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Exploring The Moderating Effects of Mental Illness on Parole Release Decisions[1]

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PAROLE RELEASE DECISIONS take into consideration an inmate's risk for recidivism (Bonta, 2002; Heilbrun, 1997). Factors associated with criminal involvement are divided into static and dynamic risk factors, the latter of which are termed criminogenic needs (Andrews & Bonta, 2003). Static risk factors include past behaviors like criminal history and as such are immutable. Criminogenic needs include education and antisocial cognitions, values, and behaviors and are considered areas that can be targeted for intervention. Research on risk assessment for criminal recidivism has identified a set of "central eight" risk factors that predict criminal involvement most reliably (see Table 1; Andrews & Bonta, 2006; Andrews, Bonta, & Wormith, 2006). The criminality of persons with mental illness is influenced by the same central risk factors that influence criminal behavior among persons without mental illness (Bonta, Law, & Hanson, 1998; Hodgins & Janson, 2002).

TABLE 1.
Criminal Risk Factors

	Factor	Risk
The "Central Eight" Risk Factors	Family and/or marital	Two key elements are nurturance and/or caring and monitoring and/or supervision.
	School and/or work	Low levels of performance and satisfactions in school and/or work
	Leisure and/or recreation	Low levels of involvement and satisfaction in anticriminal leisure pursuits
	Antisocial cognition	Attitudes, values, beliefs, and rationalizations supportive of crime; cognitive emotional states of anger, resentment, and defiance; criminal versus reformed identity; criminal versus anticriminal identity
	Antisocial associates	Close association with criminal others and relative isolation from anticriminal others; immediate social support for crime
	Antisocial personality pattern	Adventurous pleasure seeking, alienation, restlessly aggressive
	History of antisocial behavior	Early and continuing involvement in a number and variety of antisocial acts in a variety of settings
	Substance abuse	Abuse of alcohol and/or other drugs
Examples of Minor Risk Factors	Major mental disorder	
	Physical health issues	
	Seriousness of current offence	

Notes: From: Andrews, Bonta, & Wormith, (2006).

Mental illness is not one of the central eight risk factors and, in itself, has been found to have little relation to long-term criminal recidivism (Bonta, et al., 1998; Gendreau, Little, & Goggin, 1996; Quinsey, Harris, Rice, & Cormier, 1998). However, mentally-ill inmates tend to fare worse in risk assessments (Carroll, Weiner, Coates, Galegher, & Alibrio, 1982; Hannah-Moffat, 2004) and are less likely to be paroled than non-mentally ill inmates (Feder, 1994; Hannah-Moffat, 2004), extending their time behind bars (Ditton, 1999; Porporino & Motiuk, 1995). In one notable study, inmates without a history of psychiatric hospitalization while incarcerated were 30 times more likely to be granted parole than inmates with a history of psychiatric hospitalization (Feder, 1994). This large effect was observed even after controlling for a number of factors, including race, prison infractions, prior imprisonments, and violence of offense and lead the author to attribute higher rates of parole denial to "differential treatment" of mentally ill inmates in the parole release process (Feder, 1994, p. 408). While Feder controlled for a number of factors known at the time to influence release decisions or to be associated with recidivism, she did not take into consideration factors that we know today do a good job of predicting criminal behavior (i.e., the central eight risk factors) and are thus, likely to be considered in the release decision-making process.

Differential treatment in parole decisions can be examined in a number of ways. Previous research on the impact of mental illness on parole release decisions has examined either the direct effect of mental illness on release decisions (Feder, 1994; Hannah-Moffat, 2004) or the indirect effect of mental illness on release decisions through association among mental illness and criminal risk or other factors (Carroll, et al., 1982; Matejkowski, Caplan, & Cullen, 2010). However, exploring the moderating effects of mental illness on the relationships among risk factors and release decisions can provide another way of examining differential treatment of mentally ill inmates in the parole decision-making process. That is, it is possible that a parole board may not utilize the same risk factors, or apply these factors similarly in contemplating release decisions among inmates based upon an inmate's mental health status. This possibility has not previously been tested in the literature.

There are a number of reasons why a parole board may apply risk factors differently in release decisions based upon an inmate's mental health status. Given that inmates with mental illness may, as a result of discrimination in the community, be assessed more negatively in regards to such criminal risk factors as a lack of attachment to employment (Manning & White, 1995; Scheid, 1999; Stuart, 2006) and education (Becker, Martin, Wajeeh, Ward, & Shern, 2002; Martin, Pescosolido, Olafsdottir, & McLeod, 2007), parole boards might grant inmates with mental illness some leniency on these factors. On the other hand, it is well-known that substance abuse (another criminal risk factor; Andrews & Bonta, 2006) among individuals with mental illness is a strong contributor to violent behavior (Fulwiler, Grossman, Forbes, & Ruthazer, 1997; Steadman, et al., 1998; Swanson, et al., 2002; Swartz, et al., 1998). As such parole boards may consider inmates with co-occurring mental illness and substance use disorders as more of a risk for parole than inmates with solely a substance use disorder. However, these hypotheticals ignore the substantial evidence that both substance abuse and lack of attachment to education are associated with criminal behavior regardless of mental health status (Bonta, et al., 1998; Gendreau, et al., 1996).

Differential treatment towards inmates with mental illness can be exhibited through inconsistent application of risk factors in parole release decisions. If one set of factors strongly predicts release decisions for inmates with mental illness and a different set of factors strongly predicts release decisions for inmates without mental illness, it indicates that a double standard is being applied in release decisions based upon the presence of a mental illness. While the reasons may differ among inmates with and without mental illness for their presence or levels of criminal risk factors, the ability of these risk factors to predict criminal behavior does not differ between the two groups. Thus, findings that support a moderating effect of mental illness on risk factors in release decisions would not only suggest differential treatment of inmates with mental illness, they may also indicate parole decision practices not in the interest of public safety.

This study explored differential application, based upon mental health status, of risk factors for criminal recidivism (Andrews & Bonta, 2006) that are considered in parole release decisions ("Factors considered at parole hearings; adult inmates," 2005). An exploratory approach was used to assess potential differential application of risk factors by inmate mental health status. This exploration began with an examination of whether or not the factors that primarily influenced release decisions were similar for inmates with and without mental illness. In models that contained explanatory variables for both groups, the strength of their predictive ability was compared using chi-square for difference tests (Allison, 1999). Significant differences indicate that the strength of the risk factor in predicting release decision varies by an inmate's psychiatric status and addresses the question: Do the central eight risk factors predict release decisions for offenders with and without mental illness similarly or, alternatively, to what extent does mental illness moderate the relationships among the central eight risk factors and release decision?

Methods

Sampling Strategy

The current study utilized data collected in a previous study of the relationship between severe mental illness and parole release decisions (Matejkowski, et al., 2010). The sampling frame was extracted from the New Jersey State Parole Board's Information System (PBIS). PBIS provided a list of the population of all New Jersey inmates who had parole release decisions in 2007. These 11,181 cases were assigned a unique random number and this sampling frame was sorted in ascending order based upon this unique random number. Inmate case files were then screened sequentially, as listed in this randomly sorted sampling frame, in order to identify parolees with and without severe mental illnesses for the previous study (SMI; a major mood or psychotic disorder for a previous study). The resulting study sample included the first 198 inmates who screened positive for SMI and the first 205 inmates who screened negative for SMI. The current study recoded these 403 cases for the presence of any Axis I disorder (excluding substance use disorders) to create two groups of inmates based upon the presence (n = 219) or absence (n = 184) of mental illness.

Data Sources

Data were collected from inmate case files and New Jersey State Parole Board and Department of Corrections administrative databases. The Parole Board's information system (PBIS) is their central database for tracking all parole-related information for State and county inmates, and for all offenders released to State Parole Board supervision. PBIS provides data access for virtually every function of the State Parole Board (New Jersey State Parole Board, 2008, p. 4). iTag is an inmate management system utilized by the Department of Corrections and the State Parole Board that holds and processes all inmate security, classification, housing/movement, release, sentencing, and transportation information. Inmate case files often contain printouts from these databases in addition to summary sheets that consolidate information the parole board is most concerned with as well as presentence investigation reports, risk assessment results, documents indicating previous parole decisions, and psychiatric evaluations.

Study Variables

Mental Illness. The Mental Health Parole Evaluation (MHPE) is completed by a trained mental health clinician (i.e., a psychologist, social worker, physician, etc.) with every inmate, typically within the month or two prior to his or her parole release hearing. The evaluation includes assessments of an inmate's current mental health status; level of community support; risk for reoffending; and summaries of substance abuse, mental health, and history of compliance with community supervision. Included in the MHPE are multi-axial diagnoses for parolees with mental illness. Results of the MHPE are included in all inmates' case files, regardless of mental health status. In addition, the most recent copy of the inmate's Electronic Medical Record (EMR) from the New Jersey Department of Corrections provides a list of all medical problems with accompanying ICD or DSM codes, medications currently prescribed, medical directives (e.g., orders to be seen monthly in a chronic care clinic), and work restrictions. The EMR is included in all inmates' case files and is also updated within the month or two prior to the release hearing. The presence in either the MHPE or EMR of a current or historical diagnosis of any adjustment, mood, anxiety, psychotic, impulse control, attention-deficit, or cognitive disorder was used to identify inmates with mental illness. All other inmates served as the comparison group. A substance-related disorder alone was not sufficient for inclusion in the group containing inmates with mental illness.[1]

Employing sample weights, 17.5 percent of parole-eligible inmates met the criteria employed here for identifying mental illness. Mood disorders were the most frequent Axis I diagnoses (10.0 percent) followed by anxiety (4.1 percent), psychotic (2.8 percent), adjustment (2.6 percent), and then impulse-control disorders (1.8 percent). Half of inmates with mental illness and a quarter of non-mentally ill inmates were diagnosed with personality disorders, the bulk of which were antisocial.

Family/Marital Supports. Each inmate's MHPE provided clinician evaluations of an inmate's sources of support in the community. These assessments identified people (such as family members and friends) that the inmate could rely upon for support in transitioning back to the community. The author and another researcher performed independent content analyses of these comments to categorize whether each offender had family support (other than a spouse or partner), spouse or partner support, and other support (such as AA sponsor or friends). Results were compared (with over 95 percent initial agreement on all three categories) and discrepancies were reconciled through an open discussion process to make the final determination of a specific type of community support. The presence of non-spousal family support, spousal support, and other support is reported through three dichotomous variables (1 = absence and 0 = presence of support).

Educational Attainment. Education level was provided by the Mental Health Parole Evaluation and dichotomized as less than a high school graduate (1) and high school graduate (including GED) or higher (0).

Employment History. Employment history measures consisted of three questions from the

Level of Service Inventory-Revised (LSI-R, Andrews & Bonta, 1995). The New Jersey State Parole Board utilizes the LSI-R to assess risk for recidivism among all potential parolees. The LSI-R is completed by the same trained clinicians who complete the MHPE and scores individuals' risk on the central eight risk factors, including criminal history, leisure/recreation, and alcohol/drug problems. The instrument contains three items that were used to assess employment history. Each of these items was coded as either a 1 (indicating a problem/risk) or a 0 (indicating no problem/risk). These items were summed, providing scores that range from 0 to 3 and then dichotomized, with values greater than or equal to 2 indicating significant lack of attachment to employment (i.e., coded as 1 = community work problems and 0 = no community work problems).

Incarceration Length, Program and Work Participation while Incarcerated. Length of incarceration was calculated from data provided by PBIS and defined as the time between the dates an inmate began serving time for the offense(s) for which he or she is being considered for parole and his or her identified (2007) parole hearing date. Program participation data, from iTag, included referral date, start date, and completion status. Total number of programs referred to, started, and completed annually were calculated by summing all programs that an inmate was referred to, had started, and had completed and then dividing each value by their length of incarceration, in years. As all inmates were "employed" during the inmate's length of incarceration (according to New Jersey Department of Corrections protocol), "unemployment" rates could not be analyzed. Analysis was limited to the annual rate of job turnover as indicated by the number of job details an inmate had during his or her length of incarceration divided by number of years incarcerated prior to release hearing. These annual rates control for an inmate's time served in prison.

Prosocial Leisure/Recreation Activities.
Prosocial leisure/recreation measures consisted of two items from the LSI-R that were coded similarly to employment history. These values were then summed, providing scores that ranged from 0 to 2 and then dichotomized, with values equal to 2 indicating significant lack of attachment to prosocial leisure/recreation activities (i.e., coded as 1 = lacks prosocial leisure/recreation activities and 0 = does not lack prosocial leisure/recreation activities).

Antisocial Personality. Diagnoses located in the MHPE or EMR indicating a current or historical antisocial personality disorder were used to identify inmates with antisocial personality (1 = presence of antisocial personality and 0 = absence of antisocial personality).

Antisocial Cognitions. Data on antisocial cognitions were collected from four items contained within the LSI-R, coded similarly to employment history and then dichotomized with values greater than or equal to 3 indicating the presence of substantial antisocial cognitions (1 = presence of antisocial cognitions and 0 = absence of antisocial cognitions).

Antisocial Associates. The iTAG system provided a no/yes (coded as 0/1) indicator of whether or not the inmate has a history of gang involvement. In addition, data on antisocial associates were collected from four items contained within the LSI-R and coded similarly to employment history. These five items were summed, providing scores that ranged from 0 to 5 and then dichotomized with values greater than or equal to 4 indicating the presence of substantial antisocial associates (1 = presence of antisocial associates and 0 = absence of antisocial associates).

Criminal History. Criminal history data were collected via NJDOC's iTag system and the State Parole Board's Case Summary Sheets. The iTag system provided dichotomous indicators of whether or not the inmate had a history of a sex offense or escape from custody (1 = yes and 0 = no). Case summary sheets provided a count of prior adult convictions and a count of juvenile adjudications.

Disciplinary Infractions. Disciplinary infractions are categorized by the NJDOC as either "asterisk" or "non-asterisk" charges and further, within asterisk charges, as either violent or non-violent asterisk charges. Asterisk charges are considered more severe than non-asterisk charges

and include offenses like escape, use of drugs, assault, or threatening with bodily harm; the last two of which are examples of violent asterisk charges. Non-asterisk charges include offenses like smoking where prohibited, refusing a work assignment, or tattooing. Counts of total disciplinary charges, which includes non-asterisk, asterisk, and violent asterisk charges while incarcerated, as well as counts of asterisk, and counts of violent asterisk charges separately were divided by an inmate's length of incarceration prior to his or her release hearing in order to provide annual infraction rates.

Substance Abuse. The presence in either the MHPE or EMR of a current diagnosis or history of a substance abuse or dependency disorder was used to identify inmates with substance abuse problems (1 = yes and 0 = no).

Control Variables

Current Offense Information. Information on inmates' current offense(s) was collected from PBIS and Presentence Investigation Reports (PSI). PBIS provides the offense name; counts of the offense; and offense degree, categorized one through five, with first-degree offenses the most serious. Severity of offense was dichotomized as less severe than a second-degree offense (0) and either a first or second degree offense (1). Crimes were categorized as non-violent (0) or violent (1). Violent offenses included crimes and attempted crimes that involved an assault (e.g., manslaughter, rape, simple assault) or threatened assault (e.g., terroristic threats, armed robbery, carjacking). Information from the offender's PSI was used to identify whether any crime for which the inmate was currently incarcerated was perpetrated upon a victim (1) or not (0; e.g., a drug or vice crime) and data from PBIS was used to identify whether the current offense(s) was committed while under community supervision (for example, a VOP or parole violation; 1 = yes and 0 = no).

Prior Release Hearings. PBIS provided the number (if any) of parole release hearings that have occurred prior to the release decision that served to include the inmate in the study's sampling frame.

Demographics. Age at time of hearing, gender, and race were provided through PBIS. The presence of a physical disability was also reported. Inmates' EMR reports all medical conditions for which the inmate was receiving treatment. These data were coded by three persons who have experience identifying physical disabilities from medical records in order to identify the presence of a physical condition that could impede work and program participation. The author coded the presence (1) or absence (0) of physical disability. Two other researchers coded a unique 10 percent of the inmates (i.e., 20 percent of cases were checked for reliability). Results were compared with the author's coding decision with over 93 percent agreement with the other coders' identification of the presence/absence of a physical disability.

Bivariate analyses were conducted to compare inmates with and without mental illness along all study and control variables. These bivariate comparisons used t-tests for continuous variables and chi-square tests for categorical variables, as appropriate to the data. Analyses indicated that inmates with mental illness (MI) did not differ from inmates without mental illness on many control variables (see Table 2). The percentage of inmates with MI released to parole was not significantly different from the percentage of inmates without a MI who received a favorable parole release decision (44 percent and 51 percent respectively). Inmates with MI were significantly older, more likely to be female, White, and had a higher average number of prior parole hearings than inmates without mental illness.

Multivariate analyses

Two stepwise logistic regression models were constructed, with release decision as the dependent variable; one for inmates with mental illness and one for inmates without mental illness. With control variables forced into the models, study variables were allowed to enter each group's model via a forward stepwise method, identifying those variables that are most predictive of parole release for each group of inmates. Resultant models that identify different variables as

predictive of parole release decisions indicate that the parole board considers risk factors differently in their decision-making process for each group. All variables that entered the stepwise models of each group of offenders were then combined and logistic regressions were again conducted for both groups. All control variables were "forced" into this second pair of models along with all risk factor variables that were predictive of release for either of the two groups in the stepwise models. Corresponding coefficients from these models were then compared to test the equality of regression coefficients using the chi-square for difference tests (Allison, 1999). This analysis is similar to estimating a single model, where a mental illness interaction is specified for every covariate. The chi-square for difference test is the square of the common z-test for testing equality of coefficients (Clogg, Petkova, & Haritou, 1995; Paternoster, Brame, Mazerolle, & Piquero, 1998). The formula for this test is:

$$X^2 = (ß1 - ß2)^2/[se(ß1)]^2 + [se(ß2)]^2$$

where seß is the standard error of the coefficient being tested. An absolute value of X^2 that is greater than 3.84 indicates a statistically significant difference of the variable between the two models at an alpha $\leq .05$. This test will indicate if factors carry the same weight in release decisions for both groups.

TABLE 2.
Control variables and parole release decision among persons with and without mental illness

	MI	Non-MI	χ^2,	df,	p
Parole release decision					
Parole granted	43.7	50.6	1.12,	1,	.288
Age, gender, race/ethnicity					
Age at hearing	35.48 (8.56)	32.78 (9.16)	-2.28(t),	401,	.023
Male	78.9	94.6	19.19,	1,	<.001
Black	48.6	60.8	3.59,	1,	.058
Hispanic	14.1	24.4	3.56,	1,	.059
White	38.0	13.6	23.88,	1,	<.001
Debilitating medical condition	25.7	19.0	1.63,	1,	.201
Current offense					
Number of offenses	3.01 (3.23)	2.49 (2.00)	-1.73(t),	401,	.084
Violent offense	25.4	19.0	1.48,	1,	.224
Violation of parole or probation	36.6	30.4	1.04,	1,	.308
First or second degree offense	22.5	25.0	0.19,	1,	.661
Victim present	54.4	43.5	2.73,	1,	.099
Number of prior hearings	0.59 (1.05)	0.38 (0.70)	-2.15(t),	401,	.032
Length of incarceration					
Years incarcerated at hearing	2.57 (4.76)	2.34 (4.00)	-0.42(t),	401,	.676

Notes. MI = mental illness. Values are weighted percentages for dichotomous variables and means with standard deviations in parentheses for continuous variables. N varied between 391 and 403 for all tests.

Muticollinearity was tested in a model that included all study and control variables. Variance inflation factor scores of the independent variables were all below four, well below the value of ten suggested to indicate problems of multicollinearity (Cohen, Cohen, West, & Aiken, 2003).

Results

Bivariate analyses indicated that inmates with mental illness (MI) differed from inmates without MI on a few study variables (see Table 3). A higher percentage of inmates with MI than inmates without MI needed housing placement upon release from prison and had an antisocial personality. The rate of substance abuse among mentally ill inmates was more than twice that of

non-mentally ill inmates. Inmates with MI had a higher average number of prior adult convictions and annual rates of violent asterisk charges while incarcerated, but a lower average number of prior juvenile adjudications. In areas where there were no differences between the two groups, risk factors were present in high percentages of inmates. Fifty percent of inmates lacked a high school education and over 40 percent of inmates possessed antisocial associates. Over half of mentally ill inmates lacked prosocial leisure and recreation activities and more than a third possessed antisocial cognitions.

Moderating Effects

The results from two stepwise models are presented in the left side of Table 4 (under "Stepwise"). Among inmates with mental illness, having obtained less than a high school education significantly reduced their chance of receiving a favorable parole release decision. Having less than a high school education also predicted parole denial among inmates without mental illness. In addition, several indicators of history of criminal behavior were negatively related to parole denial among non-mentally-ill inmates. Lacking family support was also a significant predictor of release for this group of inmates. While there was some overlap in the risk factors that were predictive of release decisions for both groups (such as lacking a high school education), non-mentally ill inmates had substantially more risk factors identified as impacting the release decision making process. The stepwise models predicted approximately 38 percent of the variance in release decisions for inmates with mental illness and 28 percent of the variance for non-mentally ill inmates.

TABLE 3.
Risk Factor Variables Among Persons With and Without Mental Illness

	MI[a]	Non-MI[a]	χ^2,	df,	p
Community support					
Lacks family support	13.0	10.6	.35,	1,	.555
Lacks spouse/partner support	76.8	71.3	0.85,	1,	.357
Lacks supportive others	85.5	85.4	<0.01,	1,	.982
Needs placement	31.0	15.7	9.16,	1,	.002
Education					
Less than high school graduate	50.0	50.2	<0.01,	1,	.981
Community work problems					
Score > 1	38.6	49.2	2.63,	1,	.105
Institutional programs					
Annual rate of program referrals	2.62 (4.26)	3.23 (4.88)	0.96(t),	401,	.336
Annual rate of program starts	0.98 (2.08)	1.83 (3.84)	1.80(t),	401,	.072
Annual rate of program completes	0.29 (1.03)	0.66 (1.90)	1.56(t),	401,	.120
Institutional work					
Jobs worked per year	8.14 (7.83)	9.15 (11.75)	0.51(t),	401,	.612
Prosocial leisure and recreation					
Lacks prosocial activities	54.3	43.5	2.73,	1,	.099
Antisocial cognitions					
Score > 2	37.1	28.7	1.93,	1,	.165
Antisocial personality	37.1	23.8	5.34,	1,	.021
Antisocial associates					
Score > 3	41.4	41.9	0.01,	1,	.943
Substance Abuse					
Has a substance use disorder	81.4	35.2	50.24	1,	<.001
Criminal history					
Number of prior adult convictions	9.79 (8.84)	6.32 (6.28)	-3.59(t),	400,	<.001
Number of prior adjudications	1.54 (2.66)	2.36 (3.04)	2.08(t),	399,	.039
Prior sex offense	15.5	8.1	3.71,	1,	.054
History of escape	15.5	12.0	0.64,	1,	.423
Institutional charges					
Annual rate of all charges	0.33 (.76)	0.38 (1.67)	0.21,	401,	.833
Annual rate of asterisk charges	0.13 (.41)	0.13 (.34)	-0.03,	401,	.979
Annual rate of violent charges	0.09 (.38)	0.03 (.13)	-2.28,	401,	.023

Notes. [a]Values are weighted percentages for dichotomous variables and means with standard deviations in parentheses for continuous variables. N varied between 390 and 403 for all tests.

Next, all control variables were "forced" into models along with risk factor variables that were predictive of release for either of the two groups in the stepwise models. The results are presented in the left side of Table 4 (under "Enter"). Chi-square tests for difference were then conducted to assess whether the relationships among these variables and release decisions differed by mental health status of the inmate (see far right of Table 4). Difference tests indicated that, among control variables, the influence of being a male on parole release decisions differed between the two groups. Male inmates with mental illness were significantly less likely to be granted parole than inmates with mental illness who were female. Gender had no significant effect on release decisions among non-mentally ill inmates. Possessing a debilitating medical condition was a negative predictor of release for inmates without a mental illness but, among inmates with mental illness, the relationship was not significant, resulting in a significant difference test. Among risk factors, difference tests indicated that mental illness did not moderate the relationships among any indicator of risk and release decision.

Discussion

Comparisons Among the Two Groups

Bivariate analyses indicated that inmates with mental illness differed from inmates without mental illness on a few study variables. In areas where there were no differences between the two groups, risk factors were present in high percentages of inmates. Over 80 percent of inmates with mental illness had a substance abuse disorder and half lacked a high school education. The higher rate of substance abuse among inmates with mental illness found in the current study supports prior research that non-incarcerated individuals with mental illness (Cuffel, 1996; Kessler, et al., 1994; Regier, et al., 1990) and inmates with mental illness (Ditton, 1999) tend to have higher rates of substance problems than people without mental illness.

The established relationship between substance abuse and criminal behavior among persons with and without mental illness (Bonta, et al., 1998; Gendreau, et al., 1996) indicates that, if corrections is to have any meaningful impact on reducing the current high levels of return to incarceration, it must address substance use problems among inmates. As the current study's findings indicate, addressing educational deficits as well may also reduce prison populations through early parole release. While inmates were referred to approximately three programs annually, they started many fewer and completed even fewer (about 10 percent of programs started by mentally ill inmates and about 20 percent by non-mentally ill inmates annually). These findings are troubling and represent a missed opportunity for providing inmates with the skills and tools necessary to improve their chances at successful community reintegration. The findings also indicate some presence of programming but the inability of programs to enroll and retain inmates. Corrections should examine how institutional programming can be tailored to address the inmates' unique needs (i.e. the "responsivity principle"; Andrews & Bonta, 2006). Such tailoring may increase participation in programming and promote recovery and educational attainment conducive to parole release and successful community reentry. Parole services can assist with continuation, or in the absence of corrections' initiation, assist with linkages to programs to address these needs in the community.

Mental Illness as a Moderator

The lack of any moderating effects of mental illness on the risk factors explored in this study suggests that an inmate's mental illness does not play much of a role in release decisions. Stepwise models identified different risk factor variables that predicted release decisions for each group of inmates. However, chi-square for difference tests did not indicate these risk factors affected release decisions differently based upon the presence of a mental illness. This finding, along with the similar rates of parole release across the two groups, suggests that inmates with mental illness are not treated differently in the parole release decision-making process based upon their psychiatric status. However, results may reflect insufficient sample size to detect moderating effects. Several of the differences between the two groups appeared substantial (for example, the relationship between first or second degree offense and release decision differed considerably based upon the presence of a mental illness) and would likely be significant given a larger sample. Results can be used to identify potential areas for testing in a more fully powered study.

Mental illness itself has little relation to criminal recidivism (Bonta, et al., 1998) and, thus, its apparent lack of influence on release decisions could reflect an evidence-based approach in release decisions by the parole board. However, it is important to point out that of the central eight risk factors (Andrews & Bonta, 2006) tested for their relationships with release decisions, only three were influential (lack of attachment to family support, lack of attachment to education, and antisocial behavior). In addition, none of the models tested accounted for a majority of variance in release decisions, suggesting that parole board members are exercising considerable discretion in their release decisions above and beyond consideration of criminal risk factors alone.

The New Jersey parole hearing process allows for in-person as well as video conference hearings that provide hearing officers the opportunity to be influenced by the inmate's appearance and presentation. Perceptions by parole board members of an inmate's honesty in response to queries during the hearing can influence release decisions (Ruback, 1981; Ruback & Hopper, 1986). While it may seem reasonable to doubt an inmate's appropriateness for parole

based upon an assessment of his or her honesty, visual cues that are often relied upon to assess dishonesty (gaze aversion, postural shifting, response latency) do not function as valid indicators of honest responses (Davis, Markus, & Walters, 2006; DePaulo, et al., 2003). For inmates with mental illness, such social behaviors may reflect manifestations of medications or psychiatric symptoms, bringing into question further the validity of impressions based upon these cues.

TABLE 4.
Stepwise and Logistic Regression Results: Factors Associated with Parole Release

	Stepwise		Enter		
	non-MI (n = 170)	MI (n = 201)	non-MI (n = 172)	MI (n = 203)	Chi-Square for Difference[a]
	AOR, CI, (p)	AOR, CI, (p)	AOR, CI, (p)	AOR, CI, (p)	χ^2 (p)
Control variables					
Male	1.08, .27-4.36 (.907)	0.13, .03-.65, (.013)	1.89, .53-6.69, (.324)	0.15, .03-.78, (.025)	5.70 (.017)
White	1.38, .60-3.21, (.451)	0.75, .19-2.92, (.680)	1.29, .56-2.98, (.547)	0.57, .13-2.46, (.453)	0.90 (.342)
Age at time of hearing	0.99, .96-1.03, (.744)	0.95, .87-1.04 (.298)	0.99, .96-1.03, (.810)	0.96, .86-.1.06, (.386)	0.55 (.456)
Debilitating medical condition	0.46, .23-.90, (.024)	3.15, .67-14.86 (.146)	0.45, 23-.89, (.022)	2.92, .59-14.45, (.190)	4.45 (.035)
Years incarcerated	1.06, .94-1.19, (.374)	1.12, .90-1.40, (.321)	1.05, .95-1.17, (.333)	1.09, .86-1.38, (.464)	0.07 (.795)
Number prior hearings	1.49, .89-2.51, (.130)	1.24, .49-3.15, (.651)	1.16, .74-1.81, (.518)	1.21, .48-3.05, (.693)	0.01 (.941)
Number of offenses	0.75, .64-89, (.001)	0.70, .48-1.03 (.074)	0.75, .64-.89, (.001)	0.73, .50-1.09, (.121)	0.02 (.901)
Violent offense	0.32, .13-.83, (.019)	0.43, .07-2.58, (.357)	0.32, .13-.83, (.019)	0.54, .09-3.21, (.496)	0.24 (.622)
Victim present	1.39, .72-2.68 (.331)	1.18, .27-5.15, (.830)	1.42, .74-2.73, (.299)	1.07, .23-5.02, (.933)	0.11 (.742)
First or second degree offense	1.58, .76-3.30 (.223)	0.36, .06-2.24, (.273)	1.58, .76-3.28, (.223)	0.25, .04-1.67, (.153)	3.14 (.076)
Violation of parole or probation	0.78, .44-1.38 (.387)	0.76, .19-3.15, (.710)	0.78, .44-1.39, (.400)	0.82, .18-3.65, (.789)	0.01 (.958)
Risk factors					
Community support					
Lacks family support	2.67, 1.04-6.89, (.042)		2.67, 1.04-6.88, (.042)	1.55, .18-13.21, (.690)	0.21 (.648)
Education					
Less than high school graduate	0.46, .27-.81, (.006)	0.11, .03-.44, (.002)	0.44, .25-.76, (.003)	0.10, .02-.42, (.002)	3.54 (.060)
Criminal history					
Number of prior adult convictions	0.91, .85-.96, (.001)		0.91, .85-.96, (.002)	0.96, .86-1.06, (.376)	0.69 (.406)
Number of prior adjudications	0.89, .81-.98, (.016)		0.89, .81-.98 (.019)	0.87, .65-1.16, (.338)	0.04 (.851)
Institutional misconduct					
Annual asterisk charges	0.34, .12-.93, (.036)		0.39, .14-1.03, (.058)	1.09, .26-4.68, (.906)	1.35 (.246)
Nagelkerke R^2	.277	.382	.273	.407	

[a]df = 1

The utility of parole release hearings is questionable. Ample research indicates actuarial risk assessment as superior to clinical assessment in predicting violence and criminal behavior (Bonta,

2002; Bonta, et al., 1998; Dolan & Doyle, 2000; Grove & Meehl, 1996). Moreover, impressions gathered during a parole hearing may actually reduce a hearing officer's ability to predict criminal recidivism compared to a prediction based on case file information alone (Ruback & Hopper, 1986). This suggests that substantial time and resources could be saved without increasing risk to the public by reducing or eliminating parole release hearings. Indeed, Campbell (2008), in Comprehensive Framework for Paroling Authorities in an Era of Evidence-based Practices, states that,

To date there is little research on the value of an in-person parole board hearing. Given the significance of resources that are required to hold in-person hearings, research about the value of such hearings in decision-making is desperately needed.

However, while a possibility, it is unclear to what extent impressions gleaned from release hearings influenced release decisions in the current study.

Results may indicate that the operationalization of risk factors used in the current study did not adequately reflect the operationalizations used by board members. While every effort was made to measure risk factors using documents and databases that are commonly accessed by board members, it is possible that members utilized information the researcher was not aware of or to which he was not granted access in order to assess risk in appropriate domains. Future research is planned that will survey board members as to how they operationalize risk in their decision-making processes. In addition, observational studies of parole release hearings and discussions may be a more objective way to identify issues and behaviors that influence release decisions. Such information would allow for more accurate appraisal of the proportions of release decisions that are based upon empirically identified risk factors and interview factors.

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