

Child Behavior Checklist
Grade 4/Year 5 Update

FAST Track Project Technical Report
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Citation

Instrument

Achenbach, T.M. (1991). Manual for the Child Behavior Checklist / 4 – 18 and 1991 Profile. Burlington, VT: University of Vermont Department of Psychiatry.

Report

Nix, R.L. (2001). Child Behavior Checklist (Technical Report) [On-line]. Available: <http://www.fasttrackproject.org>

Data Sources

Raw: p5i

Scored: cbc5

I. Measure Description

The Child Behavior Checklist (CBCL) is one of the most widely used measures in child psychology. It is composed of 112 items that each significantly differentiate clinically-referred from non-referred children. The items of the CBCL were factor analyzed to empirically identify the forms of psychopathology that actually occur in children. These items are presented in alphabetical order to reduce the bias that might occur as a result of informants' preconceived notions regarding the presence or absence of a particular disorder. The CBCL produces continuous raw scores and t-scores in each domain. The t-scores, which have a uniform mean of 50 and a standard deviation of 10, are normed separately for boys and girls and for younger (ages 4 to 11) and older (ages 12 to 18) children, based on a nationally-representative sample. To further increase the validity of assessment, the parent-rated CBCL can be used in conjunction with its counterparts, the Teacher Report Form and the Youth Self-Report. The CBCL is an alternative to other classification systems of psychopathology in children, such as the Diagnostic and Statistical Manual of the American Psychiatric Association, that are theoretically derived, that query related symptoms in clusters, that yield categorical assessments of psychopathology, and that do not take into account sex or age differences. Extensive documentation of the validity and reliability of the CBCL can be found in the Manual for the Child Behavior Checklist / 4 – 18 and 1991 Profile.

II. Report Sample

This report is based on data from the Cohort 1 normative and high risk groups. These data were collected during the summer of the fifth year of Fast Track, when most children had just completed fourth

grade. Children in the intervention group were not included in the analyses for this report. Children who were part of both the normative group and the high risk group were included with the high risk group only.

Altogether, data were collected from 279 normative group children and 141 high risk control group children. Data were not collected from 29 normative group children and 14 high risk group children. The number of subjects from each site is presented in the table below.

	Durham		Nashville		Pennsylvania		Seattle	
	n	missing	n	missing	n	missing	n	missing
Normative group	81	5	56	9	76	8	66	7
High risk group	36	3	39	1	34	6	32	4

III. Scaling

Parents rate each item of the CBCL with a 0 for “not true,” a 1 for “somewhat or sometimes true,” or a 2 for “very true or often true.” In a special scoring program that accompanies the measure, the ratings on various constellations of the CBCL items are added together to produce raw scores and t-scores for each of nine behavior syndromes. The items that compose each behavior syndrome are as follows.

Withdrawn: 42, 65, 69, 75, 80, 88, 102, 103, and 111.

Somatic Complaints: 51, 54, 56a, 56b, 56c, 56d, 56e, 56f, 56g, and, if applicable, 56h.

Anxious / Depressed: 12, 14, 31, 32, 33, 34, 35, 45, 50, 52, 71, 89, 103, and 112.

Social Problems: 1, 11, 25, 38, 48, 55, 62, and 64.

Thought Problems: 9, 40, 66, 70, 80, 84, and 85.

Attention Problems: 1, 8, 10, 13, 17, 41, 45, 46, 61, 62, and 80.

Delinquent Behavior: 26, 39, 43, 63, 67, 72, 81, 82, 90, 96, 101, 105, and 106.

Aggressive Behavior: 3, 7, 16, 19, 20, 21, 22, 23, 27, 37, 57, 68, 74, 86, 87, 93, 94, 95, 97, and 104.

Sex Problems: 5, 59, 60, 73, 96, and 110.

The CBCL also has three broad-band or second-order problems scales. The Internalizing Problems scale is composed of the Withdrawn, Somatic Complaints, and Anxious / Depressed syndromes. The Externalizing Problems scale is composed of the Delinquent Behavior and Aggressive Behavior syndromes. The Total Problems scale is composed of all 112 CBCL items except Item 2, which queries about allergies, and Item 4, which queries about asthma.

IV. Differences Between Groups

The high risk group received significantly higher scores than the normative group on all behavior syndromes and problems scales, except Somatic Complaints. Results of univariate comparisons based on site, race, or sex within the normative and high risk groups are presented below. All comparisons that were significant are listed. (Blank spaces represent non-significant group differences.) Comparisons that were only marginally significant – between the .10 and .05 probability level – are indicated with a “+.” For the race subgroup comparisons, only children who were European American or African American were included. Although significant interactions among site, race, and sex exist, they are not straightforward and are not presented here.

Behavior syndrome or problems scale	Normative vs. high risk group	Normative group			High risk group		
		Site	Race	Sex	Site	Race	Sex
Withdrawn	HR > N						M > F
Somatic Complaints						W > B	
Anxious / Depressed	HR > N		W > B		N > D	W > B+	M > F
Social Problems	HR > N	DN > PS					M > F
Thought Problems	HR > N						M > F

Attention Problems	HR > N		B >W+	M > F			M > F
Delinquent Behavior	HR > N	N > PS	B >W+	M > F	N > DS		M > F
Aggressive Behavior	HR > N			M > F	N > D	W >B+	M > F
Sex Problems	HR > N				N > D		
Internalizing Problems	HR > N		W >B+		N > D	W >B+	M > F
Externalizing Problems	HR > N	N > S		M > F	N > D	W >B+	M > F
Total Problems	HR > N			M > F+	N > D	W >B+	M > F

KEY In the normative vs. high risk group column, “HR” stands for high risk and “N” stands for normative. In the site columns, “D” stands for Durham, “N” stands for Nashville, “P” stands for Pennsylvania, and “S” stands for Seattle. In the race columns, “B” stands for African American or “black,” and “W” stands for European American or “white.” In the sex columns, “F” stands for female, and “M” stands for male.

V. Recommendations for Use

Achenbach (1991) recommends that raw scores on the CBCL behavior syndromes and problems scales be used in research. At the high end of the distribution, raw scores may be more precise and uniform than t-scores. In addition, on the behavior syndromes – but not the problems scales – below average t-scores have been truncated at 50. However, if sex differences are not controlled in statistical analyses or if age differences among subjects are non-trivial, it may be preferable to use t-scores.

Choosing to use an individual behavior syndrome score or a problems scale score should depend on the specific research question being asked. In general, however, the problems scales scores are going to be slightly more reliable because they are composed of more items. As with most measures of psychopathology, the distributions of scores on the CBCL tend to be skewed and kurtotic. Use caution in statistical analyses that are not robust to violations of normality.

VI. Descriptive statistics

Descriptive statistics of the behavior syndrome and problems scales scores for the normative group are presented in the table below. Mean-R and SD-R and Mean-T and SD-T represent the means and standard deviations of the raw scores and t-scores, respectively. Values for skewness, kurtosis, and Cronbach’s coefficient alpha are based on raw scores.

Behavior syndrome or problems scale	Mean-R	SD-R	Mean-T	SD-T	Skewness	Kurtosis	Alpha
Withdrawn	1.62	1.98	53.32	5.71	2.00	5.99	.71
Somatic Complaints	1.13	1.81	54.69	6.62	2.32	7.03	.72
Anxious / Depressed	3.16	3.33	53.94	6.11	1.38	1.62	.81
Social Problems	2.10	2.18	54.56	7.10	1.60	3.21	.67
Thought Problems	0.58	1.06	53.73	6.08	2.42	6.79	.54
Attention Problems	2.93	3.11	54.39	6.84	1.51	2.36	.79
Delinquent Behavior	1.41	1.71	53.90	6.14	1.66	3.17	.60
Aggressive Behavior	7.00	5.99	53.69	6.46	1.31	1.85	.89
Sex Problems	0.11	0.38	51.47	4.65	3.52	12.36	.04
Internalizing Problems	5.76	5.55	49.37	10.49	1.34	1.62	.86
Externalizing Problems	8.41	7.29	48.89	10.30	1.43	2.31	.90
Total Problems	22.80	17.31	49.06	10.93	1.20	1.25	.94

Descriptive statistics of the behavior syndrome and problems scales scores for the high risk group are presented in the table below.

Behavior syndrome or problems scale	Mean-R	SD-R	Mean-T	SD-T	Skewness	Kurtosis	Alpha
Withdrawn	2.25	2.34	55.30	6.94	1.65	3.91	.70

Somatic Complaints	1.30	1.69	55.80	6.63	1.49	1.99	.63
Anxious / Depressed	4.62	4.48	56.72	8.68	1.66	3.24	.86
Social Problems	3.35	2.27	58.06	7.79	0.72	0.13	.59
Thought Problems	1.22	1.61	57.34	7.96	2.19	6.82	.61
Attention Problems	5.33	3.66	58.83	8.32	0.77	0.16	.78
Delinquent Behavior	3.46	3.16	60.13	9.28	1.30	1.84	.78
Aggressive Behavior	12.45	7.60	59.26	9.69	0.81	0.60	.91
Sex Problems	0.27	0.63	53.28	6.63	3.18	12.45	.31
Internalizing Problems	7.89	6.86	53.86	10.56	1.81	4.30	.88
Externalizing Problems	15.91	10.29	58.03	11.13	0.92	0.81	.93
Total Problems	37.60	23.66	57.21	10.63	1.20	1.42	.96

VII. Correlations

Correlation coefficients for the normative group are presented below the diagonal. Correlation coefficients for the high risk group are presented above the diagonal. All correlation coefficients greater than .10 are significant at the .05 probability level.

	W	SC	AD	SP	TP	AP	DB	AB	SxP	INT	EXT	TOT
Withdrawn		.34	.67	.45	.50	.52	.42	.50	.21	.82	.50	.69
Somatic Complaints	.30		.43	.21	.45	.27	.22	.33	.17	.61	.31	.48
Anxious / Depressed	.66	.33		.55	.60	.72	.65	.72	.32	.94	.73	.88
Social Problems	.47	.15	.50		.42	.67	.42	.49	.07	.53	.49	.63
Thought Problems	.46	.15	.58	.44		.66	.50	.58	.30	.65	.58	.72
Attention Problems	.57	.26	.67	.58	.59		.62	.71	.20	.68	.72	.83
Delinquent Behavior	.41	.19	.49	.45	.46	.58		.80	.38	.59	.90	.80
Aggressive Behavior	.45	.26	.62	.54	.46	.62	.70		.31	.69	.98	.91
Sex Problems	.27	.06	.34	.23	.35	.33	.27	.29		.31	.34	.35
Internalizing Problems	.81	.62	.91	.50	.54	.67	.48	.59	.31		.69	.89
Externalizing Problems	.46	.26	.62	.55	.49	.65	.81	.99	.30	.60		.92
Total Problems	.69	.43	.83	.68	.63	.80	.73	.87	.36	.85	.89	

KEY W: Withdrawn. SC: Somatic Complaints. AD: Anxious / Depressed. SP: Social Problems. TP: Thought Problems. AP: Attention Problems. DB: Delinquent Behavior. AB: Aggressive Behavior. SxP: Sex Problems. INT: Internalizing Problems. EXT: Externalizing Problems. TOT: Total Problems.