

**Social Health Profile**  
Grade 1 / Year 2  
Fast Track Project Technical Report

**Table of Contents**

- I. Data Files Used
- II. Scale Description
- III. Assessment Schedule
- IV. TOCA-R Scoring Method
- V. Scale Derivation for the Added Social Competence Items
- VI. Scoring Recommendations
- VII. Subscales, Means, SDs, reliability, and missing data
- VIII. Subscale Correlations

**I. Data files used**

Analyses are based on data collected for the Normative and the High Risk samples of cohort 1 during the fall of their first grade year (e.g., October, 1991) (xT2AI.SSD). For some analyses, the entire sample was used, including the classmates of children targeted in the Norm and High Risk samples (N = 3024), for other analyses, the Normative sample was used (N = 363), and for other analyses, the High Risk sample - Cohort 1 was used (N = 302).

**II. Scale Description**

The Social Health Profile is composed of two measures. Twenty-six behavior rating items are from the TOCA-R (described below) and reflect three dimensions of behavioral adjustment to school (Cognitive Concentration, Authority Acceptance, and Social Contact). Nine behavior rating items were added to reflect two dimensions of social competence (Prosocial and Emotion Regulation). In addition, two items request teacher ratings of the degree of peer liking and disliking toward the child, and four items ask about specific aspects of adjustment (days absent, substance use, and likelihood of school promotion in the coming year.)

The TOCA-R scales comprise their own measure, and should be treated as such, given the previous psychometric reliability and validation studies conducted on this measure. Below is a quoted description of the development of the three TOCA-R scales from Werthamer-Larsson, Kellam & Wheeler (1991). A complete copy of this article is included in the appendix, along with excerpts from a technical report supplied to us by Kellam:

"The TOCA-R is a revision of the TOCA (Kellam, et. al., 1975). An initial set of 110 items was produced by drawing descriptors from the earlier instrument and a review of the literature on behavioral antecedents of mental health problems. The initial set was examined and reduced to 58 items, which were then refined to correspond with the behavioral aspects of DSM-III child disorder

criteria. The 58-item version was tested in a sample of 200 children to shorten the number of items. Items with low item-total correlations, ambiguous factor loadings, or low factor loadings were deleted to produce the 31 items used in the final teacher interview." (Werthamer-Larsson, Kellam & Wheeler, 1991)

[Note that in this article, only 17 items out of these 31 are used to score the three scales of this measure. However, in the technical report sent to us by Kellam, 26 items are included in the scoring of the three scales. We included the 26 items described in the technical report, as shown below.]

"The teacher interview items were rated using a 6-point frequency-based scale, with items ranging from almost never to almost always... A sample of 361 children resulted from reinterviewing 15 teachers over a 2-week period, each time by a different interviewer, to assess test-retest reliability... Time 1 child behavior (shy behavior, aggressive behavior, and concentration problems) had a strong positive significant association with Time 2 child behavior in analyses using Spearman rank-order correlation and Pearson correlation ( $p < .001$ , with Spearman's rho ranging from .74 to .94 and Pearson's correlation coefficient ranging from .75 to .94.) The behavioral factors were significantly associated with a set of concurrent measures including Spring standardized achievement scores, fourth-quarter report card grades and work habits, and absence during first grade. In addition, the behavioral factors were significantly associated with a set of antecedent variables including gender, kindergarten standardized achievement scores, kindergarten report card grades and work habits, whether the child repeats first grade, preschool experience, and changing schools between kindergarten and first grade." (Werthamer-Larsson, Kellam & Wheeler, 1991)

More information about this scale is available in the Appendix which holds the Werthamer-Larsson article and the Kellam Technical Report excerpt.

In addition, nine items from our Social Competence (Teacher version) measure were included in the SHP. A description of the derivation of the SCT is included under that measure in a later section of this manual. Five items were selected to represent the prosocial dimension of social competence and four items were selected to represent the emotion regulation dimension of social competence. The particular items were selected on the basis of their (apriori) judged likelihood to be sensitive to intervention effects of the PATHS classroom curriculum.

The two items of peer status (liking and disliking) were included in this scale, but are scored separately, as they were designed to assess social status (as assessed by the teacher) rather than to reflect behavioral style or behavioral adjustment per se.

### **III . Assessment Schedule**

A 14-item version of the TOCA-R was used as an initial screen in the selection of the high-risk sample, and was collected in the fall (October, November) of the kindergarten year for all children in all participating school districts.

The full SHP was first collected in the fall (October, November) of the first-grade year for all children in participating Intervention and Control classrooms. The full SHP was also collected in the spring (March - May) of the first grade year and annually in the spring thereafter for all children in participating Intervention and Control classrooms. SHP ratings were also collected for target children (Normative or High Risk sample) who had moved out of core schools at the end of each school year from the first grade on.

### **IV . TOCA-R Scoring Method**

Factor analyses on the 26 items of the TOCA-R, whether on the normative or high-risk sample, for boys or for girls, confirm the 3 factor structure reported by Kellam and colleagues. The items loading on each factor are as follows (note that items that require reversed scoring are noted with an R):

Factor 1 Cognitive Concentration: 2R (self-reliant), 4R (works hard), 7R (learns up to ability), 8 (distractible), 9R (concentrates), 14R (completes assignments), 16 (poor effort), 17R (eager to learn), 20R (stays on task), 22R (pays attention), 32 (mind wanders), 34R (works well alone).

Factor 2 Authority Acceptance: 3 (takes property), 5 (yells at others), 6 (fights), 10 (stubborn), 12 (lies), 15 (breaks rules), 19 (teases others), 21 (breaks things), 23 (harms others), 24 (disobedient).

Factor 3 Social Contact: 25R (initiates interactions), 26R (plays with others), 28R (social contact with others), 31 (avoids contact).

A Table is enclosed showing the factor structure derived from the factor analysis of the TOCA-R items with our Normative Sample, collected in the fall of first grade. In the appendix, the psychometric work done on this scales by Kellam and colleagues is included.

## V. Scale Derivation for the Added Social Competence Items

The items selected from the Social Competence Scale (Teacher version) to reflect two dimensions of social competence are as follows:

Prosocial: 1R (friendly), 13R (helpful), 18R (resolves peer problems), 33R (understands others), 35R (suggests w/o bossiness).

Emotional Regulation: 11R (controls temper in disagreement), 27R (appropriate expression of needs/feelings), 29R (thinks before acting), 30R (can calm down).

Social Competence: sum of all nine items listed above

These social competence items form two factors conceptually, but in the analyses of the Social Competence Scale, they did not load separately. Hence, the two scales should be scored separately only when a strong theoretical rationale supports making this distinction. For most research purposes, the items in these two scales will be combined in order to score a single social competence dimension.

## VI. Scoring Recommendations

For most research purposes, scoring recommendations are to use the three validated scales from the TOCA-R and a single score for Social Competence. However, two scoring variations may be considered to address certain research questions. First, it may be justifiable in some circumstances to score the emotion regulation and prosocial scales of social competence separately. Second, with a strong conceptual justification, it may be appropriate in some research studies to score smaller groups of items to reflect the narrow-band dimensions of behavior problems identified on other measures. (Note that these narrow-band dimensions of behavior problems are comprised of only a few items each and are not supported by the factor analysis of this measure. Hence, there would need to be a strong conceptual justification for them to be used in any research study.) The possible narrow-band dimensions that could be scored from this measure are:

1. Overt Aggression: 5 (yells), 6 (fights), 19 (teases), 21 (breaks things), 23 (harms others)
2. Oppositional: 10 (stubborn), 15 (breaks rules), 24 (has trouble accepting authority)
3. Covert Antisocial: 3 (takes people's property), 12 (lies)

Finally, the single items 36 and 37 (liking and disliking items) can be used as single items to assess teacher estimations of peer status.

VII. **Subscales, Means, SDs and reliability**

An enclosed table shows the subscale means, standard deviations, and alphas levels for the following scales:

Cognitive Concentration  
Authority Acceptance  
Social Contact  
Prosocial  
Emotional Regulation  
Social Competence (Prosocial & Emotional Regulation)  
Overt Aggression Oppositional  
Covert Antisocial

The means and standard deviations for the two peer status items are also included.

VIII. **Subscale Correlations**

The enclosed table shows the correlations for the 9 scales listed above along with the two peer status items.

**Variable: T2ACOGCN Cognitive Concentration SHP C1Y2**

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	21.03	14.67	0.969	302	0	30.74	13.45	0.952	363	0	22.30	14.57	0.963
DURH	767	0	24.82	15.37	0.969	78	0	35.14	11.66	0.931	97	0	26.47	15.33	0.972
NASH	677	0	22.15	14.80	0.965	81	0	28.85	13.32	0.945	100	0	23.35	13.41	0.944
PENN	922	0	16.92	13.71	0.972	80	0	29.08	13.49	0.964	95	0	16.80	13.34	0.962
WASH	659	0	21.23	13.56	0.964	63	0	29.84	14.67	0.960	71	0	22.49	14.68	0.970

**Variable: T2AAUTAC Authority Acceptance SHP C1Y2**

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	8.55	9.59	0.935	302	0	17.42	11.52	0.927	363	0	9.22	9.87	0.931
DURH	767	0	9.53	9.70	0.930	78	0	18.73	11.74	0.920	97	0	10.10	10.03	0.938
NASH	677	0	10.60	10.37	0.938	81	0	18.10	10.47	0.920	100	0	12.18	10.51	0.934
PENN	922	0	6.36	8.31	0.936	80	0	14.98	11.05	0.934	95	0	5.29	7.34	0.893
WASH	659	0	8.36	9.68	0.933	63	0	18.05	12.85	0.941	71	0	9.08	10.16	0.929

Variable: T2ASOCCN Social Contact SHP C1Y2

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	4.67	3.72	0.878	302	0	5.60	3.77	0.845	363	0	4.72	3.83	0.886
DURH	767	0	4.55	3.75	0.838	78	0	5.42	3.95	0.789	97	0	4.97	3.84	0.859
NASH	677	0	5.30	3.77	0.885	81	0	5.58	3.50	0.876	100	0	5.30	3.95	0.900
PENN	922	0	4.19	3.66	0.906	80	0	6.13	4.16	0.916	95	0	4.08	4.22	0.928
WASH	659	0	4.83	3.61	0.874	63	0	5.19	3.34	0.762	71	0	4.39	2.87	0.801

Variable: T2APROSC Prosocial SHP C1Y2

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	8.85	5.31	0.868	302	0	12.40	5.02	0.841	363	0	9.39	5.34	0.862
DURH	767	0	9.65	5.26	0.838	78	0	13.24	5.08	0.817	97	0	10.46	5.27	0.848
NASH	677	0	9.52	5.37	0.857	81	0	12.21	4.67	0.822	100	0	10.19	4.93	0.810
PENN	922	0	7.34	5.23	0.893	80	0	12.00	5.08	0.866	95	0	7.27	5.64	0.904
WASH	659	0	9.35	4.98	0.858	63	0	12.10	5.27	0.869	71	0	9.61	4.89	0.852



**Variable: T2AEMREG Emotional Regulation SHP C1Y2**

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	7.25	4.62	0.853	302	0	11.00	4.66	0.855	363	0	7.62	4.83	0.849
DURH	767	0	7.98	4.69	0.853	78	0	12.10	4.53	0.849	97	0	8.77	4.83	0.851
NASH	677	0	8.02	4.69	0.850	81	0	10.60	4.48	0.828	100	0	7.99	4.64	0.836
PENN	922	0	5.85	4.28	0.840	80	0	10.24	4.61	0.882	95	0	5.88	4.70	0.830
WASH	659	0	7.56	4.48	0.853	63	0	11.11	4.97	0.859	71	0	7.83	4.72	0.854

Variable: T2ASCTOT

Social Competence Total SHP C1Y2

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	16.10	9.49	0.921	302	0	23.40	9.16	0.910	363	0	17.00	9.68	0.917
DURH	767	0	17.63	9.48	0.912	78	0	25.35	9.07	0.901	97	0	19.24	9.61	0.913
NASH	677	0	17.55	9.58	0.916	81	0	22.81	8.53	0.892	100	0	18.18	9.14	0.902
PENN	922	0	13.19	9.09	0.926	80	0	22.24	9.28	0.927	95	0	13.16	9.78	0.923
WASH	659	0	16.91	9.04	0.918	63	0	23.21	9.70	0.919	71	0	17.44	9.07	0.911

**Variable: T2AOVRAG Overt Aggression SHP Narrow Band C1Y2**

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	3.77	4.73	0.889	302	0	7.87	6.06	0.890	363	0	4.07	4.94	0.885
DURH	767	0	4.13	4.74	0.873	78	0	8.54	6.46	0.898	97	0	4.21	4.67	0.882
NASH	677	0	4.57	5.09	0.895	81	0	7.65	5.34	0.880	100	0	5.48	5.47	0.880
PENN	922	0	2.86	4.24	0.905	80	0	7.03	5.99	0.904	95	0	2.55	4.22	0.876
WASH	659	0	3.81	4.78	0.883	63	0	8.38	6.50	0.895	71	0	3.93	4.89	0.885

Variable: T2AOPPOS

Oppositional SHP Narrow Band C1Y2

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	3.47	3.69	0.856	302	0	6.77	4.17	0.841	363	0	3.74	3.82	0.850
DURH	767	0	3.93	3.79	0.857	78	0	7.14	4.31	0.844	97	0	4.22	4.19	0.906
NASH	677	0	4.21	3.89	0.851	81	0	7.11	3.85	0.800	100	0	4.52	3.65	0.831
PENN	922	0	2.55	3.17	0.851	80	0	5.63	3.75	0.825	95	0	2.19	2.89	0.756
WASH	659	0	3.47	3.79	0.858	63	0	7.32	4.69	0.876	71	0	4.04	4.12	0.827

Variable: T2ACOVRT

Covert Antisocial SHP Narrow Band C1Y2

Site	All Groups					High Risk					Norm				
	N	Nmiss	Mean	SD.	Alpha	N	Nmiss	Mean	SD	Alpha	N	Nmiss	Mean	SD	Alpha
ALL	3025	0	1.30	1.93	0.795	302	0	2.79	2.47	0.777	363	0	1.41	1.93	0.752
DURH	767	0	1.48	2.01	0.808	78	0	3.05	2.46	0.754	97	0	1.68	1.82	0.602
NASH	677	0	1.81	2.16	0.786	81	0	3.33	2.35	0.725	100	0	2.18	2.14	0.753
PENN	922	0	0.94	1.58	0.764	80	0	2.33	2.28	0.767	95	0	0.56	1.33	0.765
WASH	659	0	1.07	1.88	0.801	63	0	2.35	2.71	0.866	71	0	1.11	1.99	0.817