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# An Aspect of Mental Illness and Violence: The Relationship between the Severity of Criminal Charges and Psychopathology

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**Abstract ~** The exaggeration of symptoms and malingering are an important aspect of psychological assessment in a forensic setting. This study examined criminality and scores on the Personality Assessment Inventory (PAI) validity scales to investigate the relation between psychopathology and malingering. It was the investigators' hypothesis that severity of the criminal charges would be positively correlated with the Negative Impression (NIM) and Malingering (MAL) index scores on the PAI, showing increased attempts made by patients to portray themselves in a negative light for secondary gain (i.e., reduced sentence, extended period of

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admission rather than return to jail; to remain out of punitive segregation). As predicted, the results showed a positive correlation between the NIM scale score and the category of crime. Results also showed a positive correlation between the MAL index and crime severity. The results are consistent with the belief that as the severity of the crime increases so does the likelihood of malingering or feigning of symptoms for secondary gain.

## Introduction

According to the Justice Department's Bureau of Justice Statistics, the state and federal authorities held 1,470,045 prisoners as of December 31, 2003 (Smith, 2004). The Federal Bureau of Prisons grew by more than 9,500 inmates during 2003 and state prisons grew by about 20,000 inmates (Smith, 2004).

In the year 2000, an estimated 191,000 state prisoners, about 16 percent of all inmates, were identified as mentally ill (Smith, 2001). Of the inmates classified as mentally ill, 79 percent were receiving therapy and about 60 percent were receiving psychotropic medications, including anti-depressants, stimulants, sedatives, tranquilizers or other anti-psychotic drugs (Smith, 2001). About 10 percent, approximately 18,900, of these inmates were housed in a 24-hour mental health unit (Smith, 2001). Even a small percentage of such a large population amounts to a considerable number of mentally ill persons incarcerated.

This study focuses on individuals who have a diagnosable mental illness and who have also committed acts that triggered intervention by the criminal justice system. It should be emphasized that not all mentally ill offenders are sent to jail. The courts look at the offenders' mental, medical and social histories, as well as their prior incarcerations, and the circumstances of the current offense. If the crime is deemed non-violent, a misdemeanor or a violation, then there is a distinct possibility that the offender will

be committed to a civilian state hospital for treatment rather than sentenced to jail time. This study looks at both the forensic hospitalized inmates as well as the civilly committed patients.

Among the highly problematic behaviors found in correctional settings are forms of acting out (e.g., suicidal gestures and attempts, aggressive behavior towards fellow inmates and staff) and response style (e.g., motivations to malinger). Malingering is a frequent problem in forensic settings. By definition, malingering is a deliberate behavior for a known external purpose (Hall & Poirier, 2000). It can be expressed in several forms, from pure malingering, in which the individual falsifies all symptoms, to partial malingering, in which the individual has genuine symptoms but exaggerates the impact which they have upon their daily functioning (Hall & Poirier, 2000). Rogers, Ustad, and Salekin (1997) found that 19.5% of jail referrals for mental health services were classified as malingering based on the Structured Interview of Reported Symptoms (SIRS; Wang et al., 1997). Rice, Harris and Quinsey (1996; as cited by Wang et al., 1997) found not only severe psychopathology in their sample of maximum security forensic patients, but also serious concerns regarding malingering (10%), defensiveness (45%), lying (22%), assaultiveness (16%) and physical threats (22%). Resnick (1997; as cited by Wang et al., 1997) observed the strong motivation for some inmates to feign psychosis and other serious mental disorders to serve "easy time" in the comparative comfort of inpatient facilities. In summary, inmates malinger for several reasons: (1) to serve out their time in a forensic hospital rather than a jail or prison setting, (2) to gain amnesty from the courts and receive a lesser sentence or criminal charge, or (3) to get out of or remain out of punitive segregation.

The relevance of using psychological tests to address various types of psycho-legal issues in criminal (e.g., competence to proceed, diagnostic clarification, criminal responsibility, and risk

assessment) and civil (e.g., child custody, civil commitment and personal injury) settings is widely established. These instruments are used by clinicians who are addressing these specific psycho-legal issues for the courts and who are working with offender populations in correctional settings in a treatment capacity (Edens et al., 2001). One of these measures is the Personality Assessment Inventory (PAI).

The PAI (Morey, 1991) is a multi-scale self-report inventory intended to measure "critical clinical variables" (Morey, 1991; Edens et al., 2000). The PAI includes 344 items, all declarative statements, phrased in the first person. Subjects are asked to rate the degree to which the statements apply to them on a four-point scale (1 = very true, 2 = mainly true, 3 = slightly true, 4 = false). The items form a number of non-overlapping scales, including 4 scales for assessing bias, 11 scales for assessing clinical syndromes, 5 scales for assessing treatment-related characteristics, and 2 scales for assessing interpersonal style (Edens et al., 2000). Scores on the PAI are presented in the form of linear *T*-scores that have a mean score of 50 and a standard deviation of 10 (Morey, 1991).

The PAI is useful as a measure of psychopathology in forensic settings for three reasons (Morey, 1991; White, 1988; Edens et al, 2000, Morey & Quigley, 2002). First, completion of the PAI requires only a fourth grade reading level. Given the limited educational achievement of most inmates, this makes the PAI accessible. The PAI has also become available in a Spanish version, so it is not limited to those fluent in English. Finally, and most importantly, the PAI provides broad assessment of response styles, including carelessness, random responding and minimization or exaggeration of symptoms (Edens et al., 2000). The ability of the PAI to detect feigning of mental illness has been well documented (Morey, 1991; Rogers, Ornduff & Sewell, 1993; Rogers et al., 1996, Poythress et al., 2001). Exaggeration of

symptoms is an important factor in forensic assessment, and one of the main measures looked at in the present study.

To date, a number of studies have reported strong validity of the PAI (Alterman et al., 1996; Cashel, Rogers, & Sewell, 1995; Morey, 1991; Schinka, 1995; Trull, 1995). However, there has been limited research evaluating the PAI as a measure of psychopathology, aside from the information presented in the test manual (Edens et al., 2000).

Edens et al. (2000) support three conclusions regarding the use of the PAI in forensic and correctional settings. The PAI is a widely accepted measure of various forms of psychopathology and other clinically relevant issues. An extensive research base exists in relation to various clinical factors that are grounded in credible scientific methodology and this research base has been subjected to the peer review process.

Wang et al. (1997) examined the use of the PAI in the assessment of malingering, suicide risk and aggression in male inmates. Examining 334 PAI profiles of forensic inpatient psychiatric inmates, 12% ($n$ = 40) were identified as having elevated scores on Negative Impression (NIM) and other clinical indicators of possible malingering (Wang et al., 1997). NIM was positively correlated with the Structured Interview of Reports Symptoms primary scales (SIRS), a tool frequently used by clinicians to assess malingering (Wang et al., 1997). This result illustrates the usefulness of the PAI in a correctional setting precisely because it can distinguish between the genuine and the malingering patient.

Rogers et al. (1996) examined the usefulness of the NIM scale to detect naïve (undergraduate students with no training) and sophisticated (psychology graduate students with one-week of training) subjects simulating specific disorders. The researchers

observed that all psychological measures can be feigned; the PAI does not appear to be an exception to this rule (Rogers et al., 1996). However, the results showed that the PAI was highly effective in classifying the feigning of specific disorders. The NIM scale appeared to be particularly effective with feigned schizophrenia, marginally effective with feigned depression, and ineffective with feigned generalized anxiety disorder (Rogers et al., 1996). This is an important finding in relation to the present study. As seen in the characteristics in Table 2 (in the Methods section), very few patients were diagnosed with anxiety disorders, with the majority of the sample diagnosed with psychotic disorders (36%) and mood disorders (44%).

Rogers et al. (1996) continued their study of the detection of feigned mental disorders on the PAI, specifically investigating three disorders: schizophrenia, major depression and generalized anxiety disorder. Again using the naïve and sophisticated subject design, the researchers examined the PAI validity scales and their ability to differentiate between simulators and bona fide patients. Naïve simulators tended to have higher scores than both sophisticated simulators and patients on the Inconsistency (ICN), Infrequency (INF) and NIM scales (Rogers et al., 1996). Conversely, sophisticated simulators displayed very few differences with genuine patients: NIM for feigned schizophrenia and anxiety, and INF for anxiety (Rogers et al., 1996). As expected, scores on the Positive Impression (PIM) scale demonstrated no significant differences between the two groups. It should also be noted that the sophisticated simulators were even more targeted in their malingering of their designated disorder (Rogers et al., 1996).

The purpose of the present study is to compare the PAI validity scales to the severity of criminal behavior. It is the investigators' view that as the degree of criminal behavior increases, so does the desire to show oneself in a negative light. It is believed that

there is a positive correlation between severity of crime and increased scores on the NIM and PAI scales rendering the profile questionable for malingering or feigning of symptoms for secondary gain. Furthermore, the remaining three scales, PIM, ICN, and INF, will likely show no correlation with crime severity due to the conscious attempt to portray oneself as ill, rather than careless, random or indifferent.

## Method

Participants

The sample investigated consisted of 435 institutionalized psychiatric patients at Bellevue Hospital Center in New York. Bellevue Hospital has 11 adult inpatient psychiatric units, including two forensic units. The Forensic Psychiatric units hold a total of 60 inpatient male prisoners either referred by the New York Police Department, the Rikers Island Correctional Facility, or court-ordered for a psychiatric evaluation. The individuals in the study were over the age of 18 ($M$ = 32.93, $SD$ = 10.94) and of both genders. Individuals included in the study had both a diagnosable mental illness and some form of current or prior involvement with the criminal justice system. Table 1 describes the distribution of criminal categories across the sample, with the greatest frequencies found to be those of B-Violent felonies and A-Misdemeanors. It should be noted that the legal charges in the sample range from minor offenses such as turnstile jumping, to violating parole/probation, to severe offenses including rape, murder and arson. Table 2 explores the distribution of diagnostic categories of the sample, including 36% diagnosed with Schizophrenia or a Psychotic disorder, 44.9% Mood disorder, 2.1% Anxiety disorder, 61.6% Substance abuse or dependence and 41.2% Axis II Pathology. Each participant was given a PAI and a formal chart review was conducted by the primary investigator to explore the patient's history (e.g., psychiatric, criminal, substance abuse, social and family histories).

This study did not recruit subjects. All inpatient psychological assessments were conducted for clinical purposes (e.g., differential diagnosis, treatment and discharge planning, etc.) and have been entered into the IRB-approved Inpatient Assessment Database that conforms to HIPAA regulations. Given that the research data was taken from a pre-existing database, and that the database was formed under institutional IRB approval that waived informed consent requirement, informed consent was not obtained. The researchable version of the database did not contain identifying markers in order to protect patient confidentiality.

Table 1. Criminal Categories

| | Frequency | Percent |
|---|---|---|
| A-1 Felony | 39 | 9.0 |
| A-2 Felony | 2 | 0.5 |
| B-Violent Felony | 69 | 15.9 |
| B-Nonviolent Felony | 19 | 4.4 |
| C-Violent Felony | 34 | 7.8 |
| C-Nonviolent Felony | 6 | 1.4 |
| D-Violent Felony | 43 | 9.9 |
| D-Nonviolent Felony | 23 | 5.3 |
| E-Felony | 19 | 4.4 |
| A-Misdemeanor | 73 | 16.8 |
| B-Misdemeanor | 7 | 1.6 |
| Violation | 1 | 0.2 |
| Degree Missing (Charge Known) | 100 | 23.0 |
| Total | 435 | |

*Note: The categories are ranked in order of severity. For example, an A-1 Felony is rated the most severe (scored 1 on SPSS), and a Violation is the lowest rated crime (12).

Table 2. DSM-IV Diagnosis Distribution of Sample

| | Frequency | Percent |
|---|---|---|
| Schizophrenia & Other Psychotic disorders | 156 | 36.0 |
| Mood Disorders | 195 | 44.9 |
| Anxiety Disorders | 9 | 2.1 |
| Substance Dependence | 266 | 61.6 |
| Presence of Axis II Pathology | 168 | 41.2 |

Data Reduction

The Inpatient Assessment Database includes over 1,000 participants. Each individual was admitted to one of Bellevue Hospital Center's inpatient psychiatric units, including the Forensic Psychiatry Service. Historical data extractable from the database covered prior hospitalizations, admission and discharge diagnosis, psychiatric medications, incarceration history, substance abuse, family history, and social history (including employment, living arrangements). Patients received a chart review and were given psychological assessments including, but not limited to the PAI. Assessment results were added to the database. In order to reduce the number of patients involved in the current study, the investigators excluded patients that did not have current or prior involvement with the criminal justice system. The documentation on criminal justice involvement had to include the specific charges; merely an affirmative answer was not enough to warrant inclusion. In addition, all patients that were not administered a PAI as part of their assessment protocol were also excluded.

Procedure

This study focuses on the validity scales of the PAI. There are four scales designed to assess bias: the ICN, INF, NIM and PIM.

Two of these measures are devoted to response consistency, the ICN (10 pairs of highly correlated items) and INF (8 rarely endorsed items that are unrelated to psychopathology; Morey, 1996). The PIM is a 9-item measure of defensiveness (Morey, 1996). Finally, the NIM is a scale, comprised of 9 items with highly atypical psychotic, dysphoric, and organic content, designed for the assessment of malingering (Morey, 1996). The validity scales are explained in more depth below. If any of these four scales has a T score two standard deviations above the mean, the test results are assumed invalid and no clinical interpretation of the PAI may be done.

In addition to the four validity scales mentioned above, there are several specialized indexes that are used to paint a clear picture of the respondent, such as the Defensiveness Index (DEF), the Cashel Discriminant Function (distinguishes between defensive and honest responding), the Malingering Index (MAL), the Rogers Discriminant Function (distinguishes the PAI profiles of genuine patients from those simulating patients), the Suicide Potential Index (SPI), the Violence Potential Index (VPI) and the mean clinical elevation (the mean of the clinical scales; Morey, 1996). Each of these is derived from a calculation of several clinical scales and their scores, to reach a *T*-score on the index. For example, the MAL calculates scores based on the results of the NIM, INF, ICN, PAR (paranoia), MAN (mania), DEP (depression), RXR (treatment rejection) and ANT (Antisocial) scales.
The remaining 18 clinical scales of the Personality Assessment Inventory were not monitored as a part of this study.

## Results

Table 3 represents correlations between category of crime and the validity scales and indexes of the PAI. The results show statistically significant correlations between crime severity and NIM and MAL scores on the PAI. First, the correlation between cate-

gory of crime and a marked elevation on NIM ($r$ = -.257, $p < 0.01$) provides evidence that the higher the criminal category, or more specifically, the more serious the crime, the higher the score on NIM. As presented earlier, this scale is extremely important when it comes to assessment of criminal offenders because it targets malingering. Second, there was a significant correlation between the criminal category and MAL ($r$ = -.200, $p < 0.05$). This finding provides evidence that as the severity of the crime increases, the *T*-score on the MAL increases as well. Both of these findings suggest that subjects tend to portray themselves as suffering more

Table 3. Personality Assessment Inventory Validity Scales and Indexes and the Relationship to Severity of Criminal Charges

| PAI Scales | Category of Crime |
|---|---|
| Inconsistency (ICM) | .039 |
| Infrequency (INF) | .074 |
| Negative Impression (NIM) | -.257** |
| Positive Impression (PIM) | .029 |
| Malingering Index (MAL) | -.200* |
| Malingering Index T-Score (community) | -.199* |
| Malingering Index T-Score (clinical) | -.257 |
| Defensiveness Index (DEF) | .094 |
| Suicidal Potential Index (SPI) | -.164 |
| Suicidal Potential Index T-Score (community) | -.094 |
| Suicidal Potential Index T-Score (clinical) | -.236 |
| Violence Potential Index (VPI) | -.066 |
| Violence Potential Index T-Score (community) | -.002 |
| Violence Potential Index T-Score (clinical) | -.150 |
| Cashel Discriminant Function (Raw) | -.045 |
| Cashel Discriminant Function (T score) | -.047 |
| Mean Clinical Elevation | -.238** |
| Rogers Discriminant Function (Raw) | -.078 |
| Rogers Discriminant Function (T score) | -.055 |

** Correlation is significant at the 0.01 level (2-tailed, $p < .01$)
*Correlation is significant at the 0.05 level (2-tailed, $p < .05$)

than they are, or feigning symptoms completely, causing a positive score on the MAL, when the crime that they are charged with is a more serious offense (i.e., A-1 or A-2 Felonies, B-Violent Felony) and can lead to more severe consequences (i.e., extended prison sentences).

In addition, the results showed a significant correlation between the mean clinical elevation and crime severity ($r = .238$, $p < 0.01$). As mentioned earlier, the mean clinical elevation is the mean of the clinical scales. This result indicates that the more severe the charge, the higher the mean of all the clinical scales, thereby providing additional evidence that increased feigning of symptoms appears to be linked with the seriousness of the offense.

The DEF, the Cashel Discriminant Function and the Rogers Discriminant function, when compared to crime severity, produced results that were not significant. These results are surprising since these indexes distinguish between defensive and honest responding as well as distinguish genuine patients from those simulating patients. These indexes can alert the evaluator to a malingerer as well, so for the results to be insignificant raises questions regarding the validity of the indices themselves.

The SPI and VPI indexes were also insignificant when correlated with crime severity. This is an interesting result as well, concerning subject responses, considering that patients often harm themselves or others to get admitted to the forensic hospital. However, the indices are looking at suicide and violence risk at the time of the assessment, or when the inmate is already hospitalized.

As expected, three out of four of the validity scales (the ICM, INF and PIM) proved insignificant when compared with criminal category. Subjects attempting to show illness will not want to

trigger inconsistency or infrequency, which highlights random, inconsistent, and atypical responses. The PIM scale monitors downplaying of or denial of one's symptoms and even minor problems and imperfections. A subject prone to feigning illness would not show a high score on PIM. The results of the remaining three validity scales were consistent with expectations.

## Discussion

Psychological assessment is especially challenging when conducted in a forensic setting in part because forensic inmates are at high risk for feigning mental illness. Thus it becomes important for clinical staff to be able to distinguish between a bona fide patient and a malingerer. The results of this study are important because the PAI is a tool frequently used in a correctional setting to assess this very problem. The results showed statistically significant correlations between crime severity and NIM and Malingering scores on the PAI. These findings provide strong evidence that the more serious the crime, the higher the score on NIM (the validity scale that assesses malingering) and on the Malingering Index. Both of these findings suggest that subjects tend to portray themselves as suffering more than they are, or to feign symptoms completely, when they are charged with a relatively serious offense. In addition, the results also showed a significant correlation between the mean clinical elevation and crime severity, indicating that the more severe the charge, the higher the mean of all the clinical scales.

The Defensiveness Index, and both the Cashel and Rogers Discriminant Functions produced results that were not significant. Since these indexes distinguish between defensive and honest responding as well as distinguish genuine patients from those simulating patients, it is surprising that the correlation proved to be insignificant.

Suicide and Violence Potential indexes were also insignificant when correlated with crime severity. The indices are assessing risk at the time of the assessment, which in this case is when the inmate is already hospitalized, so the result is consistent with the investigators' view. Once the patient has gained admission, this risk seems to decrease, however. Future research is needed to examine this area of the PAI.

The ICN, INF and PIM scales produced results that were insignificant. Those subjects attempting to feign illness will not respond in a random and inconsistent manner, they will respond to items that they feel will bring their "illness" to light. In addition, they are not likely to deny such symptoms. The results of the remaining three validity scales were consistent with our hypothesis.

Limitations of this study should be noted. First, this study only compared criminal category to the validity scales of the PAI. Future research may go a step further to look at actual legal charges and the malingering-related index scores. For example, if the patient is charged with an A-1 Felony (i.e., Murder 2º, Rape 1º, etc.), are they more likely to feign illness than an individual charged with a non-violent B-Felony? Are offenders that commit crimes against people more likely to malinger than offenders who commit crimes against property? In addition, it might be helpful to look at those inmates with a history of feigning illness, and their PAI results over time. Do their results change? A second limitation of this study was that 100 of the participants' criminal degrees were unknown. The specific legal charge was known, but the category was not. This could have had a major impact on the results in either direction. Another limitation is that the participants were all from inpatient psychiatric units at Bellevue Hospital. It might be interesting to look at PAI scores of mentally ill offenders when in their criminal justice settings. For example, is a recently arrested individual more prone to portraying

himself in a negative light than a post-trial, pre-conviction inmate at Rikers Island? Research could also be gathered to examine differences between correctional settings throughout the country. This is important because different correctional facilities have different styles, which could cause a change in the inmate population. Further research can also examine both the PAI and the SIRS as measures of malingering in this setting. Lastly, this study only looked at the validity scales and indexes of the PAI. Future research may also look at the clinical scales separately, to investigate what scales show marked elevations and what scales are not showing T score elevations at all.

By examining the relationship between criminality and mental illness, clinical staff will not only be able to better assess and treat the mentally ill offender, but also help the criminal justice system manage these difficult patients.

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