

## STUDENTS' AND TEACHERS' PERCEPTIONS OF CLASSROOM ENVIRONMENT AND SELF- AND OTHERS-CONCEPTS<sup>1</sup>

EDWARD G. GALLUZZI

*Greater Lafayette Area Special Services, Lafayette, IN*

EDWARD A. KIRBY AND KARL B. ZUCKER

*Indiana State University*

*Summary.*—The relationships among self-concept, others-concept (a person's perceptions and expectancies about other people), and students' and teachers' perceptions of classroom environment were explored. Subjects were 441 fifth grade children and their 25 teachers. All children were administered group tests which measured self-concept, others-concept, and perceptions on five classroom environment scales (Involvement, Affiliation, Teacher Support, Friction, and Satisfaction). Teachers completed the classroom environment measure only. Correlations indicated that children's self- and others-concepts were statistically related to their perceptions of classroom environment, but the correlations were low. When the children were assigned to high, middle, and low self- and others-concept groups, analyses of group membership indicated significant differences in perceptions on the five classroom environment scales between the groups low and high in self- and others-concepts. Significantly more children with low self- and others-concepts differed from their teachers' perceptions of classroom environment than did children with high self- and others-concepts. The findings underscore a significant relationship between perception of classroom environment and several personal variables.

Research on the learning process during the past several decades has shifted in focus from traditional factors, such as intelligence and achievement, to other variables. One of these has been students' perceptions of their classroom environment. From such studies Anderson and Walberg (1974) have concluded that perceptions of classroom environment may often need to change before improvements in learning occur.

If perception of classroom environment is a basic variable in learning, it should be investigated further. Since this variable involves people's perceptions, the characteristics of the perceivers appear to be of crucial significance. Moos (1974a, 1974b), however, has argued that a person's perceptions of social environments are typically independent of personality characteristics. Nevertheless, he concluded from previous research (Marks, 1968; McFee, 1961) that individuals who are under "high environmental uncertainty" and "high need" tend to respond to environmental measures in ways congruent with their specific need structures (Moos, 1974a).

The two personality variables which were investigated in this study, self-

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<sup>1</sup>Department of Special Education, School Psychology and Communication Disorders, Indiana State University, Terre Haute, Indiana 47809.

concept and others-concept (a person's perceptions and expectancies about other people), are considered to be related to an individual's need structure. Persons with high self- and others-concepts differ in specific qualities and behaviors from those with low self- and others-concepts. For example, as compared to low self-concept persons, high self-concept individuals are generally less anxious (Coopersmith, 1967; Piers, 1969) and tend to exhibit internal locus of control (McCandless & Evans, 1973). High others-concept individuals tend to exhibit more positive social interaction in small groups than those with low others-concepts (Barnett & Zucker, 1973, 1975, 1977). Children with both high self- and others-concepts tend to be significantly better adjusted than those with low self- and others-concepts (Galluzzi & Zucker, 1977).

These findings suggest that children who give evidence of varying levels (high, middle, low) of self- and others-concepts would tend, as a group, to respond differently to measures of classroom environments. If so, it would be necessary to take the two personality variables, self-concept and others-concept, into account in assessing classroom climates. The purpose of the present study was to investigate the hypothesis that the variables, self- and others-concepts, are related to students' perceptions of classroom environment.

## METHOD

### *Subjects*

The subjects were from a midwestern public school district and included 441 children attending 25 fifth grade regular classrooms. Of the 441 children, 243 were boys and 198 were girls. Their teachers ( $N = 25$ ) were also included in the study.

### *Assessment Instruments*

Three group-administered scales were used for assessment. The Piers-Harris Children's Self-concept Scale (Piers & Harris, 1964, 1969) is an 80-item, forced-choice test. Studies have reported test-retest stability coefficients for a 4-mo. interval ranging from .71 to .77 (Piers, 1969). The scale has also received favorable reviews in the literature (Buros, 1972; Wylie, 1974).

The Paired Hands Test (Zucker & Jordan, 1968; Barnett & Zucker, 1973, 1975, 1977), used to measure a child's others-concept, has 20 slides, each showing one black and one white hand in a relationship which implies an interaction between the hands. A set of five multiple-choice items describing what the hands might be doing accompanies each slide. Test-retest stability coefficients for a two-day interval from three schools averaged .72 (Zucker & Barnett, 1977). Strong research evidence indicates that the Paired Hands Test is a valid measure of an individual's others-concept (Barnett & Zucker, 1977).

The measure of classroom environment had five scales, three of which were adapted from the secondary level Classroom Environment Scale (Moos &

Trickett, 1974; Trickett & Moos, 1974). These three scales are Involvement, Affiliation, and Teacher Support. The two remaining scales, Friction and Satisfaction, are from the My Class Inventory (Anderson, 1973; Anderson & Cayne, 1969; Anderson & Walberg, 1968). Scale selection was based upon consideration of reliability and the authors' presumption that these scales are more likely than other classroom environment measures to be related to the self- and others-concepts. Spearman-Brown reliability coefficients were computed from the children's scores: Involvement .59, Affiliation .53, Teacher Support .59, Friction .74, and Satisfaction .77.

#### *Procedure*

Each student was assigned a code number in an attempt to control for social desirability and experimenter bias through anonymity. Data were collected in one session lasting about 90 min. per classroom. The test order within the battery was assigned randomly for each classroom. Teachers completed the measure of classroom environment away from their respective classrooms while their students were tested. The instructions to the teachers and students for taking the tests were written in advance and held constant.

#### RESULTS

Product-moment correlation coefficients for the variables studied are reported in Table 1. Although all correlations (except one) between self-concept and the classroom environment scales and between others-concept and the classroom environment scales were statistically significant and in the direction expected, only one of the 10 correlations was above .30.

Multiple regression analyses were used to explore the relationship between perceptions of classroom environment and the combined effect of children's self- and others-concepts. These analyses were computed using individual scores as well as group (classroom) means to consider relationships within as well as across classrooms.

As with the product-moment correlations, the analysis using individual

TABLE 1  
CORRELATIONS BETWEEN CLASSROOM ENVIRONMENT  
FACTORS AND SELF- AND OTHERS-CONCEPTS

Factor	2	3	4	5	6	7
1. Self-concept	.14†	.26†	.34†	.23†	-.25†	.25†
2. Others-concept		.18†	.16†	.12*	-.10*	.01
3. Involvement			.42†	.35†	-.45†	.59†
4. Affiliation				.25†	-.38†	.39†
5. Teachers' Support					-.16†	.34†
6. Friction						-.46†
7. Satisfaction						

\* $p < .05$ . † $p < .01$ .

scores found multiple correlation coefficients for each of the five classroom environment scales and children's self- and others-concepts to reach statistical significance ( $p < .01$ ). However, the values were low, ranging from .25 to .36.

Multiple regression analyses using mean (classroom) scores rather than individual scores initially suggested an increase in variance accounted for by the self- and others-concept variables. However, when a shrinkage formula (Cohen & Cohen, 1975) was applied to correct for the differences in sample size, the multiple correlations were significant ( $p < .01$ ) but quite similar in magnitude to the individual analysis. Thus statistical significance in these analyses reflected the large number of children included. Moreover, whether the analysis was within or across classrooms, the amount of variance accounted for by the self- and others-concepts was basically unchanged.

For the next step of the study, each of the 441 children was assigned to one of nine groups of self- and others-concepts to explore the effects of group membership on perceptions of classroom environment. Group membership was based upon a cutoff of  $\pm .75$  standard deviations from the respective means on the Piers-Harris Children's Self-concept Scale and the Paired Hands Test. Means and standard deviations for the self-concept and others-concept variables were 55.09 and 12.59, and 85.08 and 10.43, respectively. Analyses of variance showed that group membership affected perceptions of classroom environment. Significant differences were found between mean perceptions of classroom

TABLE 2  
COMPARISON OF MEAN PERCEPTION OF CLASSROOM ENVIRONMENT  
SCORES FOR NINE GROUPS

Group/ Concept	N	Classroom Environment Factor									
		Involvement		Affiliation		Teacher Support		Friction		Satisfaction	
		M	SD	M	SD	M	SD	M	SD	M	SD
Low Self,											
Low Others	24	5.08	2.28	5.62	2.10	5.79	1.96	6.79	1.47	3.62	2.72
High Others	17	5.82	2.01	5.59	1.77	6.71	2.09	6.41	2.00	3.64	2.34
High Self,											
Low Others	15	5.33	2.44	6.80	1.57	7.20	1.90	5.60	2.59	5.07	2.49
High Others	37	7.59	1.80	7.92	1.40	7.41	1.55	4.14	2.20	6.08	2.54
Middle Self,											
Middle Others	121	5.82	2.10	6.39	1.66	6.73	1.95	6.26	2.04	4.44	2.50
Low Self,											
Middle Others	53	5.28	1.98	6.08	1.67	5.87	2.10	6.51	1.91	3.83	2.08
High Self,											
Middle Others	59	6.31	2.25	7.05	1.54	7.00	1.90	5.80	2.01	5.00	2.42
Middle Self,											
Low Others	65	5.00	1.89	6.02	1.81	6.22	1.99	6.48	1.87	4.20	2.23
High Others	50	5.82	2.18	6.64	1.58	6.58	1.79	6.20	2.11	3.80	2.37
F		5.92		6.91		3.20		5.78		4.22	
p		<.001		<.001		<.002		<.001		<.001	

environment and group membership ( $df = 8/432$ ). A summary of the mean test scores for the nine groups and the results of the analyses of variance are reported in Table 2.

Since significant differences occurred between perceptions of classroom environment and group membership, Duncan's multiple-range test determined where significant ( $p < .05$ ,  $df = 432$ ) inequalities existed among means on the classroom environment scales. Children in the high self- and others- concept group had significantly greater mean scores on the Involvement, Affiliation, Teacher Support, and Satisfaction scales, and a significantly lower mean score on Friction than children in the low self- and others-concept group.

The next stage of the study included teachers' as well as students' scores to explore the relationship between group membership and students' and teachers' perceptions of classroom environment. The means and standard deviations for the classroom environment scales for 441 students and 25 teachers are presented in Table 3.

TABLE 3  
STUDENTS' AND TEACHERS' MEANS AND STANDARD DEVIATIONS  
ON FIVE CLASSROOM ENVIRONMENT FACTORS

Student/ Teacher		Involvement	Affiliation	Teacher Support	Friction	Satisfaction
Students	<i>M</i>	5.79	6.48	6.59	6.09	4.42
	<i>SD</i>	2.17	1.75	1.96	2.09	2.47
Teachers	<i>M</i>	7.96	8.00	8.56	4.48	6.36
	<i>SD</i>	1.34	1.06	1.64	1.33	1.40

Comparisons of students' and teachers' perceptions of classroom environment were limited to children in the low self- and others-concept group, low self- and high others-concept group, high self- and low others-concept group, and high self- and others-concept group. A discrepancy of  $\pm 3$  raw score points indicated a difference between students' and their respective teachers' perceptions on any given classroom environment scale. This discrepancy represented about a minimum of  $\pm 1.25$  standard deviations for each scale. Students who differed from their respective teacher's perceptions on at least three of the five classroom environment scales were included in the analysis.

Of the 93 children from these four self- and others-concept groups, 39 children met the stated criteria. The breakdown of these children was as follows: 15 students from the low self- and others-concept group, 6 from the low self- and high others-concept group, and 9 each from the high self- and low others-concept group and high self- and others-concept group. Chi-squared tests of independence indicated no significant ( $p > .05$ ) sex differences across group membership for either the 93 or 39 set of students ( $\chi^2 = 2.20$ ,  $df = 3$ , and  $\chi^2 = 4.35$ ,  $df = 3$ , respectively).

A chi-squared goodness-of-fit test compared the frequency distribution observed in each of the four self- and others-concept groups with the theoretical distribution expected for these groups. A chi-squared of 4.39 ( $df = 3$ ) was nonsignificant ( $p > .05$ ). However, a chi-squared of 15.00 ( $p < .01$ ,  $df = 1$ ) was found between the low and high self- and others-concept groups. It appears that significantly more children with low self- and others-concepts are likely to disagree with their respective teachers' perceptions of classroom environment than children with high self- and others-concepts.

#### DISCUSSION

The self-concept and others-concept have been related to children's perceptions of their classroom environment. However, the correlations and multiple correlations were generally low. These findings are in essential agreement with Moos' (1974a, 1974b) contention that relationships between individual personality characteristics and perceptions of social environments do exist, but they are generally not substantial. Despite the lowness of the correlations obtained, the findings do indicate that personal variables and situational variables tend to interact in predictable and expected directions.

Moos (1974a) also speculated that individuals under "high need" tend to respond to environmental measures in ways which are congruent with their specific need structures. The finding that children in the high self- and others-concept group differed significantly in their perceptions of classroom environment from children in the low self- and others-concept group provides empirical support for Moos' contention. This is particularly emphasized by the finding that children who have high self- and others-concepts perceived, as a group, significantly less friction than children with low self- and others-concepts.

Of practical interest is the tendency for more children with low self- and others-concepts to perceive their environments differently from their respective teachers' perceptions of the same classroom environment than children with high self- and others-concepts. Tentatively, regardless of differing classroom environments, the lower personal and social adjustment which may characterize children who have low self- and others-concepts seems to affect their ability to perceive the social climate in their classrooms in the same light as children who do not have low self- and others-concepts. This conclusion is reinforced by the findings that there were no sex differences among group membership and that high and low self- and others-concept children comprised no greater than 30% (8 of 26) of the children tested from any given classroom.

Finally, that perceptions of classroom environment are tied to person variables suggests that students' judgments should not be viewed as impartial. Some personal variables may tend to override situational variables, although obviously the interaction of personal and situational variables should be considered in attempting to understand complex human behavior.

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