Adolescent Chemical Dependency Inventory (ACDI)

2007
ANNUAL SUMMARY REPORT

This report summarizes ACDI test data for **422** adolescents. The ACDI test data were returned between the years 2004 and 2007. The ACDI is described on the Behavior Data Systems website at www.bdsltd.com. This report is provided by Risk & Needs Assessment, Inc., P.O. Box 44828, Phoenix, AZ 85064-4828.

Introduction _____

The contents of this report were designed to summarize 422 Adolescent Chemical Dependency Inventory (ACDI) tests that were administered prior to October 2007. This report also assesses the accuracy, reliability, and validity of the Adolescent Chemical Dependency Inventory (ACDI). This report contains data from disks received by Behavior Data Systems. Specifically, the data represents 422 adolescents who were tested prior to October 2007.
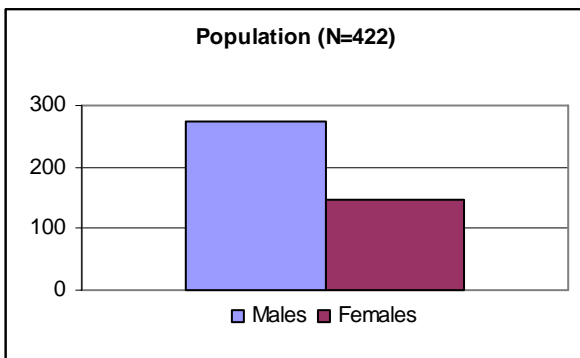
Demographic Information _____

The following data represents adolescents' self-reported answers to specific demographic questions.

Number of Adolescents Tested _____
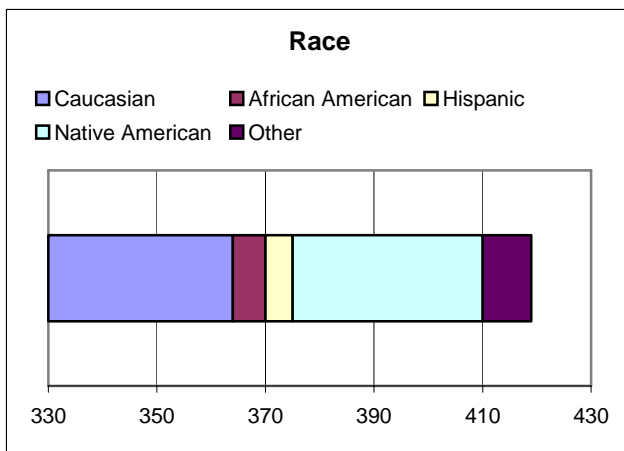
Population (N=422)

Report data collected in the years 2004-2007.

- **422 adolescents** were tested

- 274 (64.9%) adolescents were male

- 148 (35.1%) adolescents were female

Race/Ethnicity_____
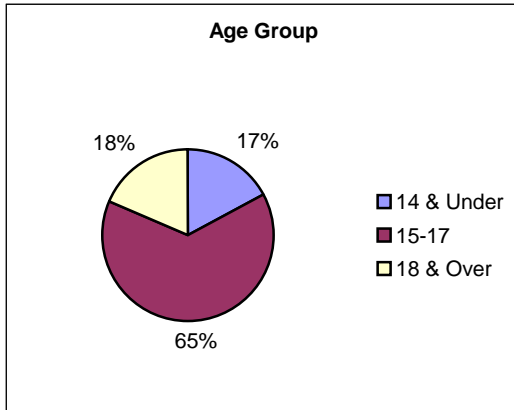
Race

☐ Caucasian ■ African American ☐ Hispanic
☐ Native American ■ Other

The majority of adolescents (87%) were Caucasian.

- 364 (86.9%) adolescents were Caucasian

- 6 (1.4%) adolescents were African American

- 35 (8.4%) adolescents were Native American

- 5 (1.2%) adolescents were Hispanic

- 9 (2.1%) adolescents were of other ethnicities

Age_____

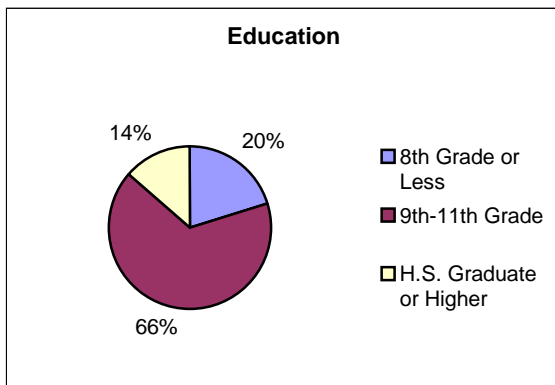**Age Group**

18%   17%

□ 14 & Under
■ 15-17
□ 18 & Over

65%

- The average age for all adolescents tested was 16.2

- Adolescents' ages ranged from 12 to 22

- The largest percentage (65%) of adolescents were 15 to17 years old

- There were no significant differences in average age by gender or ethnicity

Education _____

Education

14%   20%

□ 8th Grade or Less
■ 9th-11th Grade
□ H.S. Graduate or Higher

66%

- The majority of adolescents (66%) had completed anywhere from 9th to 11th grade.

- 14% of adolescents had completed high school or some college.

- Their were no significant differences in educational attainment by race or gender

Detailed demographic information is presented in the Appendix.

Adolescent Chemical Dependency Inventory (ACDI)
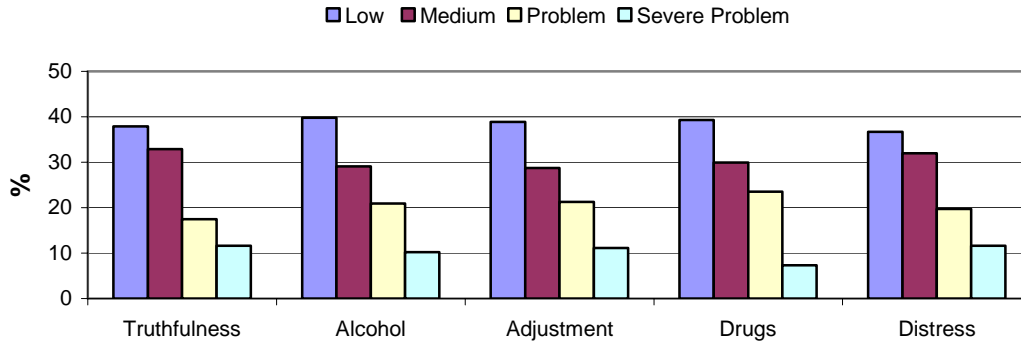
Accuracy, Reliability & Validity_____

The following section reports data from analyses for the ACDI based on the current sample of adolescents (N=422).

ACDI Accuracy _____

Test accuracy is demonstrated by small differences between obtained percentages for scale score risk ranges and expected percentages. Four categories of risk are assigned: Low Risk (zero to 39th percentile), Medium Risk (40 to 69th percentile), Problem Risk (70 to 89th percentile), and Severe Problem (90 to 100th percentile). Offender-obtained percentages for the four risk categories are subtracted from expected percentages which are shown in the top row of Table 1.

Table 1. ACDI Accuracy (105 Items, N=422)

□ Low ■ Medium □ Problem □ Severe Problem

Scale	Low Risk (39%)		Medium Risk (30%)		Problem Risk (20%)		Severe Problem (11%)	
Truthfulness	37.9	**(1.1)**	32.9	**(2.9)**	17.5	**(2.5)**	11.6	**(0.6)**
Alcohol	39.8	**(0.8)**	29.1	**(0.9)**	20.9	**(0.9)**	10.2	**(0.8)**
Adjustment	38.9	**(0.1)**	28.7	**(1.3)**	21.3	**(1.3)**	11.1	**(0.1)**
Drugs	39.3	**(0.3)**	29.9	**(0.1)**	23.5	**(3.5)**	7.3	**(3.7)**
Distress	36.7	**(2.3)**	32.0	**(2.0)**	19.7	**(0.3)**	11.6	**(0.6)**

The percentages for each ACDI scale and risk range category were obtained from the cumulative distribution of test-takers' scale scores. All but two obtained risk range percentiles were within 3.0 points of the expected percentages. Accuracy of the ACDI is shown by the small differences between obtained risk range percentages and expected percentages.

The smallest difference (0.1) between obtained and expected percentages is in the Adjustment Scale for the low risk and severe problem risk ranges and the Drugs Scale for the medium risk range. The largest difference (3.7) is in the Drugs Scale for the severe problem risk range. The average difference for all risk ranges and scales is 1.3. These findings support the accuracy of the ACDI.

Reliability_____

Scale reliability coefficients demonstrate the extent to which adolescents follow a definite pattern of responding. If "Adolescent One" is more at-risk than "Adolescent Two," "Adolescent One" will consistently answer more scale items in a deviant manner than "Adolescent Two." Table 2 shows the alpha coefficient reliability (internal consistency) scores for each ACDI scale.

Table 2. Reliability coefficient alphas for the ACDI.
All alphas are significant at p<.001.

Scale	Alpha
Truthfulness Scale	**.88**
Alcohol Scale	**.91**
Drugs Scale	**.92**
Distress Scale	**.92**
Adjustment Scale	**.86**

All ACDI scales have a reliability of .86 or higher. The professionally accepted reliability standard is .75 and higher. All ACDI scales exceed this standard.

Validity_____

Previous ACDI research demonstrated concurrent validity with the Minnesota Multiphasic Personality Inventory (MMPI). The MMPI is the most widely accepted and respected personality test in the United States. Validity refers to a test measuring what it is purported to measure. The quality of a test is largely determined by its validity. Concurrent (criterion related) validity correlates the independent scales of the test being validated with corresponding measures from an established test. The ACDI - MMPI relationships are significant and support the validity of the ACDI.

Summary _____

Data for this report were obtained from diskettes that were returned prior to October 2007. The ACDI was administered to **422 adolescents**. There were 274 males (64.9%) and 148 females (35.1%). The offender population is broadly defined as Caucasian (86.9%), 15 through 17 years of age (65%), and had completed anywhere from 9th to 11th Grade (66%).

ACDI Accuracy, Reliability and Validity

- ACDI scale risk range percentile scores are **97 percent accurate**.

- All ACDI scale reliability coefficients were **.86 or higher**. The professionally accepted reliability standard is .75 or better. All ACDI scales exceed this standard.

- Previous ACDI research demonstrated concurrent validity with the Minnesota Multiphasic Personality Inventory (MMPI). The ACDI - MMPI relationships are significant and support the validity of the ACDI.

Correct identification of alcohol, drugs, distress and adjustment problems are needed to assess adolescents' risk for current or future problems with substance use and abuse. The ACDI is an accurate, reliable and valid test for adolescent chemical dependency assessment.

_____
Amy Sharp, M.S.W.
Research Analyst

Appendix _____

Data contained on ACDI diskettes returned to Behavior Data Systems between the years 2004 and 2007 are summarized.

Adolescent Demographic Information

Population				
Males		Females		Total
N	%	N	%	N
274	64.9	148	35.1	422

Age Group				
Age	Males	Females	Total	
	N	N	N	%
Under 13	5	1	6	1.4
13	10	4	14	3.3
14	31	22	53	12.6
15	39	40	79	18.7
16	66	29	95	22.5
17	66	31	97	23.0
18	28	7	35	8.3
Over 18	29	14	43	10.2

Race/Ethnicity				
Race	Males	Females	Total	
	N	N	N	%
Caucasian	244	120	364	86.9
African American	4	2	6	1.4
Hispanic	3	2	5	1.2
Native American	12	23	35	8.4
Asian	0	0	0	0.0
Other	9	0	9	2.1

Note: 3 cases had missing Race information.

Education				
	Males	Females	Total	
Grade	N	N	N	%
6th Grade or Less	5	1	6	1.5
7th Grade	14	8	22	5.4
8th Grade	30	25	55	13.5
9th Grade	59	41	100	24.5
10th Grade	67	34	101	24.8
11th Grade	52	16	68	16.7
H.S. Graduate/GED	30	12	42	10.3
Some College	8	6	14	3.4

Note: 14 cases had missing education information.