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ABSTRACT

This research assessed the relationship between the Self Perception in School (SPS) inventory and academic achievement, school behavior, and popularity of 656 primary-grade children in a suburban district. SPS was found to be significantly correlated with teachers' ratings of children's behavior and with reading achievement for four of the six grade x sex combinations and for the three total [grade] groups; with arithmetic achievement only for boys and for the total groups; but was uncorrelated with a sociometric measure of popularity except for Grade 3 girls and the total Grade 1 and 3 groups. Significant sex and grade effects in mean SPS scores were found. Significant sex effects and a trend toward grade effect in behavior ratings was also observed. Possible explanations for the obtained results are suggested and research needs are pointed out. See TM 000 487 for a report on the development of SPS. (Author/DG)

CORRELATES OF SELF-PERCEPTION-IN-SCHOOL

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This research assessed the relationship between Self-Perception-in-School [SPS], as measured by a new self-report, group-administered, non-verbal inventory and its theoretical correlates: academic achievement, school behavior, and popularity among primary grade children.

Theory and Hypotheses

Hypotheses were derived from the perceptual or phenomenological theory of behavior, which postulates that behavior is a function of human perception. Specifically, human behavior is determined by, and pertinent to, the perceptual field of the behaver at the instant of his action. Further, an individual's behavior in a given situation is dependent upon (1) how he perceives himself, (2) how he perceives the situation in which he is involved, and (3) the interaction of these two. Particular importance is given to the role of the individual's self-perceptions in the determination of his behavior.

Since behavior is consistent with self-perception, knowledge of the perceptions an individual holds of himself and his abilities should aid in understanding and predicting his behavior. For example, if he feels, "People are against me," "I don't belong," or "I'm the worst student in this class," he will function accordingly, regardless of the "objective" facts. For this reason, self-theorists postulate that persons with negative self-perceptions perform less adequately, are less popular, have greater anxiety, are more maladjusted, etc. than persons with positive self-perceptions.

In this study it was hypothesized that, for primary grade children, there is a positive relationship between self-perception-in school and

(1) teachers' ratings of students' behavior.
(2) academic achievement.
and (3) popularity among classmates.

Instrumentation

Self-Perception-in-School. SPS inventory items were based on Sarbin's Role Theory. Since role may be studied in terms of the actions expected of an occupant of that position, the role of student was defined as those behaviors teachers expect of students. From this universe, a set of 21 items was devised and pre-tested. The final set of 19 items was validated on a sample of 656 first-, second-, and third-graders [30 classes] in two schools of a white middle-class suburban school system. Internal consistency coefficients of .62 - .82 (boys) and .49 - .60 (girls) were obtained. A stratified random sample of six (6) classes [136 children] was re-tested two weeks later. Stability coefficients of .67 - .87 were obtained. Correlation of the SPS scores with scores on a pre-school Social Desirability scale was not significant [r=.27, p>.05, N=30]. Correlation of the SPS group-administration scores with scores obtained on the SPS in an individual-testing situation was not significant [r=.16, p>.05, N=30]. Subsequent investigation suggested that the latter lack of significance might have been due to sampling error. Principal components analyses for the six (6) grade x sex groups produced from five to eight factors. However, there was no observable tendency for items to cluster in definable patterns for the various grade x sex groups. It was concluded that the SPS inventory was reliable, valid, inexpensive, non-verbal measure of the construct at the primary level.

Achievement, behavior ratings and popularity scores were also obtained for the same 656 children.

Achievement. Measures of achievement [reading and arithmetic] differed for each of the three grades. For first grade reading achievement, teachers were asked to judge the relative achievement of each child within each of her three reading groups and assign the designated rating: Low group: 1, 2; Average group: 3, 4, 5; High group: 6, or 7. No arithmetic achievement scores were available for first grade. In the second grades, the Stanford Achievement Tests were administered district-wide. Stanines, based on local norms, for four subtests [word meanings, paragraph meaning, vocabulary, word study skills] were averaged to obtain each second-grader's reading achievement score. The arithmetic subtest stanine was used as the achievement score. In the third grades, the Iowa Tests of Basic Skills were administered district-wide. The reading achievement score for each third-grader was the average stanine, based on local norms, of the child's reading and vocabulary subtest stanines. Arithmetic concepts and arithmetic problems stanines were averaged to obtain the arithmetic achievement score.

Popularity. To assess children's popularity with classmates a sociometric measure was devised and pre-tested. Each teacher was to secure from each child in the class his/her first and second choice of a partner on a field trip or other class activity or project. Choices were restricted to classmates but no restriction was made on the basis of sex. The child's popularity score was the total number of nominations he received, regardless of whether they were first or second choices.

Behavior. The teacher's rating of the child, relative to the other children in the class, constituted his behavioral score. The ratings, on a

5-point scale, were assigned on the basis of the amount of concern the child caused the teacher, that is,

"1" -- (s)he causes me considerable concern, his/her behavior or academic performance is such that I devote considerably more attention or time to him/her than to most other children in my class.

"5" -- (s)he is a very good student, (s)he would probably be characterized almost an "ideal student."

Stability coefficients for the behavior ratings, based on a two-week test-re-test interval, were .75 - .96.

Results and Discussion

All data were analyzed separately by grade and by sex and all hypotheses were tested at the .05 level of confidence.

Self-Perception-in-School was found to be significantly correlated with behavior ratings [Table 1] and with reading achievement [Table 2] for four of the six sex x grade combinations and for the three total [grade] groups. A significant correlation between SPS and arithmetic achievement was obtained only for boys and the total groups [Table 3]. Lack of significance for girls [SPS/arithmetic achievement] was attributed to the restricted range of girls' scores on the SPS variable. The hypothesized significant correlation between SPS and popularity was obtained in only one of the six sex x grade combinations [grade 3 girls] and for two of the total groups [grades 1&3][Table 4]. Lack of significant relationship here could be ascribed to any or all of the following reasons:

(1) the variables are really not related, i.e., the child's interactions with his classmates are not affected by his ability to meet the teacher's expectations.

(2) the instability of sociometric choices at this level makes them subject to unpredictable change and therefore unpredictable or unsystematic relationships.

(3) the procedure used to obtain the sociometric index may have been invalid, unreliable, or both.

These results support previous research findings in the areas of behavior and achievement. The few studies which related the variables self and school behavior also reported positive correlations. Among the numerous studies of self and achievement at all grade levels, the majority also reported significant positive correlations.

Regarding self and popularity, the present findings contradict the results previously reported on intermediate grade students. [No investigations of these variables have been reported on primary grade students] Since previous research has found significant correlation at the intermediate level, the relationship probably does exist -- at least at that level. Thus, the probable causes of the present results may be ascribed to (1) measurement error, (2) sociometric instability at the primary level, or (3) differences between primary and intermediate children.

It was also found that girls had higher SPS scores than boys [Table 5]. Previous research at the intermediate level reported contradictory results -- about equal numbers of researchers found sex differences as failed to do so. At the primary level, only two studies, both using the same instrument, were published and neither found sex differences. Thus, the finding of sex differences in SPS scores at the primary level is congruent with theory [girls are more conforming, they meet adults' expectations more often, are consequently rewarded more often, and therefore have more positive self-perceptions] and is an important contribution to the field.

Further, it was found that there were also significant grade effects [Table 6] in mean SPS scores, i.e., while girls' mean SPS scores were relatively similar in grades 1 - 3, the boys' mean SPS scores steadily decreased across the three grades [Table 5]. Apparently something was being communicated to the boys which resulted in an increasingly less positive self - perception. Consistent with results of other studies, significant sex effects were found in teachers' ratings of children's behavior [Table 7],

i.e., boys received consistently lower behavior ratings than girls, and this difference was almost twice as much in grade 3 as in grade 1 [Table 8]. Thus it may be that teachers' consistently less positive attitudes toward boys' behavior may be the cause of boys' increasingly less positive self-perceptions -- and, therefore, less adequate academic achievement.

Conclusions

These findings suggest the need for an extensive assessment, including predictive studies, of the teacher's impact on children's development. Studies also need to be done at the kindergarten level to determine whether the sex differences in self-perception exist prior to school entrance or are a result of school experiences. Further, the steady decrease in boys' SPS suggests that the consistently more negative evaluations and attitudes women teachers have towards boys' behavior may have a cumulative effect on boys' SPS. If this is so, teachers are predisposing boys to lower achievement and troublesome behavior. Investigations into this area are, therefore, desirable.

Additional research on sex and grade effects in SPS at the intermediate level is needed to ascertain whether or not these trends persist.

TABLE 1

Correlation Coefficients of Self-Perception-in-School and Behavior Ratings, by Grade and Sex

GRADE	SEX M N	SEX M r	SEX F N	SEX F r	T N	T r
1	129	.14	100	.27**	229	.19**
2	110	.23*	100	.27**	210	.25***
3	117	.38***	100	.21*	217	.36***

Note.--The number (N) of subjects in each grade x sex cell in this table constitutes the total sample tested with the SPS scale. Deviations from these cell frequencies in subsequent tables are due to a lack of data for the other variable.

*p < .05
**p < .01
***p < .001

TABLE 2

Correlation Coefficients of Self-Perception-in-School and Reading Achievement, by Grade and Sex

GRADE	SEX M N	SEX M r	SEX F N	SEX F r	T N	T r
1	129	.16	100	.25*	229	.20**
2	106	.45***	98	.15	204	.35***
3	98	.24*	94	.26*	192	.26***

*p < .05
**p < .01
***p < .001

TABLE 3

Correlation Coefficients of Self-Perception-in-School and Arithmetic Achievement, by Grade and Sex

GRADE	SEX M N	SEX M r	SEX F N	SEX F r	T N	T r
2	106	.26**	98	.15	204	.18**
3	99	.40***	93	.16	192	.33***

Note.--Arithmetic achievement data for grade 1 was unavailable.

**p < .01
***p < .001

TABLE 4

Correlation Coefficients of Self-Perception-in-School and Popularity Score, by Grade and Sex

GRADE	SEX M N	SEX M r	SEX F N	SEX F r	T N	T r
1	115	.15	91	.13	206	.14*
2	110	.03	100	.08	210	.05
3	117	.12	100	.25*	217	.16*

*p < .05

TABLE 5

Means and Standard Deviations of Self-Perception-in-School Scores, by Grade and Sex

GRADE	Mean M		Mean F		Standard Deviation M	Standard Deviation F
1	(129)	15.21	(100)	15.37	2.10	1.76
2	(110)	14.51	(100)	15.47	3.14	1.96
3	(117)	13.50	(100)	15.20	3.74	2.13

Note.--Numbers in parentheses indicate N.

TABLE 6

Analysis of Variance of Self-Perception-in-School Total Scores

Source	d.f.	SS	MS	F	p
Grade	2	115.33	57.66	8.53	< .0003
Sex	1	140.71	140.71	20.81	< .0001
Grade x Sex	2	65.71	32.86	4.86	< .008
Within	650	4394.33	6.76		
Total	655	4716.08			

TABLE 7

Analysis of Variance of Teachers' Ratings of Students' Behavior

Source	d.f.	SS	MS	F	p
Grade	2	1.00	.50	.31	n.s.
Sex	1	28.21	28.21	17.29	< .0001
Grade x Sex	2	5.00	2.50	1.54	n.s.
Within	650	1060.51	1.63		
Total	655	1094.72			

TABLE 8

Means and Standard Deviations of Teachers' Ratings of Students' Behavior, by Grade and Sex

		Mean			Standard Deviation	
GRADE		M		F	M	F
1	(129)	2.97	(100)	3.31	1.22	1.18
2	(110)	2.97	(100)	3.22	1.22	1.30
3	(117)	2.88	(100)	3.54	1.43	1.31

Note.--Numbers in parentheses indicate N.