

Attitude About Behavior
Grade 7/Year 8
FAST Track Project Technical Report
Jennifer Godwin and Anne Maumary
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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 Maumary, A. (2004). Attitudes About Behavior (Fast Track Project Technical Report) [On-line]. Available: <http://www.fasttrackproject.org/>

Data Sources

Unscored : C8U

Scored : AAB8

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) in the eighth year of the study. Overall, 78 students were missing the entire measure. Out of these, 24 were included in the control sample (5 from Durham, 6 from Nashville, 6 from Penn State, 7 from Seattle), and 68 were included in the normative sample (12 from Durham, 22 from Nashville, 14 from Penn State and 20 from Seattle).

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. 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
AAB8DEL	AttitudeTowardsDelinquency - AAB - Year	0.90	0.90
AAB8LSS	Less Serious Offenses - AAB - Year 8	0.81	0.78
AAB8SAB	AttitudeTowardsSubsAbuse - AAB - Year 8	0.89	0.89
AAB8SER	Serious Offenses - AAB - Year 8	0.93	0.94
AAB8TOT	Item Total - AAB - Year 8	0.93	0.93

All subscales have a high level of internal consistencies within each sample.

IV. Differences Between Groups

T-tests for equality of means were conducted for the individual items as well as the subscales. A significant difference between means was observed at the .05 level for property damage, sexual intercourse, robbery, cigarette smoking, a marginally significant difference was observed for skipping school, lying, marijuana use, and drug selling.

All the scales showed a significant difference between high risk and normative sample, except for the attitude about substance use and selling, which was marginal. The student in the normative group showed consistently less tolerance than the control group towards bad behaviors.

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			
AAB8DEL	AttitudeTowardsDelinquency - AAB - Year 8	3.56	0.51	3.42	0.62	221	-2.25	0.0257
AAB8LSS	Less Serious Offenses - AAB - Year 8	3.34	0.61	3.15	0.65	383	-2.90	0.0039
AAB8SAB	AttitudeTowardsSubsAbuse - AAB - Year 8	3.70	0.55	3.57	0.68	220	-1.81	0.0718
AAB8SER	Serious Offenses - AAB - Year 8	3.73	0.50	3.60	0.65	210	-1.99	0.0478
AAB8TOT	Item Total - AAB - Year 8	3.58	0.50	3.43	0.60	225	-2.50	0.0132

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			
C8U1	Skip School Without An Excuse	3.30	0.92	3.11	1.00	383	-1.81	0.0718
C8U2	Lie/Disobey/Talk Back to Adults	3.36	0.79	3.18	0.93	228	-1.87	0.0624
C8U3	Purposely Damage Someone Elses Things	3.71	0.64	3.53	0.82	213	-2.18	0.0302
C8U4	Have Sexual Intercourse	3.20	1.04	2.79	1.05	383	-3.65	0.0003
C8U5	Steal Something Worth 5 dollars	3.37	0.79	3.27	0.90	383	-1.06	0.2879
C8U6	Steal Something Worth 50 dollars	3.75	0.63	3.63	0.82	211	-1.55	0.1234
C8U7	Go Into a Building to Steal Something	3.76	0.56	3.65	0.76	204	-1.52	0.1294
C8U8	Go Joyriding Without Owners Permission	3.74	0.63	3.62	0.81	214	-1.46	0.1470
C8U9	Hit Someone/Get Into a Physical Fight	3.11	0.82	3.00	0.94	383	-1.23	0.2198
C8U10	Attack Someone W/ a Weapon to Injure The	3.71	0.62	3.58	0.79	214	-1.66	0.0976
C8U11	Use Weapon to Get Money/Things From Othe	3.79	0.53	3.62	0.79	193	-2.26	0.0251
C8U12	Smoke Cigarettes or Chew Tobacco	3.45	0.83	3.26	0.94	383	-2.02	0.0439
C8U13	Drink Beer/Wine/Alcohol W/O Par Knowledg	3.62	0.70	3.58	0.79	383	-0.53	0.5953
C8U14	Use Marijuana/Hashish/Pot	3.78	0.61	3.63	0.82	205	-1.79	0.0750
C8U15	Use Hard Drugs (Heroin/Cocaine/LSD)	3.87	0.50	3.76	0.72	196	-1.46	0.1461
C8U16	Sell Drugs	3.78	0.61	3.63	0.82	207	-1.81	0.0724

V. Recommendations for Use

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

VI. Item and Scale Means and SD's

Descriptive Statistics - Normative Sample						
Variable	Label	N	Mean	Std Dev	Minimum	Maximum
AAB8DEL	AttitudeTowardsDelinquency - AAB - Year 8	319	3.53	0.54	1.00	4.00
AAB8LSS	Less Serious Offenses - AAB - Year 8	319	3.30	0.63	1.00	4.00
AAB8SAB	AttitudeTowardsSubsAbuse - AAB - Year 8	319	3.68	0.57	1.00	4.00
AAB8SER	Serious Offenses - AAB - Year 8	319	3.70	0.53	1.00	4.00
AAB8TOT	Item Total - AAB - Year 8	319	3.55	0.53	1.00	4.00
C8U1	Skip School Without An Excuse	319	3.26	0.93	1.00	4.00
C8U2	Lie/Disobey/Talk Back to Adults	319	3.33	0.84	1.00	4.00
C8U3	Purposely Damage Someone Elses Things	319	3.68	0.69	1.00	4.00
C8U4	Have Sexual Intercourse	319	3.09	1.07	1.00	4.00
C8U5	Steal Something Worth 5 dollars	319	3.33	0.84	1.00	4.00
C8U6	Steal Something Worth 50 dollars	319	3.72	0.69	1.00	4.00
C8U7	Go Into a Building to Steal Something	319	3.74	0.61	1.00	4.00
C8U8	Go Joyriding Without Owners Permission	319	3.69	0.70	1.00	4.00
C8U9	Hit Someone/Get Into a Physical Fight	319	3.08	0.86	1.00	4.00
C8U10	Attack Someone W/ a Weapon to Injure The	319	3.70	0.65	1.00	4.00
C8U11	Use Weapon to Get Money/Things From Othe	319	3.76	0.60	1.00	4.00
C8U12	Smoke Cigarettes or Chew Tobacco	319	3.42	0.85	1.00	4.00
C8U13	Drink Beer/Wine/Alcohol W/O Par Knowledg	319	3.62	0.71	1.00	4.00
C8U14	Use Marijuana/Hashish/Pot	319	3.75	0.66	1.00	4.00
C8U15	Use Hard Drugs (Heroin/Cocaine/LSD)	319	3.86	0.54	1.00	4.00
C8U16	Sell Drugs	319	3.74	0.66	1.00	4.00

Descriptive Statistics - High Risk Control Sample						
Variable	Label	N	Mean	Std Dev	Minimum	Maximum
AAB8DEL	AttitudeTowardsDelinquency - AAB - Year 8	131	3.42	0.62	1.00	4.00
AAB8LSS	Less Serious Offenses - AAB - Year 8	131	3.15	0.65	1.00	4.00
AAB8SAB	AttitudeTowardsSubsAbuse - AAB - Year 8	131	3.57	0.68	1.00	4.00
AAB8SER	Serious Offenses - AAB - Year 8	131	3.60	0.65	1.00	4.00
AAB8TOT	Item Total - AAB - Year 8	131	3.43	0.60	1.00	4.00
C8U1	Skip School Without An Excuse	131	3.11	1.00	1.00	4.00
C8U2	Lie/Disobey/Talk Back to Adults	131	3.18	0.93	1.00	4.00
C8U3	Purposely Damage Someone Elses Things	131	3.53	0.82	1.00	4.00
C8U4	Have Sexual Intercourse	131	2.79	1.05	1.00	4.00
C8U5	Steal Something Worth 5 dollars	131	3.27	0.90	1.00	4.00
C8U6	Steal Something Worth 50 dollars	131	3.63	0.82	1.00	4.00
C8U7	Go Into a Building to Steal Something	131	3.65	0.76	1.00	4.00
C8U8	Go Joyriding Without Owners Permission	131	3.62	0.81	1.00	4.00
C8U9	Hit Someone/Get Into a Physical Fight	131	3.00	0.94	1.00	4.00
C8U10	Attack Someone W/ a Weapon to Injure The	131	3.58	0.79	1.00	4.00
C8U11	Use Weapon to Get Money/Things From Othe	131	3.62	0.79	1.00	4.00
C8U12	Smoke Cigarettes or Chew Tobacco	131	3.26	0.94	1.00	4.00
C8U13	Drink Beer/Wine/Alcohol W/O Par Knowledg	131	3.58	0.79	1.00	4.00
C8U14	Use Marijuana/Hashish/Pot	131	3.63	0.82	1.00	4.00
C8U15	Use Hard Drugs (Heroin/Cocaine/LSD)	131	3.76	0.72	1.00	4.00
C8U16	Sell Drugs	131	3.63	0.82	1.00	4.00

VII. Item and Scale Correlations

Pearson Correlation Coefficients, N = 385 Prob > r under H0: Rho=0					
	AAB8SER	AAB8LSS	AAB8SAB	AAB8DEL	AAB8TOT
AAB8SER Serious Offenses - AAB - Year 8	1.000	0.725 0.000	0.950 0.000	0.882 0.000	0.955 0.000
AAB8LSS Less Serious Offenses - AAB - Year 8	0.725 0.000	1.000	0.651 0.000	0.921 0.000	0.898 0.000
AAB8SAB AttitudeTowardsSubsAbuse - AAB - Year 8	0.950 0.000	0.651 0.000	1.000	0.756 0.000	0.890 0.000
AAB8DEL AttitudeTowardsDelinquency - AAB - Year 8	0.882 0.000	0.921 0.000	0.756 0.000	1.000	0.963 0.000
AAB8TOT Item Total - AAB - Year 8	0.955 0.000	0.898 0.000	0.890 0.000	0.963 0.000	1.000

Pearson Correlation Coefficients, N = 385 Prob > r under H0: Rho=0									
	C8U1	C8U2	C8U3	C8U4	C8U5	C8U6	C8U7	C8U8	C8U9
C8U1 Skip School Without An Excuse	1.000	0.537 0.000	0.505 0.000	0.272 0.000	0.411 0.000	0.436 0.000	0.368 0.000	0.393 0.000	0.310 0.000
C8U2 Lie/Disobey/Talk Back to Adults	0.537 0.000	1.000	0.542 0.000	0.337 0.000	0.458 0.000	0.439 0.000	0.380 0.000	0.472 0.000	0.350 0.000
C8U3 Purposely Damage Someone Elses Things	0.505 0.000	0.542 0.000	1.000	0.391 0.000	0.528 0.000	0.618 0.000	0.572 0.000	0.640 0.000	0.372 0.000
C8U4 Have Sexual Intercourse	0.272 0.000	0.337 0.000	0.391 0.000	1.000	0.400 0.000	0.381 0.000	0.373 0.000	0.431 0.000	0.449 0.000
C8U5 Steal Something Worth 5 dollars	0.411 0.000	0.458 0.000	0.528 0.000	0.400 0.000	1.000	0.563 0.000	0.474 0.000	0.522 0.000	0.399 0.000
C8U6 Steal Something Worth 50 dollars	0.436 0.000	0.439 0.000	0.618 0.000	0.381 0.000	0.563 0.000	1.000	0.695 0.000	0.624 0.000	0.291 0.000
C8U7 Go Into a Building to Steal Something	0.368 0.000	0.380 0.000	0.572 0.000	0.373 0.000	0.474 0.000	0.695 0.000	1.000	0.635 0.000	0.288 0.000
C8U8 Go Joyriding Without Owners Permission	0.393 0.000	0.472 0.000	0.640 0.000	0.431 0.000	0.522 0.000	0.624 0.000	0.635 0.000	1.000	0.413 0.000
C8U9 Hit Someone/Get Into a Physical Fight	0.310 0.000	0.350 0.000	0.372 0.000	0.449 0.000	0.399 0.000	0.291 0.000	0.288 0.000	0.413 0.000	1.000
C8U10 Attack Someone W/ a Weapon to Injure The	0.430 0.000	0.428 0.000	0.582 0.000	0.401 0.000	0.433 0.000	0.628 0.000	0.615 0.000	0.657 0.000	0.472 0.000
C8U11 Use Weapon to Get Money/Things From Othe	0.379 0.000	0.416 0.000	0.523 0.000	0.393 0.000	0.510 0.000	0.645 0.000	0.638 0.000	0.643 0.000	0.345 0.000
C8U12 Smoke Cigarettes or Chew Tobacco	0.359 0.000	0.325 0.000	0.365 0.000	0.442 0.000	0.369 0.000	0.470 0.000	0.423 0.000	0.503 0.000	0.389 0.000
C8U13 Drink Beer/Wine/Alcohol W/O Par Knowledg	0.431 0.000	0.401 0.000	0.476 0.000	0.411 0.000	0.385 0.000	0.525 0.000	0.503 0.000	0.550 0.000	0.401 0.000
C8U14 Use Marijuana/Hashish/Pot	0.385 0.000	0.379 0.000	0.505 0.000	0.407 0.000	0.362 0.000	0.586 0.000	0.562 0.000	0.595 0.000	0.317 0.000
C8U15 Use Hard Drugs (Heroin/Cocaine/LSD)	0.360 0.000	0.370 0.000	0.537 0.000	0.392 0.000	0.395 0.000	0.624 0.000	0.612 0.000	0.618 0.000	0.277 0.000
C8U16 Sell Drugs	0.335 0.000	0.350 0.000	0.497 0.000	0.452 0.000	0.346 0.000	0.556 0.000	0.547 0.000	0.620 0.000	0.420 0.000

Pearson Correlation Coefficients, N = 385 Prob > r under H0: Rho=0							
	C8U10	C8U11	C8U12	C8U13	C8U14	C8U15	C8U16
C8U1 Skip School Without An Excuse	0.430 0.000	0.379 0.000	0.359 0.000	0.431 0.000	0.385 0.000	0.360 0.000	0.335 0.000
C8U2 Lie/Disobey/Talk Back to Adults	0.428 0.000	0.416 0.000	0.325 0.000	0.401 0.000	0.379 0.000	0.370 0.000	0.350 0.000
C8U3 Purposely Damage Someone Elses Things	0.582 0.000	0.523 0.000	0.365 0.000	0.476 0.000	0.505 0.000	0.537 0.000	0.497 0.000
C8U4 Have Sexual Intercourse	0.401 0.000	0.393 0.000	0.442 0.000	0.411 0.000	0.407 0.000	0.392 0.000	0.452 0.000
C8U5 Steal Something Worth 5 dollars	0.433 0.000	0.510 0.000	0.369 0.000	0.385 0.000	0.362 0.000	0.395 0.000	0.346 0.000
C8U6 Steal Something Worth 50 dollars	0.628 0.000	0.645 0.000	0.470 0.000	0.525 0.000	0.586 0.000	0.624 0.000	0.556 0.000
C8U7 Go Into a Building to Steal Something	0.615 0.000	0.638 0.000	0.423 0.000	0.503 0.000	0.562 0.000	0.612 0.000	0.547 0.000
C8U8 Go Joyriding Without Owners Permission	0.657 0.000	0.643 0.000	0.503 0.000	0.550 0.000	0.595 0.000	0.618 0.000	0.620 0.000
C8U9 Hit Someone/Get Into a Physical Fight	0.472 0.000	0.345 0.000	0.389 0.000	0.401 0.000	0.317 0.000	0.277 0.000	0.420 0.000
C8U10 Attack Someone W/ a Weapon to Injure The	1.000	0.713 0.000	0.487 0.000	0.579 0.000	0.588 0.000	0.629 0.000	0.657 0.000
C8U11 Use Weapon to Get Money/Things From Othe	0.713 0.000	1.000	0.532 0.000	0.596 0.000	0.681 0.000	0.723 0.000	0.649 0.000
C8U12 Smoke Cigarettes or Chew Tobacco	0.487 0.000	0.532 0.000	1.000	0.721 0.000	0.590 0.000	0.549 0.000	0.520 0.000
C8U13 Drink Beer/Wine/Alcohol W/O Par Knowledg	0.579 0.000	0.596 0.000	0.721 0.000	1.000	0.680 0.000	0.646 0.000	0.621 0.000
C8U14 Use Marijuana/Hashish/Pot	0.588 0.000	0.681 0.000	0.590 0.000	0.680 0.000	1.000	0.773 0.000	0.694 0.000
C8U15 Use Hard Drugs (Heroin/Cocaine/LSD)	0.629 0.000	0.723 0.000	0.549 0.000	0.646 0.000	0.773 0.000	1.000	0.674 0.000
C8U16 Sell Drugs	0.657 0.000	0.649 0.000	0.520 0.000	0.621 0.000	0.694 0.000	0.674 0.000	1.000

Appendix:
(Scoring program removed)