monahan, 1981; Rice, Harris, Varney, & Quinsey, 1989). According to Monahan (1981), not to take this factor into consideration in making predictions is to doom the effort from the start. These findings support Coleman and Weinman's (1981) statement "violence breeds violence."

How violence is defined in research studies affects the outcome of these studies. The definition of violence is important in that it may be the determining factor of what predictors are found to be reliable. Link and Stueve (1994) used three measures of aggressive/illegal behavior to define violence: hitting, fighting, and weapon use. In a separate study, violence was defined as any battery with injury, any sexual battery, battery involving a weapon, and any imminent threat of battery (Steadman et al., 1994). Sometimes violence was interpreted as any physical contact such as pushing, scratching, kicking, and slapping (Convit et al., 1989). Weatherly (1984) defined violence as the exertion of physical force in order to inflict injury. What is evident in almost all studies,

is that violence consists of a physical act. It is what that physical act is that is the source of confusion.

Weatherly (1984) noted that there are two approaches to assess violence, a statistical approach and a clinical approach. Klassen and O'Connor's (1988) research with schizophrenic and non-schizophrenic patients yielded analyses with highly suggestive predictions along with low false positive rates. The Buss-Durkee Hostility Inventory successfully discriminated between the hostile and regular sample populations with moderate success (Selby, 1984). However, given all these findings, there has not been a test that has proven to be reliable enough to predict violence. It seems that each test brings the researchers closer to their ultimate goal in the prediction of violence.

There have been some problems with research on violence prediction. Some believe that researchers are poorly equipped to make reliable long-term predictions about violence (Feinstein, 1990). Megargee (1981) came to the conclusion that odds are two to one against the fact that the prediction on a particular patient will be correct. Monahan (1981) points to four common "blind spots" in the clinical prediction of violent behavior which appear to be lack of specificity in defining criterion, ignoring statistical base rates, relying on illusory correlation's (correlation that appears to be present but are in fact not), and failing to incorporate situational or environmental information. It is a general consensus that violence can be generally predicted, but reliability has been more difficult to establish.

The purpose of this study was to attempt to examine the frequency of documented violent behaviors in a population of chronic psychiatric inpatients in a public facility and determine if any of the predictors listed in the literature were present. In the case of this study, violence was defined as any physical act that was determined by a nurse or physician to be an act of disorderly conduct with an intent to harm a person or destroy property and required seclusion/restraints. In order to do this, charts of previously discharged patients were reviewed and data will be collected retrospectively. Patients

were defined as either violent or non-violent based on predetermined criteria. Then the histories of these groups were searched for predictors of violence to determine if there are any differences in the frequency and/or type or predictors between the groups.

Method

Participants

A random selection of at least 30 charts were divided into the subgroups of violent and non-violent patients as described below. Only patients who have been discharged from East Louisiana State Hospital in Jackson, LA, were used in the study. This is to assure that the data collection was complete and total frequency of violent/aggressive acts was available for data analysis.

Procedure

A random selection of charts was made. The charts were divided into two groups, violent and non-violent. The determination of which group any particular patient was assigned was based on the patient's behavior as recorded in the charts. If the patient has been restrained or secluded for physical assaults, property damage, threats, or disorderly conduct, they were placed in the violent group. If the patient did not exhibit any documented violent behaviors (e.g., the presence of incident reports; seclusion/restraint records), they were placed into the non-violent category.

After the initial group selection into violent and non-violent patients, the violent group was further subdivided. If the subject had committed one to four violent acts as indicated in the charts, they were placed in the low violence group. If the subject had committed five or more violent acts as indicated in the charts, they were placed in the high violence group. The time frame of all incidents was recorded and noted in a chart in the results section of the paper.

After separating the charts based on presence or absence of violence and level of violence severity, each chart was then be examined to determine how many predictors of violence are found in the histories leading to the index admission. The factors used come

from the literature and the MacArthur Risk Assessment Study (Steadman et al., 1994). The list of factors used are presented in Table One.

First certain demographic factors were examined. These include the subject's age, gender, and race. Also, the subject's socioeconomic status was recorded based upon Hollingshead's (1957) scale of social class.

Next, historical factors were examined. The family history of the subject in regards to substance abuse, mental illness, and violence were reviewed. If any history of child abuse/neglect was recorded in the charts, it was noted. The work history of the patient was also included such as the number of jobs, length of employment, and date of last job held. Also, education level was identified, and whether the subject had participated in any special education classes during their schooling. Other factors included number of prior psychiatric hospitalizations, date of first psychiatric hospitalization, date of last psychiatric hospitalization, longest time out of hospital, and the length of index hospitalization. Also, if the patient failed to comply with any treatment and the reason for that was noted. The history of crime and prior violence was recorded. The number of arrests, if any, and charges were noted. Finally, the number of incarcerations and suicide attempts if noted in the charts were documented.

Finally, the clinical factors were examined. If the presence of delusions or hallucinations are in the charts, it was noted, and if so, what type were present. The Axis II Diagnosis was recorded from the charts. Also, if any history of substance abuse was present it will be recorded. Other information to be examined included IQ level and any noted history of neurological trauma or seizure disorder.

Data Analysis

Data analysis examined the number of proposed predictor variables found in the histories of patients in each of the three groups: no violence, low violence, and high violence. It is expected that more predictors will be found in the history of patients with high violence than in the other two groups. Further analysis examined which of the

identified predictor variables are more highly associated with the presence of violence during the index hospitalization.

One way analyses of variance (ANOVAs) are used for those variables that are continuous with post hoc evaluations using Student-Newman-Keuls to control for potential variance induced by performing multiple analyses. Chi-square analyses were done on all non-continuous data to determine significance. The remaining data is presented in descriptive fashion via charts.

Results

The demographic characteristics of the three study groups are shown in Table Two. An alpha level of .05 was used for all statistical tests to determine significance. Results indicated a significant age effect among the three groups in the study, $F(2, 57)=6.99$, $p=.002$. The no violence group was significantly older than the low violence group, $q(38)=-3.64$, $p<.001$, and the high violence group, $q(38)=4.70$, $p<.001$. There was not a significant age difference between the low violence and high violence individuals, $q(38)=1.79$, $p=.08$.

In regards to race, blacks were predominant in both low violence (70%) and high violence (70%) groups. Whites were predominant solely in the no violence group (60%) as compared to 25% in the low violence group and 25% in the high violence group. The variable of gender was found to be no significant, $X^2=.33$, $df=2$, as was the variable of race, $X^2=.87$, $df=2$. The male gender was predominant in the low (70%) and high (80%) violence groups as well as the no violence group (80%). Females represented only 30% of the low violence group and 20% of the high violence group. The socio-economic status level for all three groups were found to be similar (see Table 2).

The education level was highest among those in the no violence group, $\underline{X}=11.00\pm(3.86)$. The low violence group showed a mean education level of $10.90\pm(2.94)$, and the high violence group showed a mean educational level of $8.47\pm(3.90)$. Only two groups showed subjects who had attended special education

classes, low violence (10%) and high violence (35%). A past history of special education service was also found to be not significant among the three groups, X^2=.67, df=2.

Length of stay averages appeared to be different (see Table 3). Analyses of the length of stay variable was also shown to be significant among the three groups, F(2, 57)=4.50, p=.01. The low violence group had a significantly longer hospital stay than the no violence group, q(38)=4.27, p<.001. The high violence group also had a significantly longer hospital stay than the no violence group, q(38)=-3.98, p<.001. There was no significant difference in length of stay between the low and high violence groups, q(38)=-1.21, p=.23.

Also apparent, as would be expected, was a perceived difference in number of violent episodes (see Table 3). There was a significant difference in the number of violent episodes among the three groups, F(2, 57)=25.90, p<.001. The low violence group had a significantly greater number of violent episodes than the no violence group, q(38)=12.78, p<.001. Also, the high violence group had a significantly greater number of violent episodes than the no violence group, q(38)=-7.82, p<.001. There was also a statistically significant difference between the number of violent episodes between the low violence and high violence groups, q(38)=-6.42, p<.001. This confirms the effectiveness of the a priori criteria used to establish the three study groups.

Amount of time in seclusion/restraints was also shown to be significant, F(2, 57)=14.90, p<.001. The no violence group spent significantly less time in seclusion/restraints than the low violence group, q(38)=7.42, p<.001, and the high violence group, q(38)=-5.72, p<.001. Also, there was a significantly greater amount of time spent in seclusion/restraints by individuals in the high violence group than those in the low violence group, q(38)=-5.18, p<.001.

In regards to previous violence history, there was not a significant difference among the three groups, X^2=.67, df=2. In the variable of prior history of violence, the no violence group (45%) was less frequent than the low violence (95%) and the high

violence (90%) groups (see Table 4). Also, there seemed to be a difference among the groups in the variable of a previous arrest record (see Table 4). In the no violence group, only 35% had been arrested compared to 70% of the low violence and 85% of the high violence group.

In Table Four, the frequency of family history of violence, suicide attempts, and incarcerations are looked at. In the variable of family history of violence, only 15% of the high violence group were documented while the low and no violence group did not show any evidence of a family history of violence.

Also found not significant was the factor of prior incarcerations, X^2=.67, df=2. However, among those in the no violence group, only 5% had spent time in jail compared to 55% in the low violence group and 40% in the high violence group. Previous suicide attempts were also found to be not significant among the groups, X^2=1.00, df=2. Both the no violence and high violence showed that 45% of the subjects had previously attempted suicide while only 35% had attempted in the low violence group.

In Table Five, the frequency of delusions, hallucinations, treatment compliance, and substance abuse history are looked at. The factors found not to be significant were presence of delusions, X^2=.67, df=2, and presence of hallucinations, X^2=.67, df=2. The low violence group presented the greatest frequency of delusions (45%) followed by the no violence group (35%) and finally the high violence group (30%). However, the reverse was true for hallucinations. The high violence group exhibited an overall frequency of 60%, which the low violence and no violence groups reported hallucinations at 50% and 40% respectively.

Treatment compliance was also found to be not significant, X^2=.67, df=2. In looking at treatment compliance, 95% of the no violence group complied with their prescribed treatment as did 75% of the low violence group. However, the high violence group complied in only 45% of the cases. Whether or not the subject complied with the prescribed treatment was found in the discharge checklist in the subject's chart. The

factor of substance abuse history was also found to have no significance among the groups, X^2=1.00, df=2. Only 40% of the no violence group exhibited a history of substance abuse while 60% of the low violence and 75% of the high violence groups showed a history of substance abuse.

The diagnostic classification in the groups are listed in Table Six. Schizophrenia was frequent among the no violence (45%), low violence (50%), and high violence (45%) groups. the Axis I diagnosis is of Bipolar disorder is more frequent among the no and low violence groups (20%) as compared to the high violence group (5%). The diagnosis of depression was only seen in the no violence group, and conduct disorder was only found in the high violence group. An Axis II diagnosis of mild mental retardation was greater in the high violence group (35%) than in the no (5%) or low (15%) violence groups. Also, a diagnosis of borderline intellectual functioning was found in 25% of the subjects in the high violence group compared to only 5% in both the no and low violence groups.

Also, the different types of legal charges found in the different groups are listed in Table Seven. The charge of "disturbing the peace" was higher in the no violence (43%) and low violence (36%) groups. The high violence group displayed a greater number of more serious charges such as attempted murder and aggravated rape. Finally, the percentage of patients within each group who had expressed a history of substance abuse according to drug type is listed in Table Eight.

Discussion

It was the purpose of this study to attempt to examine documented violent behaviors in a population of chronic psychiatric inpatients in a public facility and determine if any of the predictors listed in the literature were present. In the case of this study, violence was defined as any physical act that was determined by a nurse or physician to be an act of disorderly conduct with an intent to harm a person or destroy property.

In the case of what was found to be significant, the variables of number of violent episodes and amount of time spent in seclusion/restraints were no surprise. The variable of number of violent episodes defined the groups a priori, and it would follow that the greater the number of violent episodes, the greater the amount of time was spent in seclusion/restraints.

In this study age was found to be significantly different among the three groups, and this result agrees with that found in the literature. As was found in most previous studies and in the current study, the age of those in the violent groups tends to be younger than those in the no violence group. It was also found that the length of stay variable was significant. This study agrees with others that the longer the hospital stay the more violent an individual is prone to be (Brizer, 1989; Greenfield, McNiel, & Binder, 1989), or that violent patients tend to require longer lengths of stay.

However, the other variables tested were shown to be not significant. This could be due to the small sample sizes and perhaps some of the variables that appeared to be different among the groups would exhibit a statistical difference if the sample sizes were larger. Treatment compliance appears to be different among the groups (see Table 5), but because of the sample size, statistics do not show this to be true, X^2=.67, df=2. If an attempt is made in the future to replicate this study, a larger sample size would be recommended.

Another consideration that needs to be taken into account is the population that was studied in this particular study. The patients at East Louisiana State Hospital are in a chronic psychiatric patient population. As a result of this exclusive population, our results may be different than results based on patients from private hospitals or outpatient settings. Therefore, we cannot generalize these findings to all psychiatric populations, only to those institutions who house chronic psychiatric patients.

Another surprising result surfaced from the study. The no violence group had a mean age of 41.15±(1.34). The average number of hospitalizations for those in the no

violence group was 2.69±(2.39). The average number of hospitalizations and mean age for the low violence group was 6.36±(3.41) and 31.85±(8.97) respectively, and as for the high violence group the results were 6.78±(5.02) and 27.55±(1.24). Therefore, it seems that those who exhibit violent behavior tend to be hospitalized at a younger age and more often than those individuals who exhibit no violence. It may be beneficial to conduct a study with a larger sample size to see if this speculation remains true. Also, the onset of an individual's mental illness may play a part in violence prediction. It may be found that those who are institutionalized early in adolescence and young adulthood are more prone to violence than those whose onset of mental illness occurs in middle and late adulthood. Future studies may focus more closely on this view.

Further studies should also examine the needed in admission diagnosis (see Table 6). Schizophrenia, mania, and depression have been found in the literature to be related to the probability of violence (Krakowski & Volvaka, 1989; Greenfield, McNiel, & Binder, 1989). Examination of the data from the present study indicated that schizophrenia was equally represented in all three groups. Fewer patients received a primary diagnosis of Bipolar disorder in the high violence group compared to that of the other two groups. Depression was diagnosed in only the no violence group. This does not support the association of major psychiatric disorders with violence as has been suggested in the literature. However, the percentages of these diagnoses were low, and there were several other categories of mental illness present. Perhaps with a larger sample size, the findings would become more clear.

Another interesting finding in this study was the type of police charges found across the three groups (see Table 7). The two violence groups contained patients who had a wide variety of police charges against them, while those in the no violence group had fewer prior charges against them. The most frequent charge filed against the patients in the no violence group was disturbing the peace; the most frequent charge in the low violence group was disturbing the peace, battery, and "other"; while the most frequent

charges for patients in the high violence group were theft, drug related crimes, burglary, and "other." It appears that less serious charges were associated with patients in the no violence group compared to the other two groups.

It may also be of benefit for the researcher to find the reasoning behind a person's arrest and discover whether the arrest was related to a person's mental illness. For example, in the non-violent group, disturbing the peace accounted for 43% of those who had criminal charges. Those charged for this could have been misunderstood, and criminal charges may be confounded with presence of mental illness.

Furthermore, of those who had received charges in the high violence category, 24% of those charges were drug related. Also found in the study was that of those subjects in the high violence group, 75% were deemed to be afflicted with a previous history of substance abuse. While alcohol was prevalent in all the groups that had a previous history of substance abuse, cannabis abuse was greater in the low and high violence groups (see Table 8). It would seem that alcohol and drug abuse may have a considerable influence on violence potential. The variable of substance abuse is one that needs to be explored in future studies.

In summary, the current findings suggest that younger age, black males of lower socio-economic status with previous hospitalizations and a history of violent tendencies were associative with violence, as suggested by previous studies. However, none of the other predicted variables were found to be associated with violence. Sample size may have limited further assessments. In general, it should be kept in mind the difference between the population studied here compared to populations used in previous studies.

Finally, the unique aspect of this study is the use of actual documentation of violence during hospitalization and relating that to historical information present in patient charts to check the relationship between variables proposed to be associated with violence and the actual display of violence. Using this approach, there appears to be fewer predictor variables that can be clearly associative with subsequent violence in the

hospital, specifically in a population of chronically ill psychiatric patients in a public mental health facility. Further research, as suggested earlier, could clarify more completely reliable variables which, if present in a patient's history, could signal a need for early intervention to reduce potential risks associated with violence in the hospitals.

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Table 1

Predictors of Violence in Literature Used to Assess Patient's Charts

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Demographic

- Age
- Gender
- Race
- Social Class/Socioeconomic Status

Social History

- Family History
  - Child Abuse
  - Family Deviance (sociopathic, etc.)
- Work History
  - Number of Jobs
  - Length of Employment
  - Date of Last Employment
- Educational Level Completed

Mental Hospitalization History

- Prior Hospitalizations
  - Number
  - Date of First Hospitalization
  - Date of Last Hospitalization
  - Longest Time Out of Hospitalization

Length of Index Hospitalization

Treatment Compliance

History of Crime and Violence

Arrests

Number

Charge Type

Incarcerations

Violence Toward Self/Suicide Attempts

Prior History of Violence

Clinical Factors

Axis I Diagnosis

Symptoms

Delusions

Hallucinations

Axis II Diagnosis

Substance Abuse

Alcohol

Other Drugs

Table 2

Group Demographic Characteristics

Variable	No Violence	Low Violence	High Violence
N	20	20	20
Age(years)	41.15±(1.34)*	31.85±(8.97)	27.55±(1.24)
Race			
White	60%	25%	25%
Black	30%	70%	70%
Other	10%	5%	5%
Gender			
Male	80%	70%	80%
Female	20%	30%	20%
SES	4.47±(0.64)	4.45±(0.83)	4.90±(0.07)
Education Level	11.00±(3.86)	10.90±(2.94)	8.47±(3.90)
Special Ed	--	10%	35%

Note. All variables are mean values (± SD) except race, gender, and special education which are reported as percentages. SES is determined using Hollingshead's scale of socio-economic status (1957).

*no violence vs. low violence, $p<.001$

no violence vs. high violence, $p<.001$

Table 3

Frequency among groups according to Length of Stay, Violent Episodes, Seclusion/Restraint Time

Variable	No Violence	Low Violence	High Violence
N	20	20	20
Length of Stay	1.25±(1.07)*	8.36±(1.05)	12.28±(1.75)
Number of Violent Episodes	--*	2.40±(1.88)**	13.80±(11.15)
Time Spent In Seclusion/Restraints	--*	4.81±(4.10)**	52.43±(58.02)

Note. All figures represent means ± SD.

* no violence vs. low violence, $p<.001$

no violence vs. high violence, $p<.001$

** low violence vs. high violence, $p<.001$

Table 4

Frequency among groups in regards to arrests, incarcerations, suicide attempts, and history of violence and family violence

Variable	No Violence	Low Violence	High Violence
N	20	20	20
Arrests	35%	70%	85%
Prior Incarcerations	5%	55%	40%
Previous Suicide Attempts	45%	35%	45%
History of Violence	45%	95%	90%
History of Family Violence	--	--	15%

Note. Percentages reporting answers of "yes" to the stated variables.

Table 5

Delusions, hallucinations, substance abuse history, and treatment compliance among groups

Variable	No Violence	Low Violence	High Violence
N	20	20	20
Delusions	35%	45%	30%
Hallucinations	40%	50%	60%
Substance Abuse History	40%	60%	75%
Treatment Compliance	95%	75%	45%

Note. Percentages reporting answers of "yes" to each of the variables.

Table 6

Diagnosis Type by Groups

Diagnosis	No Violence	Low Violence	High Violence
	Axis I		
Schizophrenia (Total)	45%	50%	45%
Paranoid	15%	20%	5%
Undifferentiated	10%	10%	5%
Chronic Undifferentiated	--	15%	5%
Bipolar Type	10%	5%	--
Psychosis NOS	10%	--	30%
Bipolar (Total)	20%	20%	5%
Manic	5%	10%	5%
Affective	5%	5%	--
NOS	10%	5%	--
Schizoaffective Disorder	--	15%	10%
Bipolar Type	--	5%	--
Major Depression	20%	--	--
Single Episode	5%	--	--
Melancholia	5%	--	--
Recurrent with Psychotic Features	--	--	5%
Organic Personality Disorder	--	--	5%
Dysthymia	20%	--	--
Chronic Paranoid	10%	--	--
Conduct Disorder			
Solitary Aggressive	--	--	20%

Group Type	--	--	5%
Oppositional Defiant Disorder	--	--	5%
Obsessive Compulsive Disorder	--	--	5%
Substance Abuse			
Alcohol	20%	30%	20%
Cannabis	--	35%	10%
Cocaine	15%	20%	20%
Other	15%	--	20%
OTHER	--	20%	--
	Axis II		
Mild Mental Retardation	5%	15%	35%
Borderline Intellectual Functioning	5%	5%	25%
Borderline Personality Disorder	5%	--	15%
Narcissistic Personality Disorder	--	--	5%
Antisocial Personality Disorder	--	5%	5%
Passive Aggressive	--	10%	--
Dependent Traits	10%	--	--
Unspecified Mental Retardation	--	--	5%

Note. All numbers reported as percents. Total percentages for each group may exceed 100% since some patients received more than one diagnosis.

Table 7

Police Charge Type Within Each Group

Charge	No Violence[a]	Low Violence[b]	High Violence[c]
Disturbing the Peace	43%	36%	18%
Aggravated Assault	--	14%	--
Burglary	--	21%	24%
Battery	--	36%	--
Simple Assault	14%	21%	6%
Theft	--	21%	35%
Aggravated Rape	--	7%	18%
Threatening w/ Weapon	--	7%	6%
Drug Related	14%	--	24%
Shoplifting	14%	--	6%
Arson	--	--	18%
Armed Robbery	--	--	6%
Attempted Murder	--	--	6%
DWI	14%	7%	6%
Tresspassing	--	21%	12%
Auto Theft	--	--	12%
Other	28%	50%	24%

Note. Some individuals had more than one charge against them

[a] n=14

[b] n=7

[c] n=17

Table 8

Substance Abuse by History in Individual Groups

Type of Substance Abuse	No Violence[a]	Low Violence[b]	High Violence[c]
Alcohol	8	11	13
Cocaine	5	6	7
Cannabis	1	11	8
Other (Inhalants, etc.)	1	1	7

Note. Data reported as the amount in each group exhibiting the type of substance abuse according to the number of subjects in each group listed below.

[a] n=8

[b] n=12

[c] n=15