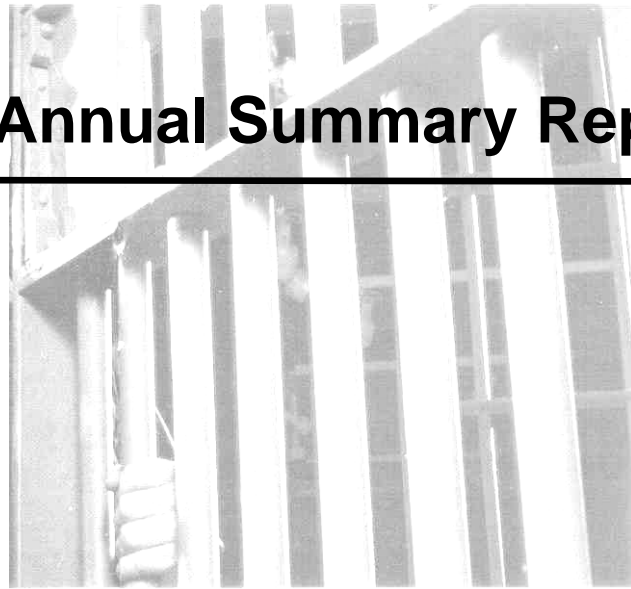# Prison Inmate Inventory

2002 Annual Summary Report

**A compilation of PII test data for the year 2002:
PII reliability, validity and accuracy,
Inmate demographics and court history**

This report summarizes Prison Inmate Inventory (PII) test data for **46,995** prison inmates. PII test data was obtained from four prison institutions in Ohio. The data was gathered between January 1, 2002 and December 31, 2002. The PII is described on the Risk and Needs Assessment website at **www.riskandneeds.com**. This report is provided by Risk and Needs Assessment, Inc., P.O. Box 44828, Phoenix, AZ 85064-4828.

Prison Inmate Inventory

Accuracy _____

PII Accuracy (N = 46,995)

■Low □Medium ■Problem □Severe Problem
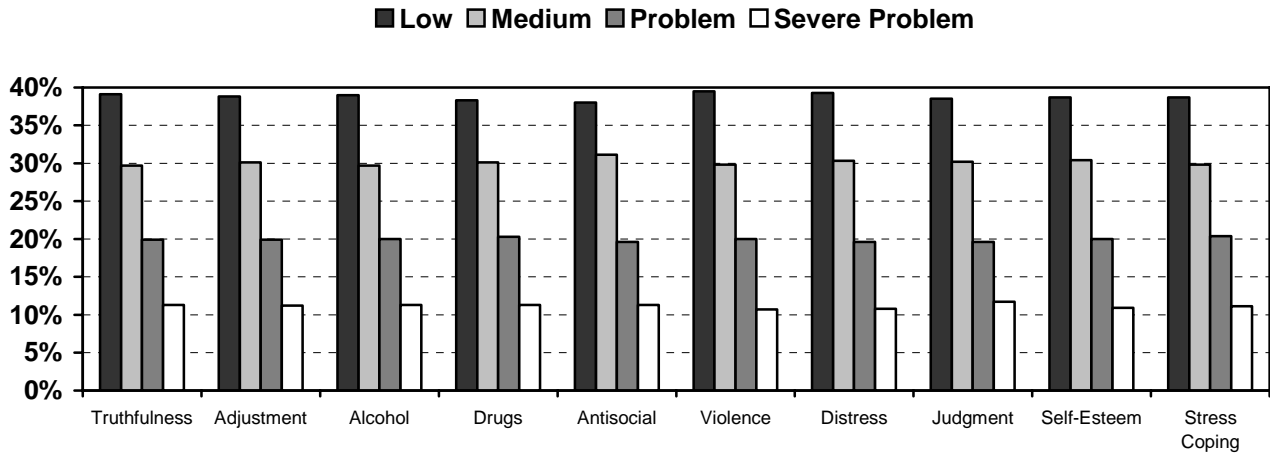
Scale	Low Risk (39%)		Medium Risk (30%)		Problem Risk (20%)		Severe Problem (11%)	
Truthfulness Scale	39.1	**(0.1)**	29.7	**(0.3)**	19.9	**(0.1)**	11.3	**(0.3)**
Adjustment Scale	38.8	**(0.2)**	30.1	**(0.1)**	19.9	**(0.1)**	11.2	**(0.2)**
Alcohol Scale	39.0	**(0.0)**	29.7	**(0.3)**	20.0	**(0.0)**	11.3	**(0.3)**
Drugs Scale	38.3	**(0.7)**	30.1	**(0.1)**	20.3	**(0.3)**	11.3	**(0.3)**
Antisocial Scale	38.0	**(1.0)**	31.1	**(1.1)**	19.6	**(0.4)**	11.3	**(0.3)**
Violence Scale	39.5	**(0.5)**	29.8	**(0.2)**	20.0	**(0.0)**	10.7	**(0.3)**
Distress Scale	39.3	**(0.3)**	30.3	**(0.3)**	19.6	**(0.4)**	10.8	**(0.2)**
Judgment Scale	38.5	**(0.5)**	30.2	**(0.2)**	19.6	**(0.4)**	11.7	**(0.7)**
Self-Esteem Scale	38.7	**(0.3)**	30.4	**(0.4)**	20.0	**(0.0)**	10.9	**(0.1)**
Stress Coping Abilities	38.7	**(0.3)**	29.8	**(0.2)**	20.4	**(0.4)**	11.1	**(0.1)**

The four risk ranges (low, medium, problem and severe) and the predicted percentages for each risk range category are shown in bold print in the top row of the above table. The percentages for each PII scale and risk range category were obtained from the cumulative distribution of inmates scale scores. **All inmate obtained risk range percentages were within 1.1 percentage points of predicted percentages. Accuracy of the PII is shown by the small differences between obtained risk range percentages and predicted percentages. Inmates' scores are 99% accurate. The PII is an accurate prison inmate assessment test.**

This means that the Prison Inmate Inventory (PII) has demonstrated empirically based accuracy. All ten PII scales (measures) are accurate to within one percent of their predicted risk ranges. This is very accurate inmate assessment.

Reliability _____

All PII scales have very high reliability coefficients and are statistically reliable. The

professionally accepted reliability standard is .75 and higher. All PII scale coefficient alphas were at or above .88, with seven of the ten scales coefficient alphas at or above .90.

Reliability coefficient alphas for the PII. All alphas are significant at p<.001.

PII SCALES	Coefficient Alphas
Truthfulness Scale	.89
Adjustment Scale	.91
Alcohol Scale	.95
Drugs Scale	.95
Antisocial Scale	.90
Violence Scale	.88
Distress Scale	.89
Judgment Scale	.90
Self-Esteem Scale	.90
Stress Coping Abilities	.92

Perfect reliability would have a coefficient alpha of 1.0. These ten empirically demonstrated scale alpha coefficients are impressive and mean that if inmate One is more violent than inmate Two, he will consistently answer more Violence Scale items deviantly than inmate Two. The major advantage of internal consistency coefficients is their practicality. It is possible to estimate reliability every time a test is given.

Validity _____

A basic problem in evaluations (assessments and testing) is whether a test measures what it is supposed to measure and determining if that test can be used in making accurate decisions. Early Prison Inmate Inventory (PII) concurrent validity studies demonstrated impressive validity. This research is presented in the PII: An Inventory of Scientific Findings document. The current analysis (N=46,995 inmates) utilizes the cumulative PII database to further evaluate validity accuracy.

PII database validity analyses involved identifying inmates who admitted they had problems. Problem inmates had treatment for alcohol or drugs, stated they were violent or declared they were antisocial. A correct identification meant these problem inmates scored in the corresponding scale's problem risk range (70th percentile and above).

PII validity results demonstrated that the Violence Scale accurately identified **99.7 percent** of the inmates who admitted they were violent. Nearly all (**98.3%**) of the inmates who admitted being antisocial scored in the "problem range" on the Antisocial Scale. The Alcohol and Drugs scales correctly identified **100 percent and 99.1 percent**, respectively, of inmates who had been in treatment for alcohol and drug problems. These criteria of problematic behavior were used because database analysis in real time settings does not lend itself to administering more than one test. Earlier PII standardization research did use "other tests" for criterion validity.

Summary _____

Data for this report was obtained from diskettes that were returned in the year 2002. The PII was administered to **46,995 inmates**. There were 44,918 males (95.6%) and 2,077 females (4.4%). The inmate population is broadly defined as Caucasian (42.5%) or Black (51.5%), 21

through 40 years of age (66.0%), High School Graduate or better (53.5%) and single (65.3%).

PII Accuracy, Reliability and Validity

- PII scale risk range percentile scores are **99 percent accurate**.

- All PII scales reliability coefficients were .88 or higher. This compares favorably with the professionally accepted reliability standard of .75 or better.

- Validity analyses demonstrate that PII scales identified nearly all inmates who had been in treatment or admitted to their having serious problems.

Inmates' measured "risk" is shown to be 99 percent accurate. Inmates with low risk range (0 to 39th percentile) or even medium risk (40 to 69th percentile) scores on the Alcohol Scale do not represent drinking problems, whereas, inmates who scored in the problem risk range (70th percentile and above) have identifiable drinking problems. Correct identification of problems corroborates these findings. The PII is a reliable, valid and accurate test for prison inmate assessment.

Number of Arrests (Inmate self-report)

- 7,761 (17.0%) inmates reported 1 or 2 arrests and 16,888 (37.0%) reported 1 to 4 arrests. 63 percent of the inmates had been arrested more than 4 times.

- 71.1% (33,032) of the inmates had 2 or more felony arrests.

Nearly two-thirds (63%) of the inmates tested had been arrested 5 or more times. 63.8% of the males and 47% of the females had 5 or more arrests. Nearly three-fourths (71.1%) of the inmates had been arrested for felonies two or more times.

Other Court Histories (Inmate self-report)

- 37,134 (80.6%) of the inmates had been placed on probation.

- 47.6% of the inmates had their probations revoked.

- 17,641 (38.2%) of the inmates had been placed on parole.

- 33.0% of the inmates had their paroles revoked.

- 38.1% of the inmates reported having their first arrest by the age of 16

These statistics demonstrate that many inmates have criminal histories. Nearly two-thirds (63%) of the inmates had been arrested multiple times. Over two-thirds had been arrested for a felony two or more times. Eighty percent had been placed on probation and 38.2% had been placed on parole. Many inmates were arrested for a crime by the age of 16.

Incarceration History (Inmate self-report)

- 54.5% of the inmates have been incarcerated 2 years or more.

- 22.1% (10,056) of the inmates have been incarcerated 6 years or more.

- 5.7% of the inmates had attempted an escape from jail or prison.

Over half of the inmates were tested with the PII after having been in prison for two years or more. Part of the reason for this is that initial start up of testing involved many inmates who had already been serving their sentences. Most inmates after the initial start up were tested at intake.

Alcohol and Drug Arrests (Inmate self-report)

- 40.6% of the inmates had one or more alcohol-related arrests and 28.9% had two or more arrests
- 58.2% of the inmates had at least one drug-related arrest and 37.4% had two or more arrests

Forty percent of the inmates had one or more alcohol-related arrests and over 58 percent had one or more drug arrests. Many of these inmates have substance abuse problems which may act as catalysts for other problems.

Number of Inmates Tested _____
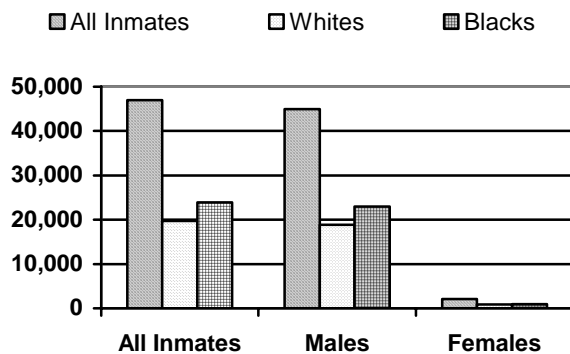
PII test data was obtained from four prison institutions in Ohio. Report data collected in the year 2002.

- **46,995 inmates** were tested
- 44,918 inmates were male
- 2,077 inmates were female
- 19,760 inmates were Whites
- 23,907 inmates were Black

- 95.6 percent of the inmates were males, 18,889 (42.5%) of the males were White, 22,960 (51.7%) of the males were Black.

- 4.4 percent of the inmates were females, 871 (42.7%) of the females were White, 947 (46.4%) of the females were Black.

The majority of inmates tested were male, however there were 2,077 females tested. Just over half of the inmates were Black and over 42 percent were White. Similar percentages were found for White and Black males and females. Only six percent of the inmates were other race/ethnicity groups.

Number of Arrests
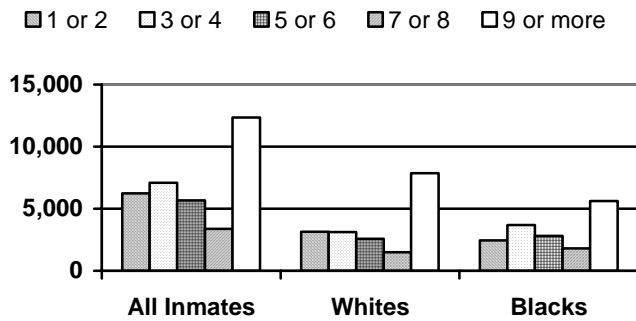
- 7,761 reported 1 or 2 arrests

- 9,127 reported 3 or 4 arrests

- 7,898 reported 5 or 6 arrests

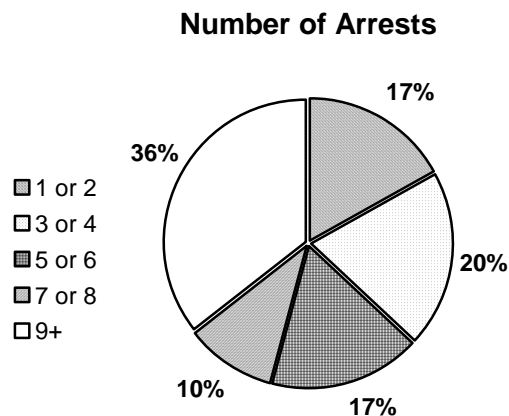- 4,602 reported 7 or 8 arrests

- 16,288 reported 9 or more arrests

Note: There were 1,319 tests with missing number of arrests information.

PII test data was obtained from four prison institutions where inmate answer sheets were scanned. In some cases inmates did not provide arrest information or left this information blank. More Whites (5,856) reported 9 or more arrests than Blacks (5,603). The average number of arrests was 6.1 for Whites and 6.3 for Blacks. None of the statistical analyses presented herein contain missing information.

Number of arrests is significantly correlated with all PII scales. Increases in number of arrests are associated with increases in prison adjustment problems, antisocial thinking, violence potential, substance abuse problems, distress, lapses in judgment, losses in self-esteem, and declines in stress coping skills. This means that number of arrests is positively related to inmate level of risk.

Number of Arrests as a Percentage _____

Number of Arrests

When number of arrests is converted to percentages, it was found that:

- 17.0 percent reported 1 or 2 arrest

- 20.0 percent reported 3 or 4 arrest

- 17.3 percent reported 5 or 6 arrests

- 10.1 percent reported 7 or 8 arrests

- 35.7 percent reported 9 or more arrests

The percentage of inmates who had 5 or more arrests was 63.0 percent. Over one-third of the inmates reported 9 or more arrests. These statistics do not include the 1,319 cases with missing number of arrests information.

Court History and PII Scale Scores _____

Correlation coefficients between court history such as, age at first arrest, number of arrests, etc., and PII scales are presented in the table below (N=46,995). These results demonstrate that **number of arrests is significantly correlated with all PII scales**. These correlations demonstrate that inmates' history of arrests is positively related to their level of risk. However, some inmates with few arrests do score high on PII scales (similarly some inmates with a lot of arrests score low) and these inmates would be "missed" if only court records were used to determine inmate risk. **In other words, court records alone are not sufficient to predict inmate risk.** PII scale scores which assess criminogenic needs, add greatly to accurate prediction.

The correlation between age at 1st arrest and PII scale scores indicates that there is a significant "negative" relationship with PII scales except for the Truthfulness Scale. This suggests that the younger inmates are at the time of their first arrest, the higher their level of risk is. Correlations with age at 1st arrest are highest for the Adjustment Scale which indicates that inmates arrested at a young age tend to have more problems coping with incarceration, that is, they have emotional and social adjustment problems.

	Truthfulness	Adjustment	Alcohol	Drugs	Antisocial	Violence
Age at 1st Arrest	-.006	-.385*	-.113*	-.110*	-.333*	-.279*
Total Number of Arrests	.137*	.456*	.437*	.362*	.630*	.362*
Felony Arrests	.099*	.208*	.232*	.391*	.483*	.200*
Times on Probation	-.032*	.389*	.318*	.290*	.453*	.293*
Times on Parole	.078*	.097*	.195*	.218*	.246*	.082*
Alcohol Arrests	-.059*	.386*	.648*	.180*	.325*	.215*
Drug Arrests	-.034*	.212*	.188*	.499*	.329*	.155*

* Significant at p<.001.

Number of arrests, felony arrests, times on probation, and times on parole are all correlated highest with the Antisocial Scale. These results suggest that inmates' antisocial thinking, or inability to conform to social norms, is positively related to their criminal behavior. Intervention aimed at changing antisocial thinking is one way to reduce inmates' criminal conduct. The Adjustment, Alcohol, Drugs and Violence scales are also correlated with these criminal history variables. These PII scales help staff understand inmates and clarify their needs. PII scales reveal areas of inquiry and criminogenic needs important for intervention and treatment. For example, inmates who have Antisocial Scale scores in the problem risk range (elevated scores) are likely to continue their criminal behavior after leaving prison. These inmates seemingly do not profit from experience, consequently, dealing with their antisocial behavior would be one of the focuses in treatment.

Alcohol arrests are correlated (r=.648) highest with Alcohol Scale scores. **Drug arrests** are correlated (r=.499) highest with the Drugs Scale. These results support the **discriminant validity** of the Alcohol and Drugs scales. These results corroborate the findings on page 2; the Alcohol and Drugs scales identify inmates with drinking and drug problems.

The criminal history variables are also significantly correlated with PII Distress, Judgment, Self-Esteem and Stress Coping Abilities scales. They are negative correlations with the Self-Esteem and Stress Coping Abilities scales which suggests that criminal history is associated with lower self-esteem and lower stress coping skills.

Appendix _____

Inmate demographics and court history contained on returned diskettes (test data) are summarized. These statistics are descriptive of the inmates that took the PII.

Population				
Males		Females		Total
N	%	N	%	N
44,918	95.6	2,077	4.4	46,995

Age Group				
	Males	Females	Total	
Age	N	N	N	%
20 & Under	7,673	139	7,812	21.7
21 - 25	7,556	326	7,882	21.9
26 - 30	5,061	336	5,397	15.0
31 - 35	5,958	335	6,293	17.5
36 - 40	3,908	283	4,191	11.6
41 - 45	2,577	156	2,733	7.6
46 - 50	829	65	894	2.5
51 - 55	273	22	295	0.8
56 - 60	227	2	229	0.6
61 & Over	308	6	314	0.9

Race/Ethnicity				
	Males	Females	Total	
Race	N	N	N	%
Caucasian	18,889	871	19,760	42.5
Black	22,960	947	23,907	51.5
Hispanic	1,009	76	1,085	2.3
Asian	35	1	36	0.1
Native American	572	39	611	1.3
Other	936	108	1,044	2.2

Education				
	Males	Females	Total	
Grade	N	N	N	%
8th grade or Less	2,319	134	2,453	5.4
Some High School	17,769	899	18,668	41.1
HS Graduate/GED	16,323	543	16,866	37.1
Some College	5,949	319	6,268	13.8
College Grad	1,110	95	1,205	2.7

Marital Status				
	Males	Females	Total	
Status	N	N	N	%
Single	29,298	1,135	30,433	65.3
Married	7,409	406	7,815	16.8
Divorced	5,881	305	6,186	13.3
Separated	1,470	176	1,646	3.5
Widowed	481	44	525	1.1

	Age at First Arrest			
	Males	Females	Total	
Age	N	N	N	(%)
10 & Under	1,151	14	1,165	2.5
11 - 12	3,219	71	3,290	7.2
13 - 14	4,834	120	4,954	10.8
15 - 16	7,884	223	8,107	17.6
17 - 18	11,105	310	11,415	24.8
19 - 20	4,459	215	4,674	10.2
21 - 22	3,101	157	3,258	7.1
23 - 24	1,617	144	1,761	3.8
25 - 29	2,412	313	2,725	5.9
30 - 34	2,053	199	2,252	4.9
35 & Over	2,111	230	2,341	5.1

Inmate Self-report Court History, continued

Number	Number of Times Arrested			
	Males	Females	Total	
Number	N	N	N	(%)
1 – 2	7,172	589	7,761	17.0
3 – 4	8,658	469	9,127	20.0
5 – 6	7,635	263	7,898	17.3
7	1,912	112	2,024	5.8
8	1,342	42	1,384	3.9
9	425	11	436	1.2
10 or More	11,598	408	12,006	34.2

	Times on Probation				Probation Revocations			
	Males	Females	Total		Males	Females	Total	
Number	N	N	N	(%)	N	N	N	(%)
0	8,526	436	8,962	19.4	22,519	1,044	23,563	52.4
1	16,771	820	17,591	38.2	12,693	613	13,306	29.6
2	9,747	513	10,260	22.3	4,180	199	4,379	9.7
3	4,325	124	4,449	9.7	2,097	67	2,164	4.8
4	2,122	72	2,194	4.8	865	56	921	2.0
5	1,873	39	1,912	4.1	334	8	342	0.8
6 +	706	22	728	1.6	257	7	264	0.6

	Times on Parole				Parole Revocations			
	Males	Females	Total		Males	Females	Total	
Number	N	N	N	(%)	N	N	N	(%)
0	26,893	1,645	28,538	61.8	33,001	1,817	34,818	77.0
1	11,577	307	11,884	25.7	6,112	126	6,238	13.8
2	2,476	58	2,534	5.5	1,915	42	1,957	4.3
3	1,945	12	1,957	4.2	1,330	16	1,346	3.0
4	628	10	638	1.4	334	3	337	0.7
5	196	0	196	0.4	158	1	159	0.4
6 +	430	2	432	0.9	355	2	357	0.8

	Number of Years in Jail and Prison				Jail/Prison Escape Attempts			
	Males	Females	Total		Males	Females	Total	
Number	N	N	N	(%)	N	N	N	(%)
0	13,634	1,027	14,661	32.2	41,525	1,951	43,476	94.3
1	5,770	291	6,061	13.3	1,885	90	1,975	4.3
2	4,905	249	5,154	11.3	303	6	309	0.7
3	4,199	127	4,326	9.5	285	2	287	0.6
4	2,104	110	2,214	4.9	26	0	26	0.1
5	2,992	70	3,062	6.7	10	1	11	0.1
6 +	9,890	166	10,056	22.1	32	2	34	0.1

The data contained in these tables accurately summarizes the inmate-reported information provided on their PII answer sheets.

Inmate Self-report Court History, continued

Number	Felony Arrests				Drug Arrests			
	Males	Females	Total		Males	Females	Total	
	N	N	N	(%)	N	N	N	(%)
0	581	37	618	1.3	18,545	933	19,478	41.8
1	12,002	814	12,816	27.6	9,230	460	9,690	20.8
2	10,995	438	11,433	24.6	6,381	275	6,656	14.3
3	7,387	241	7,628	16.4	4,769	173	4,942	10.6
4	4,521	192	4,713	10.1	1,330	78	1,408	3.0
5	2,888	105	2,993	6.4	1,758	33	1,791	3.8
6 +	6,076	189	6,265	13.5	2,563	100	2,663	5.7

Number	Alcohol Arrests				DUI/DWI Arrests			
	Males	Females	Total		Males	Females	Total	
	N	N	N	(%)	N	N	N	(%)
0	25,973	1,482	27,455	59.4	29,611	1,574	31,185	67.5
1	5,199	230	5,429	11.7	6,297	300	6,597	14.3
2	3,082	75	3,157	6.8	3,019	79	3,098	6.7
3	2,577	68	2,645	5.7	2,029	45	2,074	4.5
4	1,624	36	1,660	3.6	1,076	29	1,105	2.4
5	1,937	36	1,973	4.3	688	17	705	1.5
6 +	3,849	68	3,917	8.5	1,449	5	1,454	3.1

Over one-third (38.1%) of the inmates reported having been arrest for the first time by the age of 16 and 62.9 percent had their first arrest by the age of 18. Nearly three-fourths (71.1%) of the inmates tested had been arrested for felonies two or more times. Over three-fourths (80.6%) had been placed on probation and nearly half (47.6%) had their probations revoked. Nearly 40 percent of the inmates had been placed on parole and 33 percent had their paroles revoked. Over 40 percent of the inmates had one or more alcohol arrests and 28.9 percent had two or more alcohol arrests. 58 percent of the inmates had one or more drug arrests and 37.4 percent had two or more drug arrests.

Discussion _____

Criminal history has been shown to correlate (page 6) with PII scales and is therefore representative of inmate risk. However, criminal history does not provide any insight into understanding inmates and their problems. If inmates are to be rehabilitated efforts must focus on what inmate behaviors need to change. PII scales represent areas of inquiry that help staff understand inmates and their needs.

Reviewing relationships between PII scales and criminal history can provide inmate understanding. The correlations presented on page 6 reveal that the PII Antisocial Scale correlated significantly with criminal history. Thus, Antisocial Scale scores are associated with the likelihood that an inmate will engage in future criminal activity. Even if an inmate has little criminal history to go by, if he scores high on the Antisocial Scale he is likely to be involved in future crime. This means that intervention and treatment programs for inmates with elevated Antisocial Scale scores should focus on their antisocial attitudes along with other significant recidivism prediction factors.

Other PII scales can be interpreted in similar ways. For example, the PII Violence Scale

correlates with criminal history and shows that inmate criminal behavior is violence-related. Similarly, inmate alcohol and drug problems are related to criminal history. These PII scales reveal the severity of an inmate's violence potential, drinking and drug problems. Elevated scale scores indicate that intervention and treatment programs should focus on resolving these problems to lower an inmate's chances of committing future crimes.

This discussion of PII results emphasizes the importance of PII scales. Each scale is included for an important reason. Scales provide prison staff with information to make decisions regarding inmate status and rehabilitation. PII scales are what have been termed criminogenic needs. They are the factors involved in risk prediction that are amenable to change. An inmate's criminal history has little value in establishing intervention programs aimed at rehabilitation because they do not reveal what needs to change. To change inmates' behavior you need to know what to change and how severe problems are. Knowing an inmate's problem severity facilitates placing inmates into appropriate levels of treatment.

The ten PII scales assess attitudes and behaviors that yield an inmate profile. Scale scores determine severity and elevated (70th percentile and above) scores reveal areas that are dominant. Multiple elevated scales reveal co-determinants of criminal behavior and indicate multiple areas to resolve in intervention. Any change in any of these areas will impact inmate criminal behavior.

The results presented in this report demonstrate that differences exist between Whites and Blacks. For example, number of arrests data show that more Whites than Blacks had 9 or more arrests, yet Blacks had more arrests on average than Whites. Differences exist between males and females as well. The PII accounts for these differences by having separate standardized scoring procedures for Whites and Blacks as well as males and females. The accuracy of PII scales (page 1) attest to the accuracy of these procedures. Separate scoring procedures eliminate the need to have different tests for different inmates. All inmates take the same test but scale risk range scores are determined on the basis of race/ethnicity and gender.

In summary, the PII is a reliable, valid and accurate prison inmate test. Results presented in this report show that PII risk range percentages (page 1) were 99% accurate, PII scales reliability coefficients (page 1) were .88 or higher, PII scales accurately identified inmate violence, antisocial, alcohol and drug problems (page 2). The PII Antisocial Scale was highly correlated with criminal history. Adjustment, Violence, Alcohol and Drugs scales were also related to criminal history. PII scales are criminogenic needs; they identify areas of inquiry for intervention and treatment. Elevated PII scales reveal what needs to change. Targeting these needs in treatment can have positive affects on changing inmates' criminal conduct and reducing recidivism.

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Donald D Davignon, Ph.D.
Senior Research Analyst