# Diagnostic Patterns Among Three Violent Offender Types

**Richard M. Yarvis, MD, MPH**

**The promulgation of effective prevention and treatment strategies for the complex behavioral acts that constitute rape and homicide awaits the availability of reliable etiological data, including diagnostic data. This article endeavors to enhance that database by providing a comparison of the diagnostic presentations of three offender groups—murderers, rapists, and rapists who murder their victims.**

Rape and murder have both been investigated in the psychiatric literature. Both share a common behavioral element, physical violence. Sometimes, when rape is followed by homicide, the two crimes share a common victim. Many of the existing studies, whatever their behavioral focus, have been anecdotal in nature or have represented multicase reports. Few have approached their subject in a quantitative manner. The structured studies that do exist suffer from a range of methodological impediments that include unspecified diagnostic criteria, use of record reviews rather than direct clinical observation, and widely divergent and often not representative study populations. Perpetrators of rape/murder have been especially neglected as a focus of study.

Studies of homicide have yielded a range of findings that are discordant and contradictory.[1–8] With respect to rape, quantitative findings are even more sparse or are outdated. The works of Kraft-Ebbing[9] and Ellis,[10] while historically important, are antiquated in their diagnostic concepts. The pioneering study by Gebhardt *et al.*[11] is exhaustive, but lacks adequate diagnostic detail. Other studies,[12–16] while interesting, ignore diagnostic concepts and rely instead on sociological and/or psychodynamic constructs to draw their conclusions.

In 1980, the author began to collect etiological data, including diagnostic data, on the perpetrators of acts of major criminal violence. To date, that effort has led to the study of 300 violent offenders who have committed homicides, assaults, rapes, armed robberies, and combined offenses such as rape/homicide. In a prior publication,[17] the author reported on murderers and provided in-depth DSM III-oriented diagnostic data, as well as data on a multiplicity of other etiological factors including alienation, internalized val-

Dr. Yarvis is Clinical Professor of Psychiatry and Director, Division of Forensic Psychiatry, University of California, Davis, School of Medicine, Sacramento, CA. Address correspondence to: Richard M. Yarvis, MD, MPH, Division of Forensic Psychiatry, University of California, Davis, School of Medicine, 2315 Stockton Blvd, Sacramento, CA 95817.

ues, self-esteem, motives, intoxication, and stress.

This article undertakes the very circumscribed task of examining the patterns of Axis I and Axis II psychopathology in three varieties of violent offender: males who have committed homicide, rapists, and males who have raped and then afterward murdered their victims. The aim of the inquiry is to contrast and compare these three groups with respect to differences and similarities in their diagnostic patterns.

It is possible to hypothesize how those who commit homicide, rape, and rape/homicide would differ in their Axis I and Axis II diagnoses. In the author's experience, the phenomenology of each crime as studied clinically suggests a different symptomatic and characterologic pattern for each offender group, but only hypothesis testing can determine whether these clinically observed differences characterize real patterns.

First, let us look at clinically derived profiles for each offender group. The phenomenology of homicide is quite variable. Premeditation coupled with exquisite planning may be present, but just as common are momentary rage, a lack of impulse control, or ill-conceived responses to threatening hallucinatory stimuli or delusional beliefs. Suitable weapons are easy to find, and victims, intended or not, are universally available unless one lives a hermit's existence. A broad spectrum of more and less serious Axis I pathology and a wide range of Axis II pathology would be predicated in murderous individuals. Psychoses would be predicted to be prevalent among murderers whose acts are then motivated by hallucinatory stimuli or delusional thinking. Antisocial character pathology, while present, need not be preeminent. Substance abuse may be common as well.

The profile of rapist/murderers looks quite different. Often such individuals commit their acts intentionally to inflict pain and suffering and/or to eliminate the sole witness to the initiating crime of rape. Such motives are very predatory and suggest a level of premeditation and planning that is dependent upon substantially greater functional capacity than is necessary simply to murder. For example, an individual who lures young women to isolated settings where he rapes and then strangles them is carrying out a repetitive, complex activity of a highly predatory nature. Such behavior would predict a low prevalence of psychotic disorganization, a high level of sexual pathology, and an antisocial character structure that is almost universal. High levels of substance abuse may also be predicted.

The crime of rape is often a product of some degree of deliberation and planning. Advanced complex planning may characterize the serial rapist who stalks his victims, waits patiently for a safe opportunity to commit his crime, and then executes a successful forced entry to the victim's home in order to carry out the crime. Date rape may be more spontaneous in its initiation and additionally may be motivated by the lack of inhibition caused by substance abuse, but some degree of planning and decision making is often evident. Psychotic motivations are rarely in evidence, and psychotic dysfunction, which would often preclude the

implementation of a complex plan, is not expected. A higher prevalence of sexual disorders than would prevail in the community at large could be expected. While high levels of Axis II pathology are to be expected, levels of antisocial character pathology would not be predicted to be as prevalent as in rapist/murderers. Many rapists are also married, hold jobs, and appear at least superficially to be law-abiding members of the community.

It remains for us to create specific hypotheses that can be tested to determine which of the above predictions of psychopathology are supportable by available data.

## Methodology

The current inquiry examines Axis I and Axis II diagnoses in 78 men charged with homicide, 92 men charged with sexual assault (anal and/or vaginal penetration), and 10 men charged with sexual assault who subsequently killed their victims. All 180 study subjects were referred to the author for psychiatric evaluation by judges or attorneys between January 1, 1980 and December 31, 1993. These 180 subjects constitute the total subset of male murderers and rapists from a larger study population of 300 subjects evaluated by the author during the same time period. The 120 subjects excluded from the study were female murderers and persons who committed assaults and armed robberies.

Each study subject was examined directly by the author. Multi-examiner evaluations were not feasible for economic and legal reasons. The minimum number of hours spent with any defendant was 2 and the maximum in excess of 100. Other relevant persons, including family members, friends, employers, teachers, therapists, and crime scene witnesses, were also interviewed by the author whenever they were available.

All relevant records were also examined. These included, but were not limited to, military and educational records, medical records, the records of prior psychiatric evaluations and treatments, police reports relating to the crime, transcripts and audio and video tapes of police interrogations of the defendant, and records relating to the defendant's prior criminal activities.

No information obtained from defendants was used unless validated by independent sources. This was considered vital, as criminal defendants have a vested interest in the outcome of any evaluation and therefore may not provide accurate information. Corroboration of clinical symptoms came from a variety of sources including antecedent psychiatric records, a prior therapist's recollections, or observations made by an objective and appropriately skilled observer.

All of the findings, initially recorded as interview notes, were subsequently entered into a 229-item precoded questionnaire.[17] This protocol provided a uniform record of relevant demographic, psychiatric, substance abuse, developmental, educational, marital, criminal, and military service information for each defendant. For the purpose of assigning psychiatric diagnoses to study subjects, the author strictly adhered to the diagnostic criteria contained in DSM-III. Although DSM-III-R and then DSM-IV were published during the study period, neither

was used for reasons of continuity of diagnoses.

Study subjects were assigned only one Axis I and one Axis II diagnosis. Where more than one diagnosis could be given, the diagnosis of the symptoms judged to be causing the greatest degree of functional impairment was used. This was necessary because the use of more than one Axis I or Axis II diagnosis would have led to insurmountable data analysis problems. Axis I and Axis II diagnoses were made independently, keeping in mind any Axis I diagnosis that would preclude a particular Axis II diagnosis.

For purposes of data analysis, some diagnoses were aggregated into broader diagnostic categories. For example, all substance abuse diagnoses were categorized together, as were all varieties of psychosis. Given their low prevalence, most nonpsychotic Axis I disorders were aggregated. Exceptions to the latter were sexual diagnoses. Only two sexual diagnoses were noted frequently—pedophilia and sexual sadism. For statistical purposes, these were analyzed together under the label sexual diagnoses. Among the Axis II diagnoses, antisocial and borderline personality disorders were considered individually, but other Axis II diagnoses, given their low prevalence, were aggregated.

The problem of whether data samples are representative is a critical one in all clinical research. One obvious limitation derives from the fact that only criminals who are caught can be evaluated. This is less of a problem with homicide cases, in which the percentage of crimes solved is relatively high. It is a much more serious problem in rape cases, so many of which go unreported or unsolved. There is no readily available solution for this problem. Regarding reported and solved cases, the study subjects in this article closely reflect the age, racial, and ethnic distribution of all felons convicted of comparable crimes in California during the time period in which the study data were collected.

**Table 1**
**Frequency Distribution of Axis I Diagnoses for the Three Offender Groups (percent)**

| Axis I Diagnosis | Offender Group | | |
|---|---|---|---|
| | Murderers | Rapists | Rapist/ Murderers |
| Substance abuse | 34.6 | 29.4 | 40.0 |
| Psychosis | 30.8 | 4.4 | 0.0 |
| Dysthymia | 10.3 | 9.8 | 0.0 |
| Pedophilia | 0.0 | 18.5 | 0.0 |
| Sexual sadism | 0.0 | 6.5 | 30.0 |
| All other | 11.5 | 7.6 | 10.0 |
| No Axis I disorder | 12.8 | 23.9 | 20.0 |

## Results

Tables 1 and 2 summarize the prevalence rates for Axis I and Axis II diag-

**Table 2**
**Frequency Distribution of Axis II Diagnosis for the Three Offender Groups (percent)**

| Axis II Diagnosis | Offender Group | | |
|---|---|---|---|
| | Murderers | Rapists | Rapist/ Murderers |
| Antisocial | 25.6 | 18.5 | 90.0 |
| Borderline | 20.5 | 30.4 | 0.0 |
| All other | 21.8 | 3.3 | 10.0 |
| No Axis II disorder | 32.1 | 47.8 | 0.0 |

noses in each offender group. These tables provide descriptive but not statistical support for the validity of the profiles described above. The tables demonstrate that Axis I and Axis II psychopathology is no stranger to the study subjects in any of the offender groups. As was suggested by the profiles, substance abuse is a common diagnosis in all offender groups and is in fact the most common diagnosis found in all of the groups. As predicted, psychosis is most prevalent among murderers, pedophilia among rapists, and sexual sadism among rapist/murderers.

The pattern of Axis II diagnoses differed from group to group in predictable ways. All rapist/murderers, three-quarters of the murderers, and about one-half of the rapists had some Axis II diagnosis. All but one of the rapist/murderers (the most predatory of the three groups) met the criteria for an Axis II diagnosis of antisocial personality disorder. Among murderers, a diverse pattern of Axis II disorders was observed, while among rapists the most common Axis II diagnosis was borderline personality disorder, a finding not predicted, but not discordant with the profile.

The profiles were validated statistically through hypothesis testing. One hypothesis predicted that of the three offender groups, rapists would demonstrate significantly less Axis I psychopathology than other groups, given their more complex and diverse etiological patterns. To test this hypothesis, the frequencies of cases in which Axis I diagnoses were present and absent were examined in each offender group (Table 3) and a likelihood ratio chi-square value ($L^2$) computed.

**Table 3**
**Axis I Diagnosis by Offender Type Frequencies (percent), Likelihood Ratio Chi-Square Values ($L^2$), and Cell Variance (Standard Residuals)**

| | Offender Group | | |
|---|---|---|---|
| Any Axis I Disorder | Murderers | Rapists | Rapist/ Murderers |
| Present | 87.2 (0.60) | 76.1 (−0.54) | 80.0 (−0.04) |
| Absent | 12.8 (−1.23) | 23.9 (1.11) | 20.0 (0.08) |

$L^2 = 3.50$, NS.

Less well known than the Pearson chi-square test, the likelihood ratio chi-square measures are based on a log linear model that affords the investigator not only an opportunity to test for statistically significant differences, but also to compute standardized residuals for each cell in the cross-tabulation being analyzed.

Standardized residuals identify those cells that contribute most and least to the variance noted between the observed and expected frequencies. Standardized residuals can be represented by either positive or negative values, depending on whether the direction of the discrepancy between observed and expected frequencies is direct or inverse. Standardized residuals greater than $\pm 1.64$ (the 95th percentile of a standard normal distribution) suggest a significant discrepancy between an observed and expected value.

In Table 3, the likelihood ratio chi-square value is 3.50, which does not reach a level of statistical significance, and none of the standardized residuals reaches a threshold value of $\pm 1.64$. Hence, the predicted difference between rapists and the other offender groups regarding the

**Table 4**
**Axis I Sexual Diagnosis by Offender Type Frequencies (percent), Likelihood Ratio Chi-Square Values ($L^2$), and Cell Variance (Standard Residuals)**

| | Offender Group | | |
|---|---|---|---|
| Axis I Sexual Disorder | Murderers | Rapists | Rapist/ Murderers |
| Present | 0.0 | 25.0 | 30.0 |
| | (−3.36) | (2.66) | (1.29) |
| Absent | 100.0 | 75.0 | 70.0 |
| | (1.38) | (−1.09) | (−0.53) |

$L^2 = 32.98$, $p = .000$.

**Table 5**
**Axis I Diagnoses (Excluding Sexual and Substance Abuse Disorders) by Offender Type Frequencies (percent), Likelihood Ratio Chi-Square Values ($L^2$), and Cell Variance (Standard Residuals)**

| | Offender Group | | |
|---|---|---|---|
| Axis I Disorder[a] | Murderers | Rapists | Rapist/ Murderers |
| Present | 52.6 | 21.7 | 10.0 |
| | (2.73) | (−2.08) | (−1.32) |
| Absent | 47.4 | 78.3 | 90.0 |
| | (−1.98) | (1.51) | (0.95) |

$L^2 = 21.05$, $p = .000$.
[a] Excluding sexual and substance abuse disorders.

presence or absence of Axis I pathology is not supported by the data. The offender groups cannot be distinguished on this basis.

While overall rates of Axis I psychopathology do not discriminate between offender groups, hypotheses that predicated diagnosis-specific differences were tested next. A second hypothesis predicted that rapists and rapist/murderers would demonstrate significantly higher prevalence rates for Axis I sexual disorders than murderers. If such differences were not demonstrable, no other specific diagnosis difference was likely. However, significant differences were found when this hypothesis was tested.

In Table 4, the frequencies of Axis I sexual disorders presented for the three offender groups support the hypothesis, and the likelihood ratio chi-square value is highly significant ($L^2 = 32.98$, $p = .000$). The standardized residual values demonstrate a significantly lower than expected number of such disorders among murderers and a significantly higher than expected level among rapists. Interestingly, although the frequency of such disorders among rapist/murderers is high, the standardized residual value remains below the $\pm 1.64$ threshold.

A third hypothesis was then tested, which predicted that, excluding substance abuse disorders, which are common in all three groups, and sexual disorders, which are uniquely present in rapists and rapist/murderers, other types of Axis I pathology would be more prevalent among murderers than other offenders. In Table 5, the frequency distribution of Axis I psychopathology in the three offender groups (excluding sexual and substance abuse disorders) is presented. As predicted, such disorders are far more prevalent among murderers than they are in the other two offender groups. The differences are highly significant ($L^2 = 21.05$, $p = .000$). Three of the cells have standardized residual values exceeding $\pm 1.64$ and demonstrate that murderers have significantly higher than expected levels of such Axis I psychopathology and rapists significantly lower levels than expected.

A fourth and even more specific hy-

**Table 6**
**Axis I Psychotic Diagnoses by Offender Type Frequencies (percent), Likelihood Ratio Chi-Square Values ($L^2$), and Cell Variance (Standard Residuals)**

| Psychotic Disorder | Offender Group | | |
|---|---|---|---|
| | Murderers | Rapists | Rapist/ Murderers |
| Present | 30.8 | 4.4 | 0.0 |
| | (3.41) | (−2.73) | (−1.25) |
| Absent | 69.2 | 95.6 | 100.0 |
| | (−1.46) | (1.17) | (0.54) |

$L^2 = 26.40$, $p = .000$.

**Table 7**
**Axis II Diagnoses by Offender Type Frequencies (percent), Likelihood Ratio Chi-Square Values ($L^2$), and Cell Variance (Standard Residuals)**

| Any Axis II Disorder | Offender Group | | |
|---|---|---|---|
| | Murderers | Rapists | Rapist/ Murderers |
| Present | 68.0 | 52.2 | 100.0 |
| | (0.71) | (−1.16) | (1.54) |
| Absent | 32.0 | 47.8 | 0.0 |
| | (−0.90) | (1.47) | (−1.96) |

$L^2 = 14.43$, $p = .001$.

pothesis predicted a significantly higher prevalence of psychotic disorders among murderers than either of the other two offender groups. The frequency distribution of psychoses among the three offender groups that is presented in Table 6 and its likelihood ratio chi-square value demonstrates that this prediction is correct ($L^2 = 26.40$, $p = .000$). The standardized residuals demonstrate a much higher than expected level of psychosis among murderers and a significantly lower than expected level of psychosis among rapists.

Several hypotheses related to the prevalence of Axis II disorders were examined. The profiles described above predict that rapists should exhibit the lowest frequency of Axis II disorders. This is borne out by the data presented in Table 7. The likelihood ratio chi-square value was highly significant ($L^2 = 14.43$, $p = .001$). However, the only significant standardized residual value indicates a less than expected prevalence in the disorder-not-present Axis II cell for the rapist/murderer group.

The last hypothesis that was tested predicted that the highest prevalence of antisocial personality disorders would occur among rapist/murderers, the most predatory of the three offender groups, whereas rapists, with their complex etiological mix, would have the lowest such prevalence. The frequency distribution displayed in Table 8 supports the validity of this hypothesis as does the likelihood ratio chi-square analysis ($L^2 = 21.24$, $p = .000$). The standardized residual value for the cell, representing the presence of an-

**Table 8**
**Axis II Antisocial Personality Disorder Diagnosis by Offender Type Frequencies (percent), Likelihood Ratio Chi-Square Values ($L^2$), and Cell Variance (Standard Residuals)**

| Antisocial Personality Disorder* | Offender Group | | |
|---|---|---|---|
| | Murderers | Rapists | Rapist/ Murderers |
| Present | 25.6 | 18.5 | 90.0 |
| | (0.01) | (−1.34) | (4.03) |
| Absent | 74.4 | 81.5 | 10.0 |
| | (−0.01) | (0.79) | (−2.36) |

$L^2 = 21.24$, $p = .000$.

tisocial personality disorders in rapist/murderers, was highly significant as well (4.03).

## Conclusions

The data analyses presented above suggest that the clinical profiles present for each of the three offender groups under study can be at least partially validated when the patterns of Axis I and Axis II psychopathology they predict are examined. To find such validation with reference to Axis I psychopathology, one must look beyond overall measures, such as the presence or absence of any Axis I psychopathology, and examine the prevalence rates of particular diagnostic groups.

The data analyses confirm several important findings. As expected, sexual diagnoses are found exclusively among sexual offenders, with rapists sharing two diagnoses, pedophilia and sexual sadism, while rapist/murderers demonstrate an extraordinarily high prevalence of sexual sadism, a rare diagnosis. Substance abuse disorders are highly prevalent in all groups and their presence does not distinguish meaningfully between groups. Psychotic psychopathology is most prevalent among murderers, whose crimes require less functional capacity than do those of rapists and rapist/murderers. Although most of the subjects in all offender groups exhibited some type of Axis I psychopathology, almost one-quarter of the rapists did not.

When one looks at Axis II psychopathology, the most predatory offender group demonstrates the highest prevalence of antisocial personality disorder diagnoses. Additionally, every rapist/murderer and two-thirds of the murderers exhibited some type of Axis II psychopathology, but almost one-half of all the rapists exhibited none. Rape unassociated with murder was the offense least associated with either Axis I or Axis II psychopathology, supporting the notion that its etiological pattern is extremely complex.

This article is not meant to suggest that one can or should distinguish criminal offender types solely on the basis of diagnosed psychopathology. Many other characteristics require examination in order to illuminate the diversity of social, psychological, and biological factors that can contribute to criminal behavior. However, it is useful to examine specific contributions to criminal behavior, such as psychopathology, to discern whether in fact they do appear to contribute as predicted by etiological models. In the case of the three offender groups under study, a significant contribution would appear to be present.

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