

## Validity and Reliability of the Prison Inmate Inventory (PII)

Lisa Degiorgio, PhD and David L. Wegner  
Behavior Data Systems  
P.O. Box 44828, Phoenix, AZ 85064-4828  
800 231-2401  
[lisa@bdsLtd.com](mailto:lisa@bdsLtd.com)

Authors note: Dr. Degiorgio is an assistant professor at Thomas University in the Division of Counseling.

### **Abstract**

This study reports on the psychometric properties of the Prison Inmate Inventory (PII) a 160-item, 10-scale inmate screening tool that includes static factors as well as dynamic factors amenable to change through treatment. The PII includes a Truthfulness Scale to assess offender denial, problem minimization and guardedness, factors associated with treatment completion and recidivism. Reliability coefficients range from .82 -.92; inter-item correlations support unique item selection and not item redundancy.

Results support the validity and accuracy of the PII in identifying high risk inmates.

*Keywords: inmate screening, risk assessment, validity, reliability, offender evaluation*

### **Validity and Reliability of the Prison Inmate Inventory (PII)**

According to the United States Department of Justice statistics (West, Sabol, & Greenman, 2011) state and federal correctional authorities saw prisoner incarcerations increase in 2009 by approximately 4,000 prisoners. Moreover, data revealed that violent inmates accounted for a 63% increase in state prison populations from 2000-2008. While the number of incarcerated males slightly increased during this time period, the number of incarcerated females slightly decreased (West et al., 2011). Despite the rise in incarcerations, it is important to note that this increase represents the slowest rate of growth of prisoner incarcerations since 2000. Consequently, a slowed rate of prisoner admission is associated with an overall decrease in the prison population combined with an increase in prisoner releases. These conditions (prison admissions and prisoner releases) represent a trend in corrections to address prison conditions and changing corrections philosophy (PEW Center for the States, April 2011). This trend has brought about renewed attention to public safety and greater scrutiny as state, county, and municipality corrections departments face economic challenges. Corrections departments are paying greater attention to corrections outcomes and recidivism. The rate at which inmates return to prison is one element being used to measure inmate outcomes because it represents a risk to public safety.

According to the PEW Center on the States (April 2011) recidivism has “long been considered the leading statistical indicator of return on correctional investment (p. 6).” In this unique, state by state comparison, PEW Center on the States study results indicate that, on average, approximately 40% of inmates returned to prison within three years of their release. The percentage of inmates who returned to prison varied by state and across regions but ranged from 24% to 68%. Inmates who were returned to prison were grouped into two categories, inmates

who committed new crimes and inmates re-incarcerated for technical violations. Technical violations can be described as activities that violated the terms of inmate supervision which resulted in a probation or parole revocation. The rates for new crimes ranged from 8% to 25%; the rate for technical violations ranged from 2%-51% (PEW Center on the States, April 2011). Rates for offenders who are incarcerated again vary widely, however an average recidivism rate of 40% threatens public safety and places a strain on already stretched correction department resources.

Recently, many probation and parole departments are adopting strategies and implementing policies to address recidivism while simultaneously improving public safety. These strategies include implementing evidence based practices into supervision, preparing inmates for release at the time of their admission, and evaluating recidivism risk using assessment tests (PEW Center on the States, September 2011; Austin, 2003).

### **Assessing Risk**

Assessing offender risk has evolved over the last 30 years and expanded to incorporate case management and treatment planning into the assessment process (Andrews & Bonta, 2010). Austin (2004) recommends that a risk assessment meet seven criteria: (a) include static and dynamic risk factors; (b) test on the specific population it is intended to assess; (c) demonstrate validity and reliability; (d) ensure that factors used in the assessment are accepted and tested within jurisdictions where it will be used; (e) compatible with staff skill level and competence; (f) be flexible enough to allow score adjustments based on professional judgment; (g) and have face validity to ensure credibility with staff, public policy officials, as well as offenders.

As noted earlier, the primary concern in corrections is public safety; consequently, those who present the greatest risk should have treatment and supervision levels that match their level

of risk need. Conversely, those offenders who present the least amount of risk should have fewer restrictions and lower security classification. While the use of assessment tests has improved this predictive validity there are limitations associated with actuarial instruments. Frequently expressed concerns include false positive errors, cultural relevance, gender bias, and response bias.

Actuarial risk predictions are estimated using actual occurrences of an event (base rates). Precision of prediction is compromised when base rates are relatively low. False positive errors occur when individuals are incorrectly identified (low risk inmates who reoffend; high risk inmates who do not reoffend) and when base rates are low the probability of making an error increases (Craig & Beech, 2009). This drawback needs to be considered when interpreting individual offender risk.

Another concern regarding risk assessments has been their limited application to diverse populations. The most frequently cited risk assessments were developed in North America, Australia, and the United Kingdom. These instruments may not reflect prison populations or racial, ethnic, and cultural backgrounds (Craig & Beech, 2009). Moreover, risk assessments are typically derived from male driven theories of criminology and ignore gender differences and contextual factors, including economical disadvantages, social disadvantages, victimization, and trauma, which disproportionately impact female offenders (Reisig, Holtfreter, & Morash, 2006). In addition, most actuarial scales weight criminal offenses equally (violent crimes versus property crimes) which results in the over-classification of low risk female inmates who are provided unnecessarily intense supervision or treatment (Van Voohis & Presser, 2001). These limitations must be carefully considered when interpreting individual results and recommending supervision levels and treatment recommendations.

The accuracy of self-report responses may be biased by the respondent's ability to minimize or deny the extent of their problems. Response bias has been defined as the systematic tendency to provide inaccurate answers to question items (Paulhus, 2002) and has been studied extensively with regards to criminal behavior (Benedict, & Lanyon 1992; Grann & Weddin, 2002; Piquero, Farrington, & Blumstein, 2003; Roberts & Wells, 2010). The potential for problem minimization is high among prisoners seeking to obtain lower supervision levels and early release, necessitating the use of validity scales designed to quantify problem minimization and denial. The Prison Inmate Inventory (PII) includes a Truthfulness Scale to assess the veracity of prisoner responses.

In addition to the above limitations, reducing recidivism requires that assessments be appropriately implemented. Corrections departments should use assessments that have demonstrated reliability and validity. Assessments should have empirical support and be standardized to maximize score and risk predictions across prison populations (American Educational Research Association, American Psychological Association, & National Council on Measurement, 1999). This study provides empirical support for the PII as a valid and reliable inmate screening tool. Theoretical and empirical support for each PII scale and test items is provided, as well as accuracy findings for the PII.

## **Methods**

### **Participants and Procedures**

There were 4, 444 inmates who completed the PII between November 2009 and October 2012. Participant data were submitted by corrections, probation, and treatment staff across the United States who implemented the PII as part of their inmate screening or intake procedures. Eighty-six percent (3, 816) of the inmates were male and 14% were female. The average age of

inmates was 35 and the average age at first arrest was 19. The majority of inmates, 59%, were Caucasian, 36% were African-American, 4% were Hispanic, less than 1% were Asian, 1% were Native American, and less than 1% of inmates selected Other; however no additional race or ethnicity information was provided for these inmates. Fifty-four percent of the inmates were single, 20% were married, 24% were divorced or separated, and 2% were widowed. Inmates were also asked about their education. Approximately 50% of inmates graduated high school or completed a GED, 40% completed some high school, less than 1% attended some college, approximately 6% had completed either a bachelors' degree or advanced degree, and 6% had an 8<sup>th</sup> grade education or less.

When completing the PII, inmates provided information about their criminal history which is summarized in Table 1. Ninety-eight percent of inmates reported one or more felonies; 80% had one or more probation sentences; 58% had one or more probation revocations; 59% had one or more parole sentences, 43% had one or more parole revocations; 99% reported one or more arrests; 44% had one or more alcohol related arrests; 78% had one or more drug-related arrests and 40% had one or more DUI arrests. Four percent of the inmates reported they had one or more prison escapes. The average number of years incarcerated was 4.5 years; the range of years spent incarcerated was 0 – 40 years.

### **Measure**

The Prison Inmate Inventory (PII) is a self-report assessment developed to help meet the needs of corrections departments by assessing inmate adjustment, coping skills, and lethality. The PII is comprehensive using a combination of static and dynamic factors that address 10 areas associated with offender risk. The PII consists of 160 items using true/false and multiple choice formats. The 10 scales include: Truthfulness Scale, Adjustment Scale, Alcohol Scale, Drug

Scale, Antisocial Scale, Violence Scale, Distress Scale, Self-esteem Scale, Judgment Scale, and Stress Coping Abilities Scale. The PII requires approximately 35 minutes for completion and is appropriate for high school ages through adulthood. The PII can be administered individually or in groups. The PII training manual recommends that test results be used in conjunction with a review of available records and experienced staff judgment. Each of the PII scales is briefly discussed below. Additional information about the Prison Inmate Inventory (PII) can be found at [www.prison-inmate-assessment.com](http://www.prison-inmate-assessment.com).

**Truthfulness Scale.** The Truthfulness Scale consists of 20 true/false items that measure how truthful the inmate was while completing the test. It identifies guarded and defensive inmates who attempt to minimize problems or attempt to “fake good”. All interview and inmate self-report information is subject to the dangers of untrue answers due to defensiveness, guardedness or deliberate falsification. This is of particular concern in a prison environment where inmates often attempt to minimize their problems and/or concerns in an effort to obtain early release (Benedict, & Lanyon, 1992). The Truthfulness Scale identifies these self-protective, recalcitrant, and guarded inmates who minimize or even conceal information. In addition, the Truthfulness Scale identifies respondents with impaired (below the sixth grade) reading abilities.

**Alcohol and Drug Scales.** The Alcohol and Drug Scales measure inmates’ admissions of alcohol or drug abuse problems, participation in previous substance abuse treatment, as well as plans for substance abuse treatment upon release from prison. Both scales consist of 14 items and use true/false and multiple choice formats. In addition, some criminal history items are also included in the scoring of the Alcohol and Drug Scales. Substance abuse and dependency are prevalent among the prisoner populations. Wright (1993) reported that inmates tend to drink more than individuals in the general population and Rounds-Bryant and Baker (2007) found that,

in a study of 752 recently incarcerated inmates, 72% met the criteria for a substance dependence diagnosis. Substance abuse is recognized as a dynamic factor that is associated with recidivism risk and underscores the need for early identification when addressing prison based treatment alternatives and post-incarceration rehabilitation.

**Antisocial Scale.** The Antisocial Scale consists of 32 true/false items that measure antisocial traits including manipulation of others, opposition to societal norms, history of rule breaking, and antisocial behaviors. Antisocial traits have been identified as reliable predictors of recidivism among inmates (Hanson & Morton-Bourgon, 2005). An antisocial orientation does not fall neatly into a static or dynamic risk factor category; it combines historical information (history of rule breaking) and dynamic offender characteristics that are amenable to change (Andrews & Bonta, 2010). Inclusion of antisocial items in an inmate assessment provides specific information about inmate risk and recidivism potential. Antisocial orientation, as a dynamic factor, may be successfully addressed in treatment and has direct implications for inmate behavior upon release.

**Violence Scale.** The Violence Scale includes 21 true/false and multiple choice items. The scale includes indicators of interpersonal conflict, emotional problems associated with anger and the physical expression of anger through violence. The capacity for physical assault and violence among prison inmates places prison officials, other inmates, and members of society at risk. Violent inmates have accounted for a large proportion of prisoner growth in the past decade (West et al., 2011), increasing the potential for violence within prison. Inmates can exhibit multiple forms of violence including collective, interpersonal, intrapersonal, and institutional violence (Bottoms, 1999; Byrne & Hummer, 2007), each representing unique threats to the safety of inmates, correction personnel, and the public. Early assessment of violence propensity

can provide information crucial to the development of interventions and management techniques to reduce violence within the prison, as well as reduce the potential for violence once inmates are released.

**Adjustment Scale.** The adjustment scale measures the inmate's ability to cope with incarceration while assessing the inmate's emotional and social adjustment. This scale uses 26 true/false items. The adjustment scale includes measures of anger, violence, manipulation of others, substance use and abuse, stress and anxiety, serious and habitual criminal behavior, and antisocial behaviors. The ability to adjust to a prison environment varies among prisoners, with demographics, pre-incarceration lifestyle, length of time in prison, and level of prison security influences how prisoners' adapt to prison life (Dhami, Ayton, & Loewenstein, 2007). The environmental and emotional factors prisoners must deal with include overcrowding, isolation for safety, distrust of others, and victimization, all of which can impact a prisoner's ability to successfully adjust to incarceration and life after release (Haney, 2002). Inmate adjustment is determined by a number of pre-existing characteristics, habits, and demands experienced within the prison setting, with a number of sources agreeing that adjustment must be understood as a multi-dimensional construct (Dhami et al., 2007; Soderstorm, Castellano, & Figaro, 2001). A behavioral domain examining an inmate's adjustment to prison can provide corrections staff with salient factors affecting prisoner behavior during incarceration and after release.

**Distress Scale.** The distress scale measures inmate discomfort, unhappiness, and pain, including indicators of internalizing anxiety, shame, and depression, as well as externalization of these emotions through physical problems including insomnia, fatigue, and restlessness. The Distress Scale contains 21 items and uses a true/false format that measures two symptom clusters, anxiety and depression. Merging of these symptom clusters is clear in the definition of

dysphoria (American Psychiatric Association [APA], 2000). Moreover, emotional distress has been shown to be related to illegal activities and aggression, as well as risk taking in sexual relationships (Cherek, Moeller, Dougherty, & Rhoades, 1997; Giotakos, Markianos, Vaidakis & Christodoulou, 2003). It is important to measure the degree of severity of perceived distress because of its broad applicability to inmate adjustment, intervention, and outcome.

**Self-Esteem Scale:** The self-esteem scale uses a 4-point rating scale to measure perceived self-worth and self-efficacy. This 16 item scale measures inmates' feelings of confidence, acceptance, and responsibility, as well as indicators of insecurity, hostility, and discontent. This scale allows for rapid self-rating wherein inmates describe their own self-esteem in words commonly used in everyday life. Positive self-esteem and self-efficacy can moderate the effects of stress (Agnew 1992; Aseltine, Gore, & Gordon, 2000) including the stress of prison life. Increased exposure to stress has been linked to more violent forms of criminal acts (Aseltine et al., 2000); by measuring levels of inmate self-esteem prison officials are able to match inmate risk and rehabilitation needs.

**Judgment Scale:** This scale contains 32 true/false and multiple choice items. Scale items focus on prisoners' decision making skills, using self-assessments of poor judgment and external indicators of poor decision making including alcohol and drug abuse, hostility, violent behaviors, and antisocial and manipulative behaviors. Judgment provides the inmate with a self-regulatory mechanism and offers the inmate an alternative to modify the course of his ongoing behavior. Research has demonstrated a relationship between impulsivity and illegal activities (Baltieri & de Andrade, 2008). Meta analysis results have found that problems with self-regulation were associated with rates of reoffending (Hanson & Morton-Bourgon, 2005). An inmate's judgment

is an important factor to be considered when establishing supervision levels or making release decisions.

**Stress Coping Abilities Scale:** The Stress Coping Abilities scale measures an inmate's ability to handle stress, including both positive coping mechanisms and associated areas of concern that cause stress including anxiety, depression, interpersonal conflict, and physically acting out. A behavioral domain related to prisoners' adjustment is their ability to effectively cope with stress. Prison is repeatedly characterized as a highly stressful environment (Hassine, 2004; Massoglia, 2008) and inmates' ability to manage or to cope with stress is essential to their well-being in, and after release from, prison. Exposure to stressors has been extensively studied as a cause of criminal behavior (Agnew 1992; Eitle & Turner 2003) with increased exposure to stress being linked to more violent criminal acts (Aseltine et al., 2000). The effect of one's exposure to stress can be moderated by the ability to effectively cope with or manage stress. Moderators include positive self-esteem and self-efficacy (Agnew 1992; Aseltine et al., 2000). The Stress Coping Abilities Scale identifies inmates who are not coping effectively with stress.

**Risk Ranges.** For each PII scale respondents are classified into four risk ranges: Low Risk (zero to 39<sup>th</sup> percentile), Medium Risk (40<sup>th</sup> to 69<sup>th</sup> percentile), Problem Risk (70<sup>th</sup> to 89<sup>th</sup> percentile), and Severe Problem (90<sup>th</sup> to 100<sup>th</sup> percentile). Risk ranges represent degree of severity. Risk ranges were established by converting raw scores to percentile scores using cumulative percentage distributions (Behavior Data Systems, 2012). Early instrument development included the use of content experts to confirm the proposed risk ranges. Data analyses, in combination with field reports from experienced evaluators have confirmed that these percentile categories provide accurate identification of problem behavior (Behavior Data Systems, 2012).

In addition to establishing risk thresholds, the risk ranges serve an important role when interpreting Truthfulness Scale scores. A truthfulness concern is identified when a Truthfulness Scale score is at or above the Problem Risk range (70<sup>th</sup> percentile). These respondents are typically cautious, guarded or may be defensive in their answers. Scores in the Problem Risk range should be interpreted cautiously. Severe problem scores on the Truthfulness Scale (90<sup>th</sup> percentile and above) invalidates all other scale scores.

### **Analysis**

Reliability of the PII was established using Cronbach's alpha, a measure of internal consistency of the items in each of the PII scales. Perfect reliability is 1.00; some researchers have suggested that reliability coefficients between .60-.90 may be appropriate depending on the nature of the instrument and the construct being measured (Murphy & Davidshofer, 2001).

Construct validity was established through use of contrast groups. This approach differentiates between inmates that are known to have higher risk factors and those known to have lower risk factors by comparing mean scale scores (DeVon, et al., 2007). In this analysis, inmates with one arrest were categorized as first-time offenders and inmates with two or more arrests were categorized as multiple offenders. It was anticipated that multiple offenders' mean scale scores would be higher than first-time inmates' mean scale scores indicating more severe problems and risk. There were 203 (5%) first-time offenders and 4, 240 (95%) multiple offenders. A test for homogeneity of variance revealed significant differences in variance between the groups which prevented the use of parametric statistics. The Mann-Whitney test, a non-parametric equivalent of the independent *t*-test was used to examine whether differences between the two groups were consistent and systematic (Gravetter & Wallnau, 2009).

Bordens and Abbott (2011) describe measurement accuracy as the agreement of results with a known standard. For this study, test accuracy for the PII was calculated by comparing the

differences between predicted placement of individuals in risk ranges and their actual placement in the ranges. Small differences between predicted and attained comparison scores represent high test accuracy. The percentage of inmates predicted to fall into each risk range are Low Risk, 39%, Medium Risk, 30%, Problem Risk, 20%, and Severe Risk, 11%.

## **Results**

### **Reliability**

Table 2 displays reliability coefficients for each PII scale, as well as the number of items within each scale. All PII scales demonstrate high to moderately high reliability coefficients.

Inter-item correlation coefficients are an alternative method for measuring the internal consistency of an instrument. It has been suggested that the use of inter-item correlation coefficients as measures of internal consistency may distinguish homogeneity of a scale from item redundancy (Boyle, 1991). Neuendorf (n.d.) citing Clark and Watson, recommend inter-item correlation coefficients between .15 and .50 when measuring a broad construct and .40-.50 when measuring a narrower construct. The inter-item correlation coefficients for the PII scales range between .131 and .865.

### **Accuracy**

Test accuracy for the PII was calculated by comparing the differences between predicted placement of individuals in risk ranges and their actual placement in the ranges. Small differences between predicted and attained placement represent high test accuracy. As illustrated in Table 3, 39% of clients were predicted to score within the Low Risk range for the Alcohol Scale. The actual percentage of individuals who scored in this range was 41.9%, which is 1.9 percentage points above the predicted 39% for low risk Violence Scale scores. The largest

predicted-attained score difference is in the Low risk range, on the Truthfulness scale. All other scale comparisons were even more accurate.

### **Validity**

The PII is designed to identify individuals who present a risk to the community and who are at risk for reoffending. For this study, the validity of the PII was established by using contrast groups, differentiating between inmates that are known to have higher risk factors and those known to have lower risk factors by comparing mean scale scores (DeVon, et al., 2007). Prior history of arrests is an established predictor of offender recidivism and those with fewer arrests represent lower risk (Andrews & Bonta, 2010).

The original scores were rank ordered and a Mann-Whitney U test was used to compare the ranks for the first time offenders group and the multiple offenders group. The results indicated statistically significant differences for the Truthfulness Scale ( $U=358851$ ,  $p<.001$ ), Alcohol Scale ( $U=198371$ ,  $p<.001$ ), Drug Scale ( $U=225199$ ,  $p<.001$ ), Antisocial Scale ( $U=126746$ ,  $p<.001$ ), Violence Scale ( $U=292810$ ,  $p<.001$ ), Adjustment Scale ( $U=105593$ ,  $p<.001$ ), Distress Scale ( $U=339537$ ,  $p<.001$ ), and Judgment ( $U=101422$ ,  $p<.001$ ). Results indicated no statistically significant differences for the Self-Esteem Scale and the Stress Coping Abilities Scale.

### **Discussion**

Prisoner admissions continue to increase although the rate of growth has slowed to historic lows (West et al., 2011). Moreover, the overall prisoner population decreased as fewer prisoners were admitted and inmate releases increased. This trend has brought about renewed attention to public safety and the alarming percentage (24%-68%) of inmates who return to prison within three years of release. To address recidivism, many probation and parole

departments are implementing evidence based practices including the use of inmate risk assessments (PEW Center on the States, April 2011; PEW Center on the States, September 2011; Department of Justice, National Institute of Corrections, 2003). With accurate identification of risk potential and early identification of factors associated coping, adjustment, and recidivism, appropriate interventions can be matched to meet the needs of inmates and improve the safety of inmates, correction personnel, and the public.

The process of inmate screening and initial classification typically takes place in diagnostic centers where approximately 70% of prison inmates are assessed (Coolidge, 2009). These screening processes often involve the administration of quick assessments to aid in initial incarceration decisions. This initial screening may be followed by more extensive and thorough evaluations to determine security classification, significant disorder identification, and possible adjustment issues (Christensen & Warwick, 2009). By including both static and dynamic factors in one assessment, the PII provides corrections personnel an alternative to using multiple intake tests. This is particularly important when resources (budgetary, staff, facilities) are limited. Moreover, the PII provides insight into co-morbid factors including substance abuse, antisocial tendencies, distress, and violence that provide a more complete picture of the inmate and his or her risk profile. The multidimensional features of the PII also support its use among non white and female inmate populations.

This study examined the psychometric properties of the PII and the findings provide empirical support for the PII as an inmate risk assessment. Reliability analyses for the Prison Inmate Inventory (PII) demonstrated moderately high to high internal consistency and inter-item correlations confirmed that scale items were representative of the constructs they were measuring and were not items repeatedly reworded. The PII accurately predicted offenders' risk range

percentages of the offenders within 3.3 percentage points, and effectively differentiated between first-time offenders and multiple offenders. The PII identified problem behaviors and accurately categorized offenders into appropriate risk ranges. Accurately assessing problem severity reduces inmate recidivism when paired with appropriately matched treatment (Andrews & Bonta, 2010). Accurately implementing the risk principle can positively impact reoffending rates and community reintegration efforts (Hanson, Bourgon, Helmus, & Hodgson, 2010).

### **Limitations**

Despite the promising psychometric findings of the PII there are some limitations related to this study, the results, and the PII. These limitations include issues of administration, psychometric properties, and participant characteristics. The limitations are discussed below along with suggested areas of future research.

As noted earlier, the authors and test designers have limited knowledge, or input into, how the PII is administered to inmates by the various corrections department or probation agencies. Inmate data was returned to the authors for analysis and interpretation. Corrections staff were provided general test administration guidelines as outlined in the training manual; however inconsistencies in test administration may impact results. Field research using the PII should include a description of administration procedures, as well as examine accuracy of risk prediction on recidivism rates. To this end, collaboration with agencies to examine long term test data would expand the existing knowledge of inmate recidivism and treatment planning. Moreover, access to these additional variables would facilitate prediction model studies using advanced correlation approaches (Bellini & Rumrill, 2009).

Since data collected in this PII study were not longitudinal, a causal relationship between scale scores, recidivism rates, and treatment outcomes could not be established. Collecting

longitudinal data is time and resource intensive; however, it may be worth considering as a this type of methodology would provide the necessary data to test whether the PII could identify, at an individual level, which offenders had the greatest likelihood of committing offenses during their incarceration and upon release. While a limitation for this project, the collection of longitudinal data is an area for future research.

Finally, despite its impressive reliability, it is generally accepted that Cronbach's alpha reliability coefficients are directly proportional to the number of test items (Murphy & Davidshofer, 2001). With 160 items, the high reliability coefficients that were obtained may be the result of the large number of items, however, the inter-item correlations challenge this criticism.

## **Conclusions**

The Prison Inmate Inventory (PII) was developed to assess inmate risk, as well as identify inmate coping abilities, adjustment, and psychological needs. By providing a comprehensive and multidimensional profile of static and dynamic risk factors, the PII aids corrections staff in safety and security determinations for inmates entering prison. The PII also identifies factors that are amenable to change through treatment, which may facilitate successful community integration after an inmate's release. Research supports implementing risk assessments as part of a comprehensive approach to reduce recidivism. Moreover, risk assessment like the PII have demonstrated significant advantages over risk assessments that rely solely on interviews and clinical impressions.

Properly identifying inmates, using an empirically supported instrument, should be part of an overall public safety strategy (Andrews & Bonta, 2010; Austin, 2004). Associated benefits of assessment implementation include reduced recidivism, reduced costs, and increased public

safety. This study has demonstrated empirical support for the PII as a reliable, valid, and accurate inmate screening test. These properties are essential for identifying inmates who demonstrate higher severity and consequently may have more complex needs (Austin, 2003; PEW Center on the States, September 2011). The PII offers probation, corrections, and treatment staff, a reliable and valid instrument for assessing inmate risk that includes static and dynamic factors consistent with the population tested. Including these factors provides a comprehensive inmate profile and provides valuable information for correction personnel on inmate risk while incarcerated, as well as areas that may be addressed to reduce the likelihood of re-incarceration after release.

### References

- Agnew, R. S. (1992). Foundation for a general strain theory of crime and delinquency. *Criminology, 30*, 47-87.
- American Educational Research Association, American Psychological Association, & National Council on Measurement (1999). *Standards for educational and psychological testing*. American Educational Research Association: Washington, DC.
- American Psychiatric Association (2000). *Diagnostic and Statistical Manual*. (4<sup>th</sup> Ed.) Washington DC: American Psychiatric Publications.
- Andrews, D. A., & Bonta, J. (2010). *The Psychology of Criminal Conduct* (5<sup>th</sup> ed.). New Providence, NJ: Lexis Nexus Group.
- Aseltine, R. H., Gore, S., & Gordon, J. (2000). Life stress, anger and anxiety, and delinquency: An empirical test of general strain theory. *Journal of Health and Social Behavior, 41*, 3, 256-275.
- Austin, J. (2004). The proper and improper use of risk assessment incorrections. *Federal Sentencing Reporter, 16* (3), 194-199.
- Baltieri, D. A., & de Andrade, A. G. (2008). Comparing serial and nonserial sex inmates: Alcohol and street drug consumption, impulsiveness, and history of sexual abuse. *Rev Bras Psiquiatr, 30* (1), 25-31.
- Behavior Data Systems. (2012). Prison Inmate Inventory. Retrieved from [www.bdsltd.com](http://www.bdsltd.com)
- Bellini, J. L., & Rumrill, P. D. (2009). *Research in rehabilitation counseling: A guide to design, methodology, and utilization*. Springfield, IL: Charles C Thomas
- Benedict, L. W., & Lanyon, R. I. (1992). An analysis of deceptiveness: Incarcerated prisoners. *Journal of Addictions and Offender Counseling, 13*, 23-31.

- Bordens, K. S. & Abbott, B. B. (2011). *Research design and methods: A process approach*. (8<sup>th</sup> ed.). New York: McGraw Hill.
- Bottoms, A. E. (1999). Interpersonal violence and social order in prisons. In M. Tonry and J. Petersilia, (Eds.), *Prisons*. Chicago, IL: University of Chicago Press.
- Boyle, G. J. (1991). Does item homogeneity indicate internal consistency or item redundancy in psychometric scales? Retrieved from <http://epublications.bond.edu.au/cgi/viewcontent>.
- Byrne, J. M. & Hummer, D. (2007). Myths and realities of prison violence: A review of the evidence. *Victims and Inmates, 2*, 77-90. doi:10.1080/15564550601087241
- Cherek, D. R., Moeller, F. G., Dougherty, D. M., & Rhoades, H. (1997). Studies of violent and nonviolent male paroles: Laboratory and psychometric measurements of impulsivity. *Biological Psychiatry, 41*, 523-529.
- Christensen, G. E., & Warwick, K. (2009). *Screening, Assessment, Treatment, Timing, Application*. The Transition from Jail to Community Project. Retrieved from <http://nicic.gov/Library/025535>.
- Coolidge, F. L., Segal, D. L., Klebe, K. J., Cahill, B. S., & Whitcomb, J. M. (2009). Psychometric properties of the Coolidge Correctional Inventory in a sample of 3, 962 prison inmates. *Behavioral Sciences and the Law, 27*, 713-726.
- Craig, L. A., & Beech, A. (2009). Best practice in conducting actuarial risk assessments with adult sexual inmates. *Journal of Sexual Aggression, 15*, 193-211. doi:10.1080/13552600902867847
- DeVon, H. A., Block, M. E., Moyle-Wright, P., Ernst, D. M., Hayden, S. J., Lazzara, D. J., Savoy, S. M., & Kostas-Polston, E. (2007). A psychometric toolbox for testing validity and reliability. *Journal of Nursing Scholarship, 39* (2), 155-164.

- Dhami, M. K., Ayton, P., & Lowenstein, G. (2007). Adaptation to prison: Indigenous or imported? *Criminal Justice & Behavior, 34*, 1085-1100.
- Eitle, D. & Turner, R. J. (2003). Stress exposure, race and young adult male crime. *The Sociological Quarterly, 44*, 2, 243-269.
- Giotakas, O., Markianos, M., Vaidakis, N., & Christodoulou, G. N. (2003). Aggression, impulsivity, plasma sex hormones, and biogenic amine turnover in a forensic population of rapists. *Journal of Sex and Marital Therapy, 29*, 215-225.
- Grann, M., & Wedin, I. (2002). Risk factors for recidivism among spousal assault and spousal homicide inmates. *Psychology, Crime and Law, 8*, 5.23.
- Gravetter, F. J. & Wallnau, L. B. (2009). *Statistics for the behavioral sciences* (8<sup>th</sup> ed.). Belmont, CA: Cengage Learning.
- Haney, C. (2002). The psychological impact of incarceration: Implications for post-prison adjustment. In United States Department of Health and Human Services, Urban Institute, *From prison to home: The effect of incarceration and reentry on children, families and community*. Prepared for the From Prison to Home Conference January 2002.
- Hanson, R. K., Bourgon, G., Helmus, L., & Hodgson, S. (2010). A meta-analysis of the effectiveness of treatment for sexual inmates: Risk, need, and responsibility. Public Safety Canada.
- Hanson, R. K., & Morton-Bourgon, K. E. (2005). The characteristics of persistent sexual inmates: A meta-analysis of recidivism studies. *Journal of Consulting and Clinical Psychology, 6*, 1154-1163. doi:10.1037/0022-006X.73.6.1154
- Hassine, V. (2004). *Life without parole* (3<sup>rd</sup> ed.). Edited by R. Johnson and T. Bernard. Los Angeles, CA: Roxbury Press.

- Massoglia, M. (2008). Incarceration as exposure: The prison, infectious disease, and other stress-related illness. *Journal of Health and Social Behavior*, 49, 56-71.
- Murphy, K. R. & Davidshofer, C. O. (2001). (5<sup>th</sup> ed.). *Psychological Testing: Principles and Applications*. Upper Saddle River, NJ: Prentice Hall.
- Neuendorf, K. A. (n.d.). Internal consistency reliability: Can Cronbach's alpha be too high? Retrieved from <http://academic.csuohio.edu/kneuendorf/c63111/hand5a.pdf>.
- Nunally, J. C. (1978). *Tests and measurements*. New York: McGraw Hill.
- Paulhus, D. L. (2002). Socially desirable responding: The evolution of a construct. In H. I. Braun, D. N. Jackson & D. E. Wiley (Eds.) *The role of constructs in psychological and educational measurement* (49-69). Mahwah NJ: Erlbaum.
- PEW Center on the States. (April, 2011). *State of recidivism: The revolving door of America's prisons*. Retrieved from <http://www.pewcenteronthestates.org/publicsafety>
- PEW Center on the States. (September, 2011). *Risk/Needs assessment 101: Science reveals new tools to manage inmates*. Retrieved from <http://www.pewcenteronthestates.org/publicsafety>
- Piquero, A., Farrington, D., & Blumstein, A. (2003). The criminal career paradigm In M. Tonry (Ed). *Crime and Justice*. Chicago, IL: University of Chicago Press.
- Reisig, M. D., Holtfreter, K., & Morash, M. (2006). Assessing recidivism risk across female pathways to crime. *Justice Quarterly*, 23, (3), 384-405.
- Robert, J. & Wells, W. (2010). The validity of criminal justice contacts reported by inmates: A comparison of self-reported data with official prison records. *Journal of Criminal Justice*, 38, (5), 1031-1037. doi:10.1016/j.crimjus.2010.07.005

Rounds-Bryant, J. L., & Baker, L. (2007). Substance dependence and level of treatment need among recently-incarcerated prisoners. *The American Journal of Drug and Alcohol Abuse*, 33, 557-561. doi:10/1080/00952990701407462

Soderstrom, I. R., Castellano, T. C., & Figaro, H. R. (2001). Measuring “mature coping” skills among adult and juvenile inmates. *Criminal Justice and Behavior*, 28, 300-328.

Van Voohis, P., Wright, E. M., Salisbury, E., & Bauman, A. (2010). Women's risk factors and their contributions to existing Risk/Needs assessment: The current status of a gender-responsive supplement. *Criminal Justice and Behavior*, 37(3), 261. Retrieved from <http://search.proquest.com/docview/197228982?accountid=14304>

West, H. C., Sabol, W. J., & Greenman, S. J. (2011). *Prisoners in 2009*. United States Department of Justice, Bureau of Justice Statistics, NCJ231675, Retrieved from [www.bjs.gov](http://www.bjs.gov).

Wright, K. N. (1993). Alcohol use by prisoners. *Alcohol Research and Health*, 17, (2), 157-161.

Table 1

## Inmate Court History Responses

Court History Items	<u>0</u>		<u>1</u>		<u>2</u>		<u>3</u>		<u>4</u>	
	N	%	N	%	N	%	N	%	N	%
Felony	26	<1	658	15	939	21	864	20	1955	44
Probation sentences	900	20	1942	44	985	22	363	8	254	6
Probation revocations	1870	42	1714	39	553	12	163	4	143	3
Parole sentences	1808	41	1196	27	603	14	371	8	466	11
Parole revocations	2551	57	894	20	441	10	247	6	311	7
Arrests	42	1	161	4	334	8	434	10	3472	78
Alcohol-related arrests	2482	56	678	15	396	9	246	6	642	14
Drug-related arrests	980	22	1063	24	907	20	623	14	870	20
DUI arrests	2663	60	795	18	406	9	206	5	374	8

Table 2

## Reliability Coefficients

Prison Inmate Inventory Scales	Alpha	Items
Truthfulness	.88	20
Alcohol	.92	14
Drugs	.92	14
Antisocial	.82	22
Violence	.88	21
Adjustment	.88	26
Distress	.87	21
Self-Esteem	.86	16
Judgment	.88	32
Stress Coping Abilities	.90	30

Table 3

## Accuracy

<u>Scales</u>	<u>Low Risk (39%)</u>		<u>Medium Risk (30%)</u>		<u>Problem Risk (20%)</u>		<u>Severe Risk (11%)</u>	
Truthfulness	42.3	(3.3)	27.7	(-2.3)	21.7	(1.7)	8.3	(-2.7)
Alcohol	40.9	(1.9)	29.6	(-.4)	19.0	(-1.0)	10.5	(-.5)
Drugs	41.0	(2.0)	29.7	(-.3)	18.9	(-1.1)	10.3	(-.7)
Antisocial	40.0	(1.0)	29.6	(-.4)	20.4	(.4)	10.0	(-1.0)
Violence	41.6	(2.6)	28.9	(-1.1)	19.2	(-.8)	10.2	(-.8)
Adjustment	40.4	(1.6)	31.2	(1.2)	18.8	(-1.2)	9.6	(-1.4)
Distress	40.6	(1.6)	29.2	(-.8)	20.1	(.1)	10.2	(-.8)
Self-Esteem	39.9	(.9)	31.7	(1.7)	18.3	(-1.7)	10.1	(-.9)
Judgment	42.2	(3.2)	28.0	(-2.0)	19.4	(-.6)	10.4	(-.6)
Stress Coping Abilities	40.6	(1.6)	29.6	(-.4)	19.0	(1.0)	10.5	(-.5)