



# NORMATIVE AND DESCRIPTIVE DATA

## Normative Sample

Since 1991, the STRS has been completed by teachers in several states, including Arizona, California, Connecticut, Colorado, Illinois, North Carolina, Wisconsin, and Virginia. STRS data were collected from 275 teacher respondents, all of whom were women teaching in classes from preschool through Grade 3. Most of the teachers (70%,  $n = 193$ ) in the normative sample were Caucasian, 15% ( $n = 41$ ) were African American, 10% ( $n = 28$ ) were Hispanic American, and 5% ( $n = 13$ ) represented other ethnic backgrounds. In the majority of cases, a single teacher rated several students ( $M = 8$ ). However, 37 teachers rated only one child. The largest number of students rated by a single teacher was 16. STRS scores were not correlated with the number of students rated.

The student sample consisted of 1,535 children between the ages of 4 years, 1 month and 8 years, 8 months. The students' mean age was 5 years. Information was available on student gender for 1,496 (97%) of the students in the normative sample. Of these, approximately 53% ( $n = 788$ ) were boys, and 47% ( $n = 708$ ) were girls. Information was also available on student race/ethnicity for students in the normative sample. Sixty-three percent ( $n = 967$ ) of the student sample was Caucasian, 18% ( $n = 276$ ) were African American, 10% ( $n = 154$ ) were Hispanic American, and 1.7% ( $n = 26$ ) were Asian American. Seven percent ( $n = 112$ ) of the student sample either represented other racial/ethnic groups, or their race/ethnicity was not reported.

Information on socioeconomic status was gathered from all students in the normative sample

using mothers' education level and annual family income. Mothers' education level was available for 1,269 students. Students reported that about 8% ( $n = 102$ ) of mothers had some high school; 23% ( $n = 297$ ) were high school graduates; 37% ( $n = 466$ ) had some college; 16% ( $n = 204$ ) had a four-year college degree; and about 16% ( $n = 200$ ) attended graduate school or received a graduate degree. Annual family income was available from 960 students and ranged from \$6,000 to over \$150,000; the mean annual family income was \$23,000. Overall, the normative sample represented a range of socioeconomic status.

## Descriptive Statistics

This section presents descriptive information for the total normative sample as well as by student gender and race/ethnicity.

### Total Normative Sample

Descriptive statistics for the entire sample ( $N = 1,535$ ) are reported in Table 5. This information indicates that teachers' reports concerning their relationship with a student show considerable variability across students. Skewness values indicate that the distributions of teachers' reports reflect a tendency to view the student-teacher relationship positively.

### Student Gender

Table 6 presents means, standard deviations, and skewness statistics for boys and girls. As was the case for the total normative sample, the distributions of STRS scores for both boys and girls are mildly skewed to suggest teachers' tendencies to view relationships somewhat positively.

**Table 5**  
**Descriptive Statistics for STRS Scale and**  
**Subscales for the Total Normative Sample**

Scale/subscale	M	SD	Minimum- Maximum	Skewness	Kurtosis
Conflict	24.40	8.93	15-57	1.06	0.38
Closeness	42.01	6.22	19-55	-0.71	0.15
Dependency	10.74	3.54	5-24	0.73	0.45
Total	114.23	15.47	55-140	-0.90	0.342

Note.  $N = 1,535$ .

When the STRS scale and subscale scores for boys and girls were compared (using Bonferroni correction for multiple testing), teachers reported (a) higher Conflict scores with boys, (b) higher Closeness scores with girls, and (c) higher Total scale scores with girls, indicating more positive relationship quality with girls. However, based on Cohen's (1988) measure of effect size  $d$ , the actual difference between boys and girls in mean scores for the Conflict subscale was less than 2 points ( $d = .17$ ), less than 3 points ( $d = .36$ ) for the Closeness subscale, and less than 4 points ( $d = .33$ ) for Total Scale mean scores. Boys and girls did not statistically differ on teacher reports of Dependency. In general, these results suggest few substantial or meaningful gender-related differences on the STRS, although the patterns of differences are significant. Birch and Ladd (1998) report a similar pattern of gender differences for kindergarten and first-grade students.

### Student Race/Ethnicity

Table 7 presents means, standard deviations, and skewness statistics for Caucasian, African American, and Hispanic American students – the three racial/ethnic groups with substantial numbers of students in the normative sample. Previous research on pilot versions of the STRS (Pianta & Nimetz, 1991; Saft & Pianta, in press) as well as work with students' perceptions of relationships with teachers (Lynch & Cicchetti, 1992) suggested that teachers' and students' views of child-teacher

relationships may vary as a function of the child's ethnicity. Therefore, separate normative data are provided for the three major ethnic groups in the normative sample. STRS users can therefore use both the total normative sample as well as comparisons of the student's score to those of students within the student's own ethnic group to better understand the student-teacher relationship. As was the case for the normative sample, the distributions of STRS scores for all three ethnic groups are mildly skewed to suggest teachers' tendencies to view relationships somewhat positively.

When the STRS scale and subscale scores for each racial/ethnic group were compared (using Bonferroni correction for multiple testing), teachers reported (a) higher Conflict scores with African American students, (b) lower Closeness scores with African American students, and (c) lower Total scale scores with African American students indicating less positive relationships with African American students. However, Table 7 indicates that the actual differences among the racial/ethnic groups in mean scores for the STRS scale and subscale were small ( $\omega^2 \leq .02$ ). In general, these results suggest few substantial or meaningful racial/ethnic group-related differences on the STRS, although the patterns of differences are statistically significant. A detailed discussion of STRS scale and subscale score differences between African American students and other racial/ethnic groups can be found in Saft and Pianta (in press).

**Table 6**  
**STRS Scale and Subscale Score Results by Student Gender**

Scale/subscale	Boys <sup>a</sup>				Girls <sup>b</sup>				t	d <sup>c</sup>
	M	SD	Skewness	Kurtosis	M	SD	Skewness	Kurtosis		
Conflict	22.79	9.24	1.07	0.461	21.32	8.36	1.12	0.823	2.77*	.17
Closeness	43.63	6.26	-0.67	0.320	45.82	6.01	-0.82	0.758	-5.78**	.36
Dependency	10.58	3.51	0.90	0.861	10.83	3.58	0.63	0.286	-1.35	.07
Total	112.23	11.03	0.41	0.301	115.76	10.52	0.48	0.358	-4.26**	.33

<sup>a</sup>n = 788. <sup>b</sup>n = 708. <sup>c</sup>Cohen's d effect size.

\*p < .0125 (two-tailed). \*\*p < .001 (two-tailed).

**Table 7**  
**STRS Scale and Subscale Score Results by Student Ethnicity**

Scale/subscale	Caucasian <sup>a</sup>				African American <sup>b</sup>				Hispanic American <sup>c</sup>				F	ω <sup>2</sup>
	M	SD	Skewness	Kurtosis	M	SD	Skewness	Kurtosis	M	SD	Skewness	Kurtosis		
Conflict	21.7	9.6	-0.85	0.083	25.0	11.3	-0.45	-0.429	20.1	8.6	-0.64	1.95	5.23**	.02
Closeness	45.1	7.2	1.15	0.823	42.8	7.1	0.76	-0.066	44.7	7.2	1.43	0.373	6.67**	.02
Dependency	10.5	3.6	0.85	0.080	11.4	3.4	0.54	0.143	10.3	3.1	0.86	1.04	3.50*	.01
Total	114.9	15.1	0.53	0.574	108.5	16.4	0.21	-0.087	116.6	13.2	0.03	0.460	3.09*	.01

<sup>a</sup>n = 967. <sup>b</sup>n = 276. <sup>c</sup>n = 154.

\*p < .0125 (two-tailed). \*\*p < .001 (two-tailed).