

Attitude About Behavior
Grade 8/Year 9
FAST Track Project Technical Report
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SAS program to create derived subscales.

Citation

Loeber, R., Farrington, D. P., Stouthamer-Loeber, M., & Van Kammen, W. B. (1998). *Antisocial Behavior and Mental Health Problems: Explanatory Factors in Childhood and Adolescence*. Mahwah, NJ: Lawrence Erlbaum.

Loeber, R., Farrington, D. P., Stouthamer-Loeber, M., & Van Kammen, W. B. (1991). *Attitude about behavior*, Pittsburgh Youth Study.

Report

Godwin, J. and Klaric, J. (2004). Attitudes About Behavior (Fast Track Project Technical Report) [On-line]. Available: <http://www.fasttrackproject.org/>

Data Sources

Unscored : C9U

Scored : AAB9

I. Scale Description

The Attitudes About Behavior measure is a 16-item measure developed for the Pittsburgh Youth Study (Loeber, Stouthamer-Loeber, van Kammen & Farrington, 1991 and 1998) It assesses the youth's tolerance regarding a variety of delinquent behaviors such as skipping school, stealing, assault, and substance use. The items are rated on a four-point scale from 1=not wrong at all to 4=very wrong.

II. Report Sample

These exploratory analyses were conducted on the high-risk control, cohort 1 (n=155) and the normative sample (n=387, n=463, including overlap) for the ninth year of the study. Overall, 105 students were missing responses to the entire measure. Out of these, 30 were in the control sample (5 from Durham, 9 from Nashville, 8 from Penn State, 8 from Washington), and 91 were from the normative sample (15 from Durham, 30 from Nashville, 27 from Penn State and 19 from Washington).

III. Scaling

Loeber et al. developed two subscales: *Attitude towards Substance Use*, containing items 12 to 16 and *Attitude towards Delinquency*, containing items 1 to 11, with the exception of item 4 (having sexual intercourse). The scales were constructed by taking the mean values across the designated items.

The items were also subjected to an exploratory factor analyses with principal component, using promax rotation and the year 8 data. Three eigenvalues greater than the commonly used 1.0 cutoff were detected. An examination of the 2-factor and 3-factor structure showed that the third factor only contained 3 items and did not have a well-defined conceptual meaning. The two-factor solution, divided the items in a group of *Serious Offenses* (steal \$50, breaking and entering, joyriding, assault, robbery, smoking, drinking, drug use and selling) and a group of *Less Serious Offenses* (skip school, lie/disobey, damage someone else's things, sexual intercourse, steal something worth \$5, fights). Again, the scales were constructed by taking the mean values across the designated items.

Finally, a *Total Score* consisting of responses to all items was also constructed by taking a mean across the items.

The inter-item reliability coefficients of all the subscales are presented in the table below:

Cronbach's Alpha for Scales			
Variable	Label	Normative	High Risk Control
AAB9DEL	AttitudeTowardsDelinquency - AAB - Year	0.89	0.83
AAB9LSS	Less Serious Offenses - AAB - Year 9	0.80	0.66
AAB9SAB	AttitudeTowardsSubsAbuse - AAB - Year 9	0.84	0.80
AAB9SER	Serious Offenses - AAB - Year 9	0.90	0.84
AAB9TOT	Item Total - AAB - Year 9	0.92	0.86

Subscales were highly reliable regardless of sample. In the normative sample, all alphas were greater than 0.8; in the control sample, all alphas were greater than 0.66.

IV. Differences Between Groups

T-tests for equality of means across the normative and control samples were conducted for the individual items as well as the subscales. A significant difference between means was observed at the .05 level for item c9u4 (Have Sexual Intercourse).

None of the scales showed a significant difference between high risk and normative sample

Comparison of Means for Normative and Control for Continuous Scales and Items								
Variable	Label	Normative		Control		DF	t Value	Pr > t
		Mean	Std Dev	Mean	Std Dev			
AAB9DEL	AttitudeTowardsDelinquency - AAB - Year 9	3.51	0.53	3.48	0.46	354	-0.53	0.5978
AAB9LSS	Less Serious Offenses - AAB - Year 9	3.22	0.63	3.12	0.54	354	-1.51	0.1317
AAB9SAB	AttitudeTowardsSubsAbuse - AAB - Year 9	3.58	0.60	3.51	0.59	354	-1.08	0.2812
AAB9SER	Serious Offenses - AAB - Year 9	3.66	0.51	3.62	0.45	354	-0.72	0.4696
AAB9TOT	Item Total - AAB - Year 9	3.50	0.53	3.43	0.44	291	-1.19	0.2364
C9U1	Skip School Without An Excuse	3.25	0.86	3.17	0.93	354	-0.82	0.4147

Comparison of Means for Normative and Control for Continuous Scales and Items								
Variable	Label	Normative		Control		DF	t Value	Pr > t
		Mean	Std Dev	Mean	Std Dev			
C9U2	Lie/Disobey/Talk Back to Adults	3.30	0.83	3.25	0.79	354	-0.52	0.6018
C9U3	Purposely Damage Someone Elses Things	3.61	0.73	3.51	0.75	354	-1.22	0.2248
C9U4	Have Sexual Intercourse	2.92	1.07	2.57	1.07	354	-2.90	0.0040
C9U5	Steal Something Worth 5 dollars	3.28	0.80	3.29	0.89	354	0.06	0.9499
C9U6	Steal Something Worth 50 dollars	3.72	0.61	3.73	0.67	354	0.15	0.8831
C9U7	Go Into a Building to Steal Something	3.75	0.54	3.76	0.55	354	0.06	0.9503
C9U8	Go Joyriding Without Owners Permission	3.74	0.65	3.65	0.63	354	-1.17	0.2430
C9U9	Hit Someone/Get Into a Physical Fight	2.99	0.88	2.95	0.86	354	-0.36	0.7157
C9U10	Attack Someone W/ a Weapon to Injure The	3.70	0.67	3.66	0.70	354	-0.49	0.6262
C9U11	Use Weapon to Get Money/Things From Othe	3.76	0.59	3.83	0.47	301	1.18	0.2388
C9U12	Smoke Cigarettes or Chew Tobacco	3.29	0.91	3.25	0.92	354	-0.38	0.7017
C9U13	Drink Beer/Wine/Alcohol W/O Par Knowledg	3.41	0.86	3.38	0.82	354	-0.37	0.7132
C9U14	Use Marijuana/Hashish/Pot	3.63	0.76	3.54	0.77	354	-1.00	0.3204
C9U15	Use Hard Drugs (Heroin/Cocaine/LSD)	3.88	0.45	3.81	0.55	212	-1.26	0.2074
C9U16	Sell Drugs	3.72	0.69	3.59	0.85	211	-1.43	0.1528

V. Recommendations for Use

The scales were negatively skewed for both control and normative samples, except for the Less Serious Offenses subscale. In the normative sample, high kurtosis (>3) was obtained for 3 subscales (Serious Offenses, Attitude towards Substance Abuse, Attitude towards Delinquency) and the Total Score?. In the control sample, high kurtosis (>3) was observed only for the Serious Offenses subscale. Data for the subscales, excluding the Less Serious Offenses subscale, may violate assumptions regarding normality.

Because of the high intercorrelations among subscales, it is recommended that total scale scores be used for analyses, unless there is a specific interest in differentiating between severities, or of type of behavior.

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VI. Item and Scale Means and SD's

Descriptive Statistics - Normative Sample						
Variable	Label	N	Mean	Std Dev	Minimum	Maximum
AAB9DEL	AttitudeTowardsDelinquency - AAB - Year 9	295	3.50	0.52	1.00	4.00
AAB9LSS	Less Serious Offenses - AAB - Year 9	295	3.20	0.62	1.00	4.00
AAB9SAB	AttitudeTowardsSubsAbuse - AAB - Year 9	295	3.57	0.60	1.00	4.00
AAB9SER	Serious Offenses - AAB - Year 9	295	3.65	0.51	1.00	4.00
AAB9TOT	Item Total - AAB - Year 9	295	3.48	0.52	1.00	4.00
C9U1	Skip School Without An Excuse	295	3.24	0.87	1.00	4.00
C9U2	Lie/Disobey/Talk Back to Adults	295	3.27	0.83	1.00	4.00
C9U3	Purposely Damage Someone Elses Things	295	3.59	0.74	1.00	4.00
C9U4	Have Sexual Intercourse	295	2.83	1.08	1.00	4.00
C9U5	Steal Something Worth 5 dollars	295	3.27	0.84	1.00	4.00
C9U6	Steal Something Worth 50 dollars	295	3.72	0.62	1.00	4.00
C9U7	Go Into a Building to Steal Something	295	3.76	0.53	1.00	4.00
C9U8	Go Joyriding Without Owners Permission	295	3.72	0.66	1.00	4.00
C9U9	Hit Someone/Get Into a Physical Fight	295	2.99	0.87	1.00	4.00
C9U10	Attack Someone W/ a Weapon to Injure The	295	3.68	0.70	1.00	4.00
C9U11	Use Weapon to Get Money/Things From Othe	295	3.77	0.58	1.00	4.00
C9U12	Smoke Cigarettes or Chew Tobacco	295	3.27	0.92	1.00	4.00
C9U13	Drink Beer/Wine/Alcohol W/O Par Knowledg	295	3.43	0.85	1.00	4.00
C9U14	Use Marijuana/Hashish/Pot	295	3.60	0.77	1.00	4.00
C9U15	Use Hard Drugs (Heroin/Cocaine/LSD)	295	3.86	0.49	1.00	4.00
C9U16	Sell Drugs	295	3.69	0.74	1.00	4.00

Descriptive Statistics - High Risk Control Sample						
Variable	Label	N	Mean	Std Dev	Minimum	Maximum
AAB9DEL	AttitudeTowardsDelinquency - AAB - Year 9	124	3.48	0.46	1.80	4.00
AAB9LSS	Less Serious Offenses - AAB - Year 9	124	3.12	0.54	1.67	4.00
AAB9SAB	AttitudeTowardsSubsAbuse - AAB - Year 9	124	3.51	0.59	1.20	4.00
AAB9SER	Serious Offenses - AAB - Year 9	124	3.62	0.45	1.90	4.00
AAB9TOT	Item Total - AAB - Year 9	124	3.43	0.44	2.00	4.00
C9U1	Skip School Without An Excuse	124	3.17	0.93	1.00	4.00
C9U2	Lie/Disobey/Talk Back to Adults	124	3.25	0.79	1.00	4.00
C9U3	Purposely Damage Someone Elses Things	124	3.51	0.75	1.00	4.00
C9U4	Have Sexual Intercourse	124	2.57	1.07	1.00	4.00
C9U5	Steal Something Worth 5 dollars	124	3.29	0.89	1.00	4.00
C9U6	Steal Something Worth 50 dollars	124	3.73	0.67	1.00	4.00
C9U7	Go Into a Building to Steal Something	124	3.76	0.55	1.00	4.00
C9U8	Go Joyriding Without Owners Permission	124	3.65	0.63	1.00	4.00
C9U9	Hit Someone/Get Into a Physical Fight	124	2.95	0.86	1.00	4.00
C9U10	Attack Someone W/ a Weapon to Injure The	124	3.66	0.70	1.00	4.00
C9U11	Use Weapon to Get Money/Things From Othe	124	3.83	0.47	1.00	4.00
C9U12	Smoke Cigarettes or Chew Tobacco	124	3.25	0.92	1.00	4.00
C9U13	Drink Beer/Wine/Alcohol W/O Par Knowledg	124	3.38	0.82	1.00	4.00
C9U14	Use Marijuana/Hashish/Pot	124	3.54	0.77	1.00	4.00
C9U15	Use Hard Drugs (Heroin/Cocaine/LSD)	124	3.81	0.55	1.00	4.00
C9U16	Sell Drugs	124	3.59	0.85	1.00	4.00

VII. Item and Scale Correlations

Pearson Correlation Coefficients, N = 356 Prob > r under H0: Rho=0					
	AAB9SER	AAB9LSS	AAB9SAB	AAB9DEL	AAB9TOT
AAB9SER Serious Offenses - AAB - Year 9	1.000	0.754 0.000	0.928 0.000	0.855 0.000	0.955 0.000
AAB9LSS Less Serious Offenses - AAB - Year 9	0.754 0.000	1.000	0.647 0.000	0.921 0.000	0.914 0.000
AAB9SAB AttitudeTowardsSubsAbuse - AAB - Year 9	0.928 0.000	0.647 0.000	1.000	0.665 0.000	0.863 0.000
AAB9DEL AttitudeTowardsDelinquency - AAB - Year 9	0.855 0.000	0.921 0.000	0.665 0.000	1.000	0.942 0.000
AAB9TOT Item Total - AAB - Year 9	0.955 0.000	0.914 0.000	0.863 0.000	0.942 0.000	1.000

Pearson Correlation Coefficients, N = 356 Prob > r under H0: Rho=0									
	C9U1	C9U2	C9U3	C9U4	C9U5	C9U6	C9U7	C9U8	C9U9
C9U1 Skip School Without An Excuse	1.000	0.463 0.000	0.494 0.000	0.370 0.000	0.443 0.000	0.421 0.000	0.454 0.000	0.399 0.000	0.360 0.000
C9U2 Lie/Disobey/Talk Back to Adults	0.463 0.000	1.000	0.528 0.000	0.320 0.000	0.275 0.000	0.364 0.000	0.450 0.000	0.430 0.000	0.370 0.000
C9U3 Purposely Damage Someone Elses Things	0.494 0.000	0.528 0.000	1.000	0.245 0.000	0.305 0.000	0.397 0.000	0.515 0.000	0.495 0.000	0.368 0.000
C9U4 Have Sexual Intercourse	0.370 0.000	0.320 0.000	0.245 0.000	1.000	0.324 0.000	0.318 0.000	0.277 0.000	0.254 0.000	0.361 0.000
C9U5 Steal Something Worth 5 dollars	0.443 0.000	0.275 0.000	0.305 0.000	0.324 0.000	1.000	0.579 0.000	0.431 0.000	0.360 0.000	0.304 0.000
C9U6 Steal Something Worth 50 dollars	0.421 0.000	0.364 0.000	0.397 0.000	0.318 0.000	0.579 0.000	1.000	0.594 0.000	0.465 0.000	0.300 0.000
C9U7 Go Into a Building to Steal Something	0.454 0.000	0.450 0.000	0.515 0.000	0.277 0.000	0.431 0.000	0.594 0.000	1.000	0.627 0.000	0.405 0.000
C9U8 Go Joyriding Without Owners Permission	0.399 0.000	0.430 0.000	0.495 0.000	0.254 0.000	0.360 0.000	0.465 0.000	0.627 0.000	1.000	0.362 0.000
C9U9 Hit Someone/Get Into a Physical Fight	0.360 0.000	0.370 0.000	0.368 0.000	0.361 0.000	0.304 0.000	0.300 0.000	0.405 0.000	0.362 0.000	1.000
C9U10 Attack Someone W/ a Weapon to Injure The	0.428 0.000	0.423 0.000	0.573 0.000	0.399 0.000	0.377 0.000	0.511 0.000	0.609 0.000	0.528 0.000	0.536 0.000
C9U11 Use Weapon to Get Money/Things From Othe	0.397 0.000	0.378 0.000	0.392 0.000	0.362 0.000	0.367 0.000	0.445 0.000	0.619 0.000	0.450 0.000	0.363 0.000
C9U12 Smoke Cigarettes or Chew Tobacco	0.291 0.000	0.348 0.000	0.218 0.000	0.478 0.000	0.245 0.000	0.304 0.000	0.269 0.000	0.306 0.000	0.328 0.000
C9U13 Drink Beer/Wine/Alcohol W/O Par Knowledg	0.458 0.000	0.378 0.000	0.279 0.000	0.466 0.000	0.279 0.000	0.376 0.000	0.411 0.000	0.473 0.000	0.390 0.000
C9U14 Use Marijuana/Hashish/Pot	0.469 0.000	0.381 0.000	0.352 0.000	0.445 0.000	0.430 0.000	0.525 0.000	0.503 0.000	0.468 0.000	0.381 0.000
C9U15 Use Hard Drugs (Heroin/Cocaine/LSD)	0.323 0.000	0.281 0.000	0.374 0.000	0.206 0.000	0.242 0.000	0.436 0.000	0.484 0.000	0.392 0.000	0.249 0.000
C9U16 Sell Drugs	0.403 0.000	0.254 0.000	0.312 0.000	0.374 0.000	0.337 0.000	0.487 0.000	0.498 0.000	0.414 0.000	0.337 0.000

Pearson Correlation Coefficients, N = 356 Prob > r under H0: Rho=0							
	C9U10	C9U11	C9U12	C9U13	C9U14	C9U15	C9U16
C9U1 Skip School Without An Excuse	0.428 0.000	0.397 0.000	0.291 0.000	0.458 0.000	0.469 0.000	0.323 0.000	0.403 0.000
C9U2 Lie/Disobey/Talk Back to Adults	0.423 0.000	0.378 0.000	0.348 0.000	0.378 0.000	0.381 0.000	0.281 0.000	0.254 0.000
C9U3 Purposely Damage Someone Elses Things	0.573 0.000	0.392 0.000	0.218 0.000	0.279 0.000	0.352 0.000	0.374 0.000	0.312 0.000
C9U4 Have Sexual Intercourse	0.399 0.000	0.362 0.000	0.478 0.000	0.466 0.000	0.445 0.000	0.206 0.000	0.374 0.000
C9U5 Steal Something Worth 5 dollars	0.377 0.000	0.367 0.000	0.245 0.000	0.279 0.000	0.430 0.000	0.242 0.000	0.337 0.000
C9U6 Steal Something Worth 50 dollars	0.511 0.000	0.445 0.000	0.304 0.000	0.376 0.000	0.525 0.000	0.436 0.000	0.487 0.000
C9U7 Go Into a Building to Steal Something	0.609 0.000	0.619 0.000	0.269 0.000	0.411 0.000	0.503 0.000	0.484 0.000	0.498 0.000
C9U8 Go Joyriding Without Owners Permission	0.528 0.000	0.450 0.000	0.306 0.000	0.473 0.000	0.468 0.000	0.392 0.000	0.414 0.000
C9U9 Hit Someone/Get Into a Physical Fight	0.536 0.000	0.363 0.000	0.328 0.000	0.390 0.000	0.381 0.000	0.249 0.000	0.337 0.000
C9U10 Attack Someone W/ a Weapon to Injure The	1.000	0.631 0.000	0.354 0.000	0.390 0.000	0.517 0.000	0.379 0.000	0.416 0.000
C9U11 Use Weapon to Get Money/Things From Othe	0.631 0.000	1.000	0.270 0.000	0.389 0.000	0.536 0.000	0.450 0.000	0.451 0.000
C9U12 Smoke Cigarettes or Chew Tobacco	0.354 0.000	0.270 0.000	1.000	0.697 0.000	0.538 0.000	0.269 0.000	0.453 0.000
C9U13 Drink Beer/Wine/Alcohol W/O Par Knowledg	0.390 0.000	0.389 0.000	0.697 0.000	1.000	0.646 0.000	0.442 0.000	0.506 0.000
C9U14 Use Marijuana/Hashish/Pot	0.517 0.000	0.536 0.000	0.538 0.000	0.646 0.000	1.000	0.453 0.000	0.663 0.000
C9U15 Use Hard Drugs (Heroin/Cocaine/LSD)	0.379 0.000	0.450 0.000	0.269 0.000	0.442 0.000	0.453 0.000	1.000	0.471 0.000
C9U16 Sell Drugs	0.416 0.000	0.451 0.000	0.453 0.000	0.506 0.000	0.663 0.000	0.471 0.000	1.000

Appendix:
(Scoring program removed)