

Adolescent Chemical Dependency Inventory (ACDI)

2007 ANNUAL SUMMARY REPORT

This report summarizes ACDI test data for **846** adolescents. The ACDI is described on the Behavior Data Systems website at www.bdsltd.com. This report is provided by Behavior Data Systems, Ltd., P.O. Box 44256, Phoenix, AZ 85064-4256.

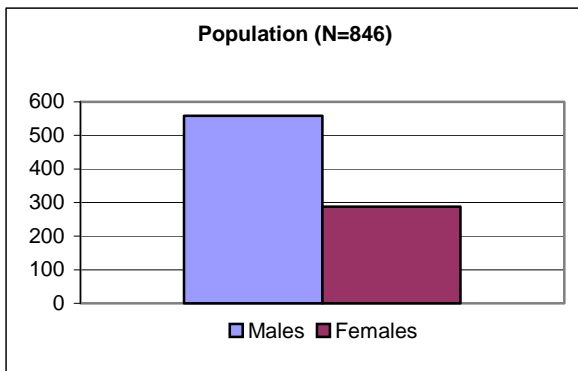
Introduction

The contents of this report were designed to summarize 846 Adolescent Chemical Dependency Inventory (ACDI) tests and assess the reliability, validity and accuracy of the ACDI. This report summarizes the test data that was obtained from 846 juveniles that were tested prior to October 2007.

Demographic Information

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

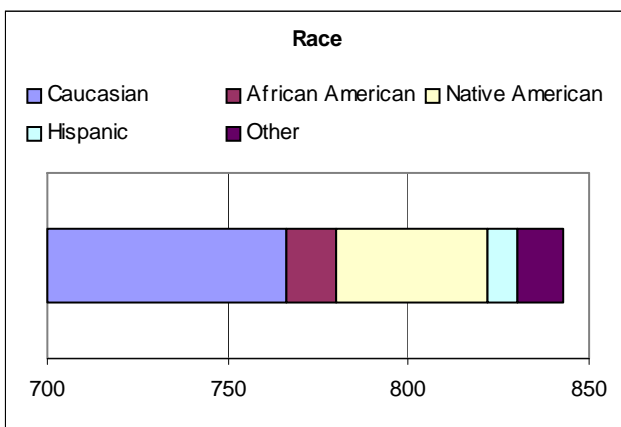
Number of Adolescents Tested



Report data collected prior to October 2007.

- **846 adolescents** were tested
- 558 (66.0%) adolescents were male
- 288 (34.0%) adolescents were female

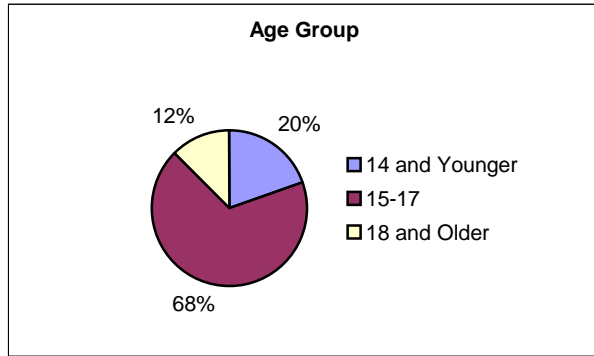
Race/Ethnicity



The majority of adolescents (91%) were Caucasian.

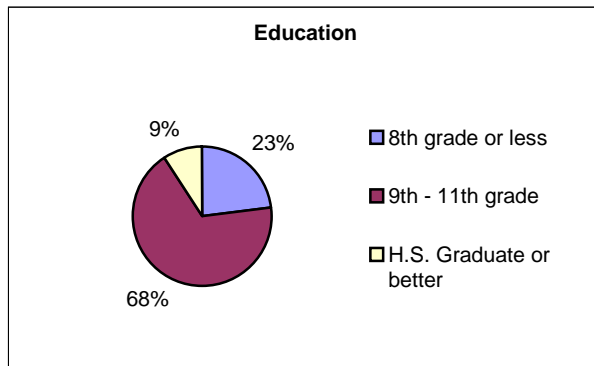
- 766 (90.9%) adolescents were Caucasian
- 14 (1.7%) adolescents were African American
- 42 (5.0%) adolescents were Native American
- 8 (0.9%) adolescents were Hispanic
- 13 (1.5%) adolescents were of other ethnicities

Age



- The average age for all adolescents tested was 15.9 years.
- Adolescents' ages ranged from 12 to 26
- The largest percentage (67.5%) of adolescents were 15 to 17 years old.
- There were no significant differences in average age by gender or ethnicity.

Education



- The majority of adolescents (67.8%) had completed anywhere from the 9th to 11th grade.
- 9.3% of adolescents had completed high school or some college.
- There were no significant differences in education by race or gender.

Detailed demographic information is presented in the Appendix.

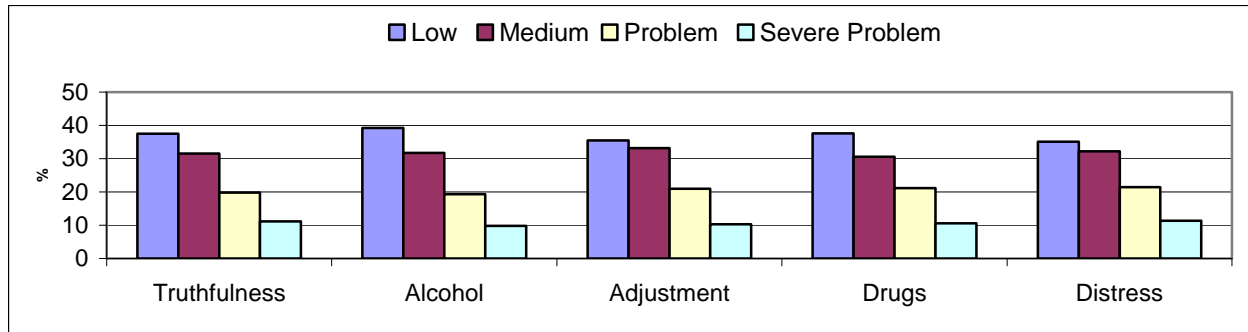
Accuracy, Reliability & Validity

The following section reports accuracy, reliability and validity data for the ACDI based on the current sample of juveniles (N=846).

ACDI Accuracy

Test accuracy is demonstrated by small differences between obtained percentage scale scores and expected or predicted percentages. Four categories of risk include: 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) risk. Offender-obtained percentages for the four risk categories are subtracted from predicted percentages which are shown in the bold parentheses to the right of each risk range. For example, the predicted percentage for the Truthfulness Scale's low risk range is 39%, whereas the attained score was 37.5 percent— which is 1.5 percentage points from the predicted score. The difference score is shown in bold parentheses, e.g., **(1.5)**.

Table 1. ACDI Accuracy (105 Items, N=846)



Scale	Low Risk (39%)	Medium Risk (30%)	Problem Risk (20%)	Severe Problem (11%)
Truthfulness	37.5 (1.5)	31.5 (1.5)	19.8 (0.2)	11.2 (0.2)
Alcohol	39.2 (0.2)	31.7 (1.7)	19.3 (0.7)	9.8 (1.2)
Adjustment	35.5 (3.5)	33.2 (3.2)	21.0 (1.0)	10.3 (0.7)
Drugs	37.6 (1.4)	30.6 (0.6)	21.2 (1.2)	10.6 (0.4)
Distress	35.1 (3.9)	32.2 (2.2)	21.4 (1.4)	11.3 (0.3)

The percentages for each ACDI scale and its risk range categories 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 the expected percentages.

The smallest difference (0.2) between obtained and expected percentages is in the Truthfulness Scale for the problem risk and severe problem risk ranges as well as the Alcohol Scale for its low risk range. The largest difference (3.9) is in the Distress Scale for the low risk range. The average difference for all risk ranges and scales is 1.4. These findings strongly support the accuracy of the ACDI.

Reliability

Scale reliability coefficients demonstrate the extent to which juveniles test scores are reliable. A test that is reliable will result in similar scores for a respondent time and time again. The most common reliability statistic is coefficient alpha. Coefficient alpha varies from 0 for random responding or no reliability to 1 for perfect reliability. 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 $p < .001$.**

<u>Scale</u>	<u>Alpha</u>
Truthfulness Scale	.87
Alcohol Scale	.89
Drugs Scale	.90
Distress Scale	.92
Adjustment Scale	.86

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

Validity

Predictive validity analysis identified adolescents who admitted to a drinking or drug problem. ACDI Alcohol and Drug Scale scores were then analyzed. A correct identification meant these problem juveniles scored in the Alcohol or Drug Scale's problem risk range (70th percentile and above).

The ACDI Alcohol Scale accurately identified 95.7 percent of the juveniles that reported they "have a drinking problem." Similarly, the Drugs Scale identified 97.0 percent of juveniles that reported they "have a drug problem." In other words, 95.7% and 97.0% of the adolescents who admitted to having alcohol or drug problems scored in the problem risk (70th percentile and higher) range on the Alcohol or Drug Scales. Understanding juvenile denial and problem minimization makes these scores even more impressive.

Summary

Data for this report were obtained from diskettes that were returned to Behavior Data Systems, Ltd. prior to October 2007. The ACDI was administered to **846 adolescents**. There were 558 males (66.0%) and 288 females (34.0%). The offender population is broadly defined as Caucasian (90.9%), 15 through 17 years of age (67.5%), and had completed anywhere from 9th to 11th Grade (67.8%).

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 exceeded this standard.
- The Alcohol Scale identified **95.7%** of adolescents with a drinking problem
- The Drugs Scale identified **97%** of adolescents with a drug problem
- When juvenile denial and problem minimization are factored in, these findings are even more impressive.

Correct identification of alcohol, drugs, distress and adjustment problems are needed to assess adolescents' risk for current adjustment, distress and substance use and abuse problems. The ACDI is an accurate, reliable and valid test for juvenile chemical dependency assessment. It should be noted that juveniles with serious emotional and adjustment problems have a higher instance of suicidal ideation. The ACDI is a comprehensive juvenile assessment instrument or test. Additional Adolescent Chemical Dependency Inventory (ACDI) information is provided on our www.bdsltd.com website.

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Appendix

Data contained on ACDI diskettes returned to Behavior Data Systems prior to October 2007 are summarized.

Adolescent Demographic Information

Population				
Males		Females		Total
N	%	N	%	N
558	66.0	288	34.0	846

Age Group				
Age	Males	Females	Total	
	N	N	N	%
Under 13	8	1	9	1.1
13	18	16	34	4.0
14	68	54	122	14.5
15	104	66	170	20.2
16	145	59	204	24.3
17	136	61	197	23.4
18	42	13	55	6.5
Over 18	32	18	50	5.9

Note: 5 cases had missing age information.

Race/Ethnicity				
Race	Males	Females	Total	
	N	N	N	%
Caucasian	515	251	766	90.9
African American	11	3	14	1.7
Hispanic	5	3	8	0.9
Native American	14	28	42	5.0
Asian	0	0	0	0
Other	11	2	13	1.5

Note: 3 cases had missing race information.

Education				
Grade	Males	Females	Total	
	N	N	N	%
6th Grade or Less	10	4	14	1.7
7th Grade	31	19	50	6.0
8th Grade	76	50	126	15.2
9th Grade	149	83	232	28.0
10th Grade	134	65	199	24.0
11th Grade	94	37	131	15.8
H.S. Graduate/GED	42	16	58	7.0
Some College	10	9	19	2.3

Note: 17 cases had missing education information.