

**Department of Juvenile Justice
Behavioral Services Unit**

**1601 Old Bon Air Road
Richmond, VA 23235**

Sexual Adjustment Inventory - Juvenile

1-13-03

Prepared by:

Behavior Data Systems, Ltd.
P.O. BOX 44256
Phoenix, Arizona 85064-4256

Sexual Adjustment Inventory - Juvenile Summary Report

Preface

This report summarizes Department of Juvenile Justices' Sexual Adjustment Inventory - Juvenile test results. The information for this report comes from data contained on returned diskettes. There were 168 juvenile offenders tested. This annual report is descriptive of Department of Juvenile Justices juvenile offender assessment program and is not a research document per se. Sexual Adjustment Inventory (SAI) - Juvenile and SAI (adult) research is summarized in a separate document titled "SAI: An Inventory of Scientific Findings."

The SAI-Juvenile is a brief, easily administered and automated (computer scored) juvenile sex offender screening instrument or test. The SAI-Juvenile has thirteen scales that measure offender truthfulness, sex adjustment, child molest, sexual assault (rape), incest, exhibitionism, violence (lethality), antisocial attitudes, distress, judgment, alcohol abuse and drug abuse. The SAI-Juvenile has been standardized on juvenile sex offenders.

This annual report is organized as follows: scales risk range accuracy along with are presented on page 1. The reliability (page 1) and validity (page 2) are briefly presented. The percentages of juvenile offender responses to direct admission items (page 3) are often of interest to professionals in the juvenile sex offender field. Concise summary is presented on page 4. And the Appendix (pages 5 - 8) summarizes juvenile demographics, court histories and test statistics used in this report.

This document is presented as a professional courtesy to Behavioral Services Unit, Department of Juvenile Justice, Richmond, Virginia. The intent is to assist staff better understand their juvenile sex offenders.

Donald D Davignon, Ph.D.
Senior Research Analyst
Behavior Data Systems, Ltd.

SEXUAL ADJUSTMENT INVENTORY - JUVENILE

This report briefly summarizes the statistical results of the Sexual Adjustment Inventory (SAI) - Juvenile. There were a total of 168 juvenile sex offenders tested by the Behavioral Services Unit, Department of Juvenile Justice. These 168 juvenile test results are summarized and presented after SAI-Juvenile test statistics. The following test statistics are summarized from the SAI-Juvenile database, which includes 766 juvenile sex offenders. These are the test results upon which the SAI-Juvenile is standardized. An explanation of these statistics is presented in the Appendix.

Accuracy of the SAI-Juvenile (Normative Data)

SAI-Juvenile scale scores fall into one of four risk range categories (low, medium, problem and severe problem). The percentages of offenders falling into each risk range category for each SAI-Juvenile scale are compared to predicted percentages that are shown in the top row of the table below. Small differences between obtained and predicted percentages mean the scales are accurate. The SAI-Juvenile database of 766 juvenile sex offenders is included in this analysis.

SAI-Juvenile Accuracy (N = 766)

SAI-Juvenile Scales	Low Risk (39%)	Medium Risk (30%)	Problem Risk (20%)	Severe Problem (11%)
Test-item Truthfulness	36.8 (2.2)	29.3 (0.7)	22.3 (2.3)	11.6 (0.6)
Sex-item Truthfulness	39.8 (0.3)	30.5 (0.5)	20.0 (0.0)	10.8 (0.2)
Sexual Adjustment	38.7 (0.3)	30.5 (0.5)	20.0 (0.0)	10.8 (0.2)
Child Molest Scale	38.3 (0.7)	28.8 (1.2)	21.6 (1.6)	11.3 (0.3)
Rape Scale	39.3 (0.3)	30.2 (0.2)	19.8 (0.2)	10.7 (0.3)
Incest Scale	41.4 (2.4)	28.6 (1.4)	17.4 (2.6)	12.6 (1.6)
Exhibitionism Scale	40.5 (1.5)	29.6 (0.4)	18.9 (1.1)	11.0 (0.0)
Alcohol Scale	37.5 (1.5)	31.6 (1.6)	19.3 (0.7)	11.6 (0.6)
Drugs Scale	37.1 (1.9)	32.7 (2.7)	19.8 (0.2)	10.4 (0.6)
Violence Scale	39.0 (0.0)	30.0 (0.0)	20.4 (0.4)	10.6 (0.4)
Antisocial Scale	38.9 (0.1)	28.6 (1.4)	21.9 (1.9)	10.6 (0.4)
Distress Scale	38.1 (0.9)	31.5 (1.5)	20.1 (0.1)	10.3 (0.7)
Judgment Scale	38.5 (0.5)	29.8 (0.2)	20.0 (0.0)	11.7 (0.7)

As shown in the above table, the objectively obtained percentages of participants falling in each risk range were very close to the expected percentages for each risk category. All of the obtained risk range percentages were within 2.7 percentage points of the expected percentages and many (35 of 52 possible) were within one percentage point. These results demonstrate that risk range percentile scores are very accurate.

Reliability of the SAI-Juvenile (Normative Data)

Test reliability means that scale scores are reproducible. Test scores will be obtained on a consistent basis. Reliability coefficients of .75 are generally accepted for test reliability and

coefficient alphas above .85 are considered very reliable. The SAI-Juvenile database (N=766) was used in this analysis.

Reliability coefficient alphas. All alphas are significant at p<.001.

SAI-Juvenile Scale	Coefficient Alpha	SAI-Juvenile Scale	Coefficient Alpha
Test-item Truthfulness Scale	.86	Alcohol Scale	.92
Sex-item Truthfulness Scale	.85	Drugs Scale	.92
Sex Adjustment Scale	.83	Violence Scale	.86
Child Molest Scale	.82	Antisocial Scale	.82
Sexual Assault (Rape) Scale	.86	Distress Scale	.83
Incest Scale	.82	Judgment Scale	.82
Exhibitionism Scale	.89		

All SAI-Juvenile scales have reliability coefficients that are well above the professionally accepted standard of .75. These results demonstrate that the SAI-Juvenile is a very reliable juvenile offender assessment test.

Validity of the SAI-Juvenile (Normative Data)

Test validity means that the test measures what it is supposed to measure. Predictive validity results for the correct identification of problems (sex-related and non-sex related problems) are presented in the table below. The table shows the percentage of offenders who admitted having problems and who scored in the problem risk range on the selected SAI-Juvenile scales in comparison to offenders who scored in the low risk range.

These predictive validity results were as follows. The Sexual Adjustment Scale **correctly identified 97.4 percent** or 75 of the 77 offenders who admitted they had serious sexual adjustment problems. The Child Molest Scale **correctly identified 100 percent** of the 175 offenders who had been arrested for child molestation. The Sexual (Rape) Assault Scale **identified 100 percent** of the 131 offenders who had forced someone to have sex. The Incest Scale **correctly identified 100 percent** of the 155 participants who admitted to having sex with a family member. The Exhibitionism Scale **correctly identified 100 percent** of the 150 offenders who were arrested for exhibitionism. These results strongly support the validity of the SAI-Juvenile sex-related scales.

The predictive validity results for the non-sex related scales were as follows. The Violence Scale **correctly identified 98.4 percent** or 123 of the 125 participants who admitted being violent. The Antisocial Scale **correctly identified 93 percent** or 119 of the 128 offenders who admitted to antisocial thinking and behavior. The Alcohol Scale **correctly identified 100%** of the 59 offenders who admitted to having a drinking problem. The Drugs Scale **correctly identified 100%** of the 130 offenders who admitted having a drug problem. The Distress Scale **correctly identified 92.5 percent** or 136 of the 147 participants who stated they were in counseling or treatment for anxiety or depression. The Judgment Scale **correctly identified 89.7 percent** or 61 of the 68 offenders who admitted that they did not know right from wrong. These results provide strong support for the validity of the non sex-related scales.

Predictive Validity of the SAI-Juvenile

SAI-Juvenile Scale	Correct Identification of Problem Behavior	SAI-Juvenile Scale	Correct Identification of Problem Behavior
Sexual Adjustment	97.4%	Alcohol	100%
Child (Pedophile) Molest	100%	Drugs	100%
Sexual (Rape) Assault	100%	Violence	98.4%
Incest	100%	Antisocial	93.0%
Exhibitionism	100%	Distress	92.5%
		Judgment	89.7%

Juvenile Offender Self-Perceptions, Department of Juvenile Justice Data

There were 168 Department of Juvenile Justice juvenile clients included in this analysis. There were 165 males and 3 females.

Alcohol and Drug Problems

		Males %	Females %
#175. How would you describe your drinking?			
1. A serious problem		6.7	0.0
2. A moderate problem		6.7	0.0
3. A slight problem		10.9	0.0
#178. How would you describe your use of drugs?			
1. A serious problem		8.5	0.0
2. A moderate problem		7.3	0.0
3. A slight problem		9.1	0.0
#177. Recovery means having an alcohol or drug problem, but not drinking or using drugs anymore. I am a recovering:			
1. Alcoholic.....		3.0	0.0
2. Drug abuser		7.3	0.0
3. Both 1 and 2.....		13.3	0.0

Emotional Problems

#180. During the last 6 months, I have been:			
1. Dangerous to myself (suicidal).....		7.3	33.3
2. Dangerous to others (homicidal).....		3.6	0.0
3. Both 1 and 2 (suicidal and homicidal)		8.5	0.0
#181. During the last 6 months, I have had:			
1. Serious emotional problems.....		18.2	0.0
2. Mental health problems.....		2.4	0.0
3. Both 1 and 2.....		10.9	0.0
#183. Select the statement that applies to you. I have:			
1. Serious personal problems		12.1	0.0
2. Serious family problems.....		15.2	0.0
3. Both 1 and 2 (personal and family problems)		20.6	66.7

SUMMARY

The SAI-Juvenile was administered to 168 Department of Juvenile Justice juvenile sex offenders. There were 165 males (98.2%) and 3 females (1.8%). This juvenile population is broadly defined as Black (50%) or White (34.1%), 14 through 17 years of age (80.3%), and 7th Grade through 10th Grade (79.9%) education level.

SAI-Juvenile Reliability, Validity and Accuracy (Normative Data)

- SAI-Juvenile scale risk range percentile scores were accurate to within 2.7 percent of predicted for all SAI-Juvenile scales and all risk ranges
- All SAI-Juvenile scales reliability coefficients were at .82 or higher
- Predictive validity analyses demonstrate that SAI-Juvenile scales accurately identify problem prone juvenile offenders

Alcohol and Drug Problems (Client Self-report)

- 24.3% of males (no females) indicated their drinking was at least a slight problem or worse
- 24.9% of males (no females) indicated their drug use was at least a slight problem or worse
- 7.9% of males (no females) reported one or more arrests for alcohol
- 15.1% of males (no females) reported one or more arrests for drugs
- 23.6% of males (no females) indicated they are a recovering alcoholic, drug abuser, or both alcoholic and drug abuser

Emotional Problems (Client Self-report)

- 7.3% males and 33.3% females reported during the last six months they have been suicidal
- 12.1% males (no females) report having been homicidal, or both suicidal and homicidal
- 31.5% males (no females) indicated during the last six months they had serious emotional problems, mental health problems, or had both emotional and mental health problems
- 47.9% of males and 66.7% of females indicated they have serious personal problems, serious family problems or both personal and family problems

This report demonstrates that the SAI-Juvenile is a valid and accurate test for juvenile sex offender assessment. The SAI-Juvenile is an objective test that determines juvenile sex offender risk in several sex-related and non sex-related areas of inquiry. Sex-related measures differentiate between sexual experimentation and sexual deviance. Non sex-related measures provide insight into juvenile behaviors that may act as catalysts for juvenile sexual deviance and serious sexual aggression problems. Juvenile substance abuse can lead to further sexual deviance problems. Substance abuse combined with violence and antisocial tendencies is an ominous prognosis in lieu of sexual maladjustment. The SAI-Juvenile helps evaluators understand juvenile sex offenders and aids in decision-making regarding intervention, counseling and treatment.

Appendix

Juvenile Demographics and Self-reported Court History, Department of Juvenile Justice

Population					
Males		Females		Total	
N	%	N	%	N	
165	98.2	3	1.8	168	

Age Group						
Age	Males		Females		Total	
	N	N	N	N	%	
Under 13	3	0	3	1.8		
13	11	0	11	6.6		
14	22	0	22	13.2		
15	33	0	33	19.8		
16	35	2	37	22.2		
17	41	1	42	25.1		
18	16	0	16	9.6		
19	3	0	3	1.8		

Race/Ethnicity				
Race	Males		Females	
	N	N	N	%
Caucasian	55	1	56	34.1
Black	80	2	82	50.0
Hispanic	13	0	13	7.9
Other	13	0	13	7.9

Note: There were 4 cases with missing race information.

Education						
Grade	Males		Females		Total	
	N	N	N	N	%	
6th Grade or Less	1	0	1	1	1.1	
7th Grade	16	0	16	16	16.8	
8th Grade	8	1	9	9	9.5	
9th Grade	27	1	28	28	29.5	
10th Grade	23	0	23	23	24.2	
11th Grade	10	0	10	10	10.5	
H.S. Graduate/GED	7	0	7	7	7.4	
Some College	1	0	1	1	1.1	

Note: There were 73 cases with missing education information.

Age at First Arrest						
Age	Males		Females		Total	
	N	%	N	%	N	%
Under 11	5	3.3	0	0.0	5	3.2
11	14	9.2	0	0.0	14	9.0
12	18	11.8	0	0.0	18	11.6
13	23	15.1	1	33.3	24	15.5
14	42	27.6	0	0.0	42	27.1
15	27	17.8	1	33.3	28	18.1
16	15	9.9	1	33.3	16	10.3
Over 16	8	5.3	0	0.0	8	5.1

Note: There were 13 cases with missing information for age at first arrest.

Juvenile Reported Court-Related History, continued

Number	Misdemeanor Convictions				Felony Convictions			
	Males		Females		Males		Females	
	N	N	N	%	N	N	N	%
0	52	1	53	35.8	18	1	19	12.4
1	21	0	21	14.2	51	1	52	34.0
2	22	2	24	16.2	40	0	40	26.1
3	14	0	14	9.5	19	0	19	12.4
4 +	36	0	36	24.3	22	1	23	15.0

Note: There were 20 cases with missing information.

Note: 15 cases had missing information.

Number	Times on Probation				Probation Revocations			
	Males		Females		Males		Females	
	N	N	N	%	N	N	N	%
0	37	1	38	24.5	80	2	82	54.7
1	82	1	83	53.5	33	0	33	22.0
2	19	1	20	12.9	7	0	7	4.7
3	11	0	11	7.1	13	1	14	9.3
4 +	3	0	3	1.8	14	0	14	9.3

Note: There were 13 cases with missing information.

Note: 18 cases had missing information.

Number of Times Arrested						
Number of Times Arrested	Males		Females		Total	
	N	%	N	%	N	%
0	4	2.7	0	0.0	4	2.6
1	39	26.4	2	66.7	41	27.2
2	31	20.9	0	0.0	31	20.5
3	27	18.2	0	0.0	27	17.9
4	17	11.5	1	33.3	18	11.9
5	12	8.1	0	0.0	12	7.9
6 or More	18	12.2	0	0.0	18	11.9

Note: There were 17 cases with missing information for number of times arrested.

Number	Times in Juvenile Detention				Times in Juvenile Confinement			
	Males		Females		Males		Females	
	N	N	N	%	N	N	N	%
0	4	0	4	2.6	11	0	11	7.2
1	45	1	46	30.3	108	3	111	72.5
2	40	0	40	26.3	23	0	23	15.0
3	25	1	26	17.1	2	0	2	1.3
4	12	1	13	8.6	3	0	3	2.0
5	9	0	9	5.9	3	0	3	2.0
6 +	14	0	14	9.2	0	0	0	0.0

Note: There were 16 cases with missing information.

Note: 15 cases had missing information.

Juvenile Reported Court-Related History, continued

Number of Court Hearings	Number of Juvenile Court Hearings					
	Males		Females		Total	
	N	%	N	%	N	%
0	2	1.4	0	0.0	2	1.4
1	23	15.9	1	33.3	24	16.2
2	21	14.5	0	0.0	21	14.2
3	24	16.6	1	33.3	25	16.9
4	16	11.0	0	0.0	16	10.8
5	16	11.0	1	33.3	17	11.5
6 or More	43	29.7	0	0.0	43	29.1

Note: There were 20 cases with missing information for number of juvenile court hearings.

Number	Alcohol-Related Arrests				Drug-Related Arrests			
	Males		Females		Males		Females	
	N	N	N	%	N	N	N	%
0	140	3	143	92.3	129	3	132	85.2
1	9	0	9	5.8	19	0	19	12.3
2	1	0	1	0.6	3	0	3	1.9
3	1	0	1	0.6	1	0	1	0.6
4	0	0	0	0.0	0	0	0	0.0
5 +	1	0	1	0.6	0	0	0	0.0

Note: There were 13 cases with missing information for alcohol arrests and drug arrests.

Test Statistics Used in this Report

The test statistics used in this report include reliability, validity and accuracy. Reliability refers to precision of measurement. Validity refers to the degree to which the test measures what it is supposed to measure. Accuracy refers to how closely obtained scale score risk range percentages approximate expected percentages.

Reliability

Reliability can be thought of as the likelihood that scores are reproducible. A test that is reliable will result in similar scores for the respondent time and time again. The importance of repeatability cannot be over-emphasized. If different scores were gotten each time a test was taken then completely different interpretations of the test scores result and different decisions made regarding intervention. If test scores are not precise measurements then the test cannot be accurate.

The most common reliability statistic is coefficient alpha. This statistic gives inter-item reliability as well as scale reliability. Here we have consistency of each test item in relation to respondents' scores. Coefficient alpha varies from 0 for random responding or no reliability to 1 for perfect reliability. Reliability coefficients of .75 are generally accepted for test reliability and coefficients above .85 are considered very reliable.

Validity

Test validity means that the test scale scores measure what they are supposed to measure, i.e., severity of problems. For example, Alcohol Scale scores identify problem prone drinkers and the Drugs Scale scores identify drug abusers. The criterion in the analysis that establish problem drinkers or drug abusers is having been in treatment (alcohol or drug). Having been in treatment identifies offenders as having had an alcohol or drug problem. Treatment information is obtained directly from offenders' responses to test items. An example test item is "I have been in alcohol treatment for my drinking problem." For other scales, offenders' responses to certain test items represent admission of problems. An example item is, "I am in counseling or treatment for anxiety or depression." Offenders who admitted having problems would be expected to score in the corresponding scale's problem range. Test items are chosen that directly relate to the scale and these are the scales included in this analysis. Other scales that do not have a direct item to choose as a criterion are not included.

For these analyses, offenders were separated into two groups, those who admitted problems and those who did not admit problems. Then, offender scores on the relevant scales were compared. It was predicted that offenders who admitted problems would score in the problem risk range (70th percentile and above) on the test scales. Non-problem was defined in terms of low risk scores (39th percentile and below). The percentage of offenders who had admitted problems and also scored in the 70th percentile range and above was considered a correct identification of problems. High percentages of offenders who admitted to problems and had elevated problem-risk scores would demonstrate these scales' validity.

Accuracy

For ease in interpreting offender risk, scale scores were divided into four risk ranges: low risk (zero to 39th percentile), medium risk (40 to 69th percentile), problem risk (70 to 89th percentile), and severe problem risk (90 to 100th percentile). By definition the expected percentages of offenders scoring in each risk range (for each scale) is: 39% in low risk, 30% in medium risk, 20% in problem risk, and 11% in severe problem risk. Scores at or above the 70th percentile identify offenders as having problems.

The predictive validity results lend support for using these particular percentages. The 70th percentile cut off for problem identification correctly classifies nearly 100 percent of problem offenders. The low risk level of 39 percent avoids putting a large percentage of offenders into a "moderate" range. Putting low risk offenders into intervention programs aimed at higher risk offenders would over-burden counseling programs and may be counter-productive, unnecessarily alarm offenders and result in offenders exhibiting more problems than they originally had.

Risk range percentile scores were derived by adding points for test items, truth-correction points and criminal history, if applicable. These raw scores are converted to percentile scores by using cumulative percentage distributions. These results are presented in tables for each test separately. Risk range percentile scores represent degree of severity. Analysis of the risk range percentile scores involved comparing the offender's obtained risk range percentile scores to predicted risk range percentages as defined above. These percentages are shown in parentheses in the top row of the tables. The actual percentage of offenders falling in each of the four risk ranges, based on their risk range percentile scores, was compared to these predicted percentages. The differences between predicted and obtained are shown in parentheses. Small differences indicate the scales are accurate.