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ABSTRACT

This report presents results of a study which investigated the variable self-esteem and its relationship to achievement of inner-city college students, socioeconomic and aspirational factors, and attitudes toward teachers, school, and self. The experimental group consisted of 39 "high risk" students, 38 of whom were black; all were enrolled for placement in an intensive education program (IEP). The control group consisted of 63 subjects who were not considered "high-risk," the ratio of which was 30 percent black. A comparison of mean gain in self-esteem at the end of 40 weeks of school showed a gain of .29 for the control group and a gain of 9.42 (significant at .01) for the IEP group. It was hypothesized that the rise in self-esteem scores for the IEP group resulted from participation in the IEP program rather than from college attendance per se. Speculation is made by the author on reasons why the initial self-esteem scores of the IEP subjects were so low, and important conclusions were drawn from the data concerning overall results of higher self-esteem in black students. Recommendations for further research are discussed. (Author/PC)

Factors Affecting the Measurement of  
"Self-Esteem and Achievement of Inner-City  
Afro-American College Students"

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Contemporary research indicates a relationship between self-esteem and academic achievement. (Purkey, 1970) Self-esteem is central to many personality theories that suggest that self-assessment is a major factor influencing behavior. The preponderance of research to date on underachievers and non-achievers demonstrates that the attitudes of these people are decisively negative and closely tied to their feelings of worth. (Goldberg (1960), Taylor (1964), Shaw and Alves (1963), Bruch and Bodwin (1962), and Fink (1962). A number of studies indicate in their research findings that students with negative self-images of ability rarely perform well in school. (Brookover, Erickson, and Joiner, 1967). Underachievers and non-achievers present a picture of discouragement and failure, they think poorly of themselves, do not expect to achieve, and therefore become victims of a "self-fulfilling" prophecy.

It is hypothesized that one of the most important requirements of effective behavior is self-esteem, as personal worth is a crucial factor in how one's attitudes, values and goal-directed behavior develop. (Fink, 1962; McCandless, 1967; Phillips, 1964; Staines, 1958). Recent self-esteem studies have shown that people with high-esteem tend to be successful both academically and socially. (Coopersmith, 1968)

There has been little research in the area of self-esteem and achievement with college students. Is there a significant difference in self-esteem of achievers and non-achievers at the college level or is the fact that these students have reached the college level an indication of high-esteem? What are some of the characteristics of achieving and nonachieving students, of high-esteem or low-esteem students, if there is a differentiation at this level? Are there significant differences in attitudes towards school and teachers? Can these attitudes change? Does esteem improve with academic success? Is self-esteem related to aspiration and socio-economic variables? My study attempted to investigate these concerns.

If the self-esteem of the college students can be raised, will not his achievement

level and attitudes toward college life improve? The academic environment will be less threatening if one feels that he is capable and confident. Self-perceptions comprise an important area for educational study for how a student looks at himself often has an effect upon how he looks at school and how he performs in the classroom. (Spiegler, 1967)

The self tends to have two chief meanings: the self as subject or agent and the self as the individual who is known to himself (English and English, 1965). Self-esteem is commonly used to refer to the second meaning. For this particular study the definition of self-esteem of Dr. Stanley Coopersmith (1967) was employed as his self-esteem instrument was used in this research.

By self-esteem we refer to the evaluation which the individual makes and customarily maintains with regard to himself; it expresses an attitude of approval or disapproval, and indicates the extent to which the individual believes himself to be capable, significant, successful, and worthy. In short, self-esteem is a personal judgment of worthiness that is expressed in the attitudes the individual holds towards himself. It is subjective experience which the individual conveys to others by verbal reports and other overt expressive behavior. (p.5)

Subjects

The subjects for this study were beginning college freshmen with no previous college experience. The state university was located in an inner-city urban community. An ACT calculated "probability of earning a "C" score (P/C)", derived from differentially weighted ACT subtests and high school grades was used as an admission variable. A number of "high risk" students were admitted for placement in an intensive education program (IEP). These students had a 0.30 or less probability of "C" scores. Previous studies have shown that freshman students with similar predictive criteria have been those who often withdrew after two trimesters in residence or were dropped from the college because of low GPA's. The ACT calculated P/C's correlated between 0.50 and 0.60 with GPA's in previous studies at the university.

The lower the P/C score, the lower is the average GPA. Average GPA's for students



with PC's of 0.30 or lower are 1.32 or lower. (Table 1)

TABLE 1

RELATIONSHIP OF "C" OR HIGHER PROBABILITIES  
TO COLLEGE GRADE POINT AVERAGES EARNED  
BY ENTRANTS OF JANUARY, 1966

Grade C Probability	Average Earned GPA	Grade C Probability	Average Earned GPA
.95	3.75	.52	2.05
.91	3.40	.48	1.83
.89	3.25	.42	1.60
.84	3.16	.38	1.52
.81	3.05	.32	1.42
.75	2.79	.30	1.32
.71	2.61	.26	1.23
.64	2.44	.21	1.08
.59	2.25	.02-.16	.90

The experimental group consisted of thirty-nine "high-risk" student, thirty-eight of which were Black, (i.e., P/C's of 0.30 or lower). The control group consisted of sixty-three subjects who were not considered "high-risk", the ratio of which was 30% Black. The P/C scores had a mean of .472 and a standard deviation of .206. In addition to data from the IEF and the control groups, data from 82 students who were in neither group and who were not "high-risk" are included where available.

#### Instruments

Self-Esteem Inventory (SEI). This inventory was developed by Dr. Stanley Coopersmith and consists of fifty statements relative to school, family, peers, self and general social activity. Most of the statements are based on items from the Rogers and Dymond (1954) scale. The SEI has four subscales: General Self, Social Self, Peers, Home-Parents, and School-Academic. An example of an item is:

Like Me \_\_\_\_\_ Unlike Me \_\_\_\_\_

I spend a lot of time daydreaming.

The total number correct for all scales is 50.

Student Information Survey (SIS). The SIS was developed by Dr. Carl Clark and consists

of eighty-one items, of which a number relate to attitudes toward self, school and teachers. The SIS is a multiple choice questionnaire utilizing short stem statements which lead into three choices. An example is:

I think the personalities of most college teachers will be:

- a. warm
- b. cold
- c. carping and critical

Items that referred to students' attitudes toward teachers, school and self were selected for analysis. Each response choice was correlated with initial self-esteem scores, using a point biserial correlation. Each response choice was dichotomized into two scores: two points based on the selection of the item, one point based on the non-selection of the item.

American Council on Education Report (ACE). Questions relative to aspirations, financial status, neighborhood and high school characteristics and parents' education were selected. An example of the scoring procedure is:

- 1) Degree of concern about ability to finance college education.
  1. none (3 points)
  2. some (2 points)
  3. major (1 point)

The higher the combined score, the higher the socio-economic status. Aspirational level was also assessed by weighing items selected from the ACE and adding scores to yield an index of aspiration level. The higher the combined score, the higher the aspirational level. Relationships between and among the measured variables were assessed by correlational techniques and t-tests for significance of differences as shown in Table 3 page 5.

### Results

Table 1 shows that four differences between means significant at the .05 level or better were obtained. One of these P/C, significant at .001 can be discounted because P/C was the criterion used in dichotomizing the items. Differences in initial (i.e., at the beginning of the freshman year) self-esteem scores for the control and the IEP groups are significant at the .01 level, the control group having a significantly higher mean self-esteem score. Significant at the .05 level is the difference in mean

TABLE 1

t-TESTS OF DIFFERENCES BETWEEN MEANS OF SELF-ESTEEM AND P/C SCORES  
GPA'S, HS RANKS, AND SOCIO-ECONOMIC AND ASPIRATIONAL  
SCORES OF CONTROL AND IEP GROUPS

Variable	C Group		IEP Group		t	df	E
	N	M	N	S.D.			
Init. Self-Est.	63	34.873	39	29.102	5.771	100	4.279*
	59	35.271	29	23.133	7.138	86	4.762*
Final Self-Est.	59	35.559	29	37.552	1.993	86	1.240
P/C Scores	63	0.472	39	.185	.287	100	7.880***
First GPA'S	59	2.326	29	2.395	.069	86	.4339
Final GPA'S	63	2.311	39	2.291	.020	100	1.653
	59	2.313	29	2.241	.072	86	.5465
HSGPA	63	2.250	39	2.137	.113	100	.919
HS Rank	63	66.603	39	69.143	2.540	100	.676
Soc-Ec. Scores	59	15.559	30	13.996	1.563	87	1.960*
Aspira'l Scores	62	20.435	30	19.966	.469	90	.9122

\* P < .05  
\*\* P < .01  
\*\*\* P < .001

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socio-economic level between the two groups, with the control group having the higher status.

It is interesting to note that, although the initial self-esteem mean for the IEP group is significantly lower than that of the control group, the final self-esteem mean for the IEP group is higher than that of the control group, although not significantly so. Differences in GPA's first and final, are not significant. All means are slightly above "C". Neither are high school ranks significantly different. Mean rank of the IEP's were slightly higher than that of the control group.

TABLE 2

t-TESTS OF DIFFERENCES BETWEEN MEAN GAINS OF SELF-ESTEEM SCORES FOR CONTROL AND IEP GROUPS

	Self-Esteem - 1st			Self-Esteem - 2nd		
	N	M	SD	N	M	SD
Control Group	59	35.271	7.583	59	35.559	7.620
IEP Group	29	28.133	4.360	29	37.552	5.828

  

	Diff	df	t
(Control Group)	.288	58	.209
(IEP Group)	9.419	28	6.650**

\*\*p < .01

Table 2 shows the results of t-tests for significance of differences between mean gains in self-esteem for control and IEP groups after forty weeks in college. Gain for control group is not significant but gain for the IEP group is significant at the .01 level.

As the IEP students are representatives of an extreme group, low P/C scores, regression towards the overall self-esteem mean score would be expected. To calculate the regression coefficient the pre- and post-self-esteem scores were correlated. This

regression coefficient was used to predict their expected scores.

The deviation from these predictions was used in comparing the IEP and control group gains. The formula for these deviation scores is the following, which Ferguson refers to as delta scores [1966, p. 267]:

$$d = \frac{ZY - r_{xy}Z_X}{\sqrt{1 - r_{xy}^2}}$$

The first  $t$  in Table 2a shows a nonsignificant loss for the control and a gain significant at the .01 level for the IEP. Comparing the gains for the two groups, the IEP group gained significantly more than the control, the  $t$  being 3.5937, which is significant at .01 level.

TABLE 2a

## SELF-ESTEEM GAINS CORRELATED FOR REGRESSION

Group	N	M of Cor- rected Gains (1)	S.D.	df	t
Control	59	-.2148	.857	57	1.090 for gains
IEP	29	.5134	.934	27	2.9087** for gains
				86	t for compar- ison of gains between groups 3.5947**

\*\*p < .01

(1) Test-retest  $r = .4501$

Table 3 shows partial correlations between the variables of initial self-esteem probability of "C" and, final grade-point averages for the three groups, with one of the three variables held constant in each case. There is a negative relationship between initial self-esteem and final grade-point average for the total and control groups when P/C is held constant, but the correlations are low and nonsignificant.

TABLE 3

PARTIAL CORRELATIONS BETWEEN INITIAL SELF-ESTEEM SCORES, P/C SCORES, AND FINAL GPA FOR TOTAL, CONTROL, AND INTENSIVE

Groups	Correlated Variables	Controlled Variables	r
Total Freshmen	ISE and FGPA	P/C	-.112
	P/C and FGPA	ISE	.471**
	P/C and ISE	FGPA	.335*
Control	ISE and FGPA	P/C	-.078
	P/C and FGPA	ISE	.582**
	P/C and ISE	FGPA	.258*
Intensive Education	ISE and FGPA	P/C	.140
	P/C and FGPA	ISE	.256*
	P/C and ISE	FGPA	-.172

\*p < .05

\*\*p < .01

Significant at the .05 level are P/C and ISE when FGPA is held constant for the total and control groups. P/C and FGPA are significant at the .01 level when ISE is held constant.

The IEP group had a significantly (at the .05 level) lower socio-economic mean score than the control group. As six variables were involved in the socio-economic index, each variable was examined separately. The variables so examined are financial concern, financial source, family, education, family income, neighborhood and high school characteristics. The only difference that was significant between the two groups was family income. The control group had a higher mean income than the IEP group and the difference is significant at the .05 level. The mean of the IEP group is between \$4,000 and \$7,999, and the mean of the control group is between \$6,000 and \$9,999.

Attitudes toward teacher, school, and self were assessed from items selected from Dr. Clark's Student Information survey. Each item had three response choices and each choice was correlated with initial self-esteem scores. Two points were assigned if a response choice was selected, one point was assigned if it was not. A positive correlation indicates that initial self-esteem scores of those who selected that response were higher on the average than initial self-esteem scores of those who did not. Negative correlations indicate that those who selected that response had lower mean initial self-esteem scores than those who did not. The formula used is the following:

$$r_{pbi} = \frac{\bar{y}_2 - \bar{y}_1}{s_y} \quad pq$$

If the mean self-esteem score of those who chose the item (indicated by  $y_2$ ) is lower than the mean of those who did not choose the item (indicated by  $y_1$ ) the correlation will be negative. The results showed that higher esteem subjects have more positive attitudes.

DISCUSSION AND CONCLUSIONS

The purpose of the present study was to investigate the variable, self-esteem and its relationship to (1) achievement of inner-city college students, (2) socio-economic and aspirational factors, and (3) attitudes toward teachers, school and self.

Means and standard deviations for initial self-esteem scores (administered at the beginning of the college year) and final self-esteem scores administered at the end of forty weeks of school show that the mean initial self-esteem score of the control group was 7.14 points higher than that of the IEP group. The difference is significant at .01. For the same subjects, the mean final self-esteem score for the controls was 1.99 points lower than for the IEP's. The difference is not significant.

The mean gain in self-esteem for the control group was .29. The mean gain for the IEP group was 9.42, significant at .01. Clearly, the college experience markedly raised self-esteem of the IEP subjects. The mean self-esteem score at the end of the college year is higher than the mean of the control. It can be hypothesized that the rise in self-esteem scores for the IEP group resulted from participation in the IEP program rather than from college attendance per se. The data, however, do not permit a test of that hypothesis.

The reasons why the initial self-esteem scores of the IEP subjects were so low is also a matter of speculation. The IEP subjects were placed in that group on the basis of a P/C score of .30 or lower, derived from self-reported high school grades and scores on subtests of the ACT. The mean high school GPA and mean high school rank of IEP subjects, while slightly lower than the controls, were not significantly so. Subjects in both groups were performing approximately equally well in high school. The difference between the two groups on the variable, P/C, therefore presumably depends primarily on ACT subtest scores.

Students are informed of ACT results by their high school counselors. Low ACT subjects are usually not eligible for admission to college or, if admitted, are placed in special programs. Awareness of having done poorly on the ACT, plus assign-

ment to a special program designed for students with a high probability of failure, may account in part for the initially low self-esteem scores of the IEP subjects.

Diggory (1966) reported that when one's ability is important and highly rated, a failure of that ability lowers one's self-evaluation of other seemingly unrelated abilities. Conversely, success of an ability that is rated highly raises the self-evaluation of other abilities. Ludwig and Hoehr (1967) report similar spread of effect.

Wylie (1951) states that students were likely to change their self-evaluation after experiencing experimentally induced success or failure.

If the poor scores on the ACT are related to the low self-esteem of the IEP students as a consequence of their poor ACT performance, the emotional pain and loss of dignity surely should suggest the questioning of the use of these instruments.

Another possibility is that the general negative attitudes of low-esteem subjects, as evidenced in the Student Information Survey, may have been a part of the personality prior and during ACT testing. This same negativism may have led them to report high school performance as less adequate than it actually was. In the present study, low esteem subjects tended to express dissatisfaction with their high school grades and to rate themselves as being in the middle third of their high school classes. Reference to high school records for this group showed that they were actually approximately equal in high school performance to students in the control group, who generally reported themselves to have been in the upper third of their class and to have been satisfied with their grades.

In studies of this nature it is a concern as to which effect comes first, self-esteem affecting behavior or behavior affecting self-esteem. Cooper-Smith (1967) states this succinctly:

Like other investigators of personality development, we are not in a position to determine whether the conditions we find associated with self-esteem are antecedents, consequences, or correlates. (p.17)

There were no significant differences between the means of the two groups on first

GPA (at the end of the first trimester), final GPA (at the end of forty weeks in college), high school GPA, or high school rank. The two latter means were obtained from the students' records, rather than from self-reports. If self-esteem is related to college achievement, the IEP group would be expected to perform less well academically, but such is not the case. Perhaps the special program and the challenge to succeed gave the IEP students the motivation to perform capably.

Although self-esteem was not found to be significantly correlated with college success, there is partial support to the fact that the IEP students who entered with low expectations for college success and low self-esteem scores gained significantly in self-esteem when they achieved success in college by performing as well as other students in their class.

Aspiration is not correlated with self-esteem. Low esteem and high-esteem subjects responded in much the same way to items concerning predicted achievements (i.e., failures, honors, drop-outs, GPA's, post-graduate success).

An index of socio-economic status was obtained by weighting items from the ACE and adding scores on the selected items to give an index score. The relationship between status and self-esteem was first evaluated on the basis of the index score and then on the basis of responses of the IEP and control groups to individual items included in the index. The control group had the higher mean score, and the difference is significant at .05.

Differences in mean scores for responses of control and IEP subjects to separate items used to obtain the index score were considered, and t-tests were computed to determine the significance of the differences. Only one difference was significant at the .05 level; family income. The mean of the IEP group fell in the range of \$4,000 to \$7,999; the mean of the control group was in the range of \$6,000 to \$9,999.

Attitudes towards teachers, school, and self were assessed by responses to items selected from the Student Information Survey (SIS). The results indicate that higher self-esteem subjects have more positive attitudes toward teachers, school, and self than

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do lower self-esteem subjects.

Higher esteem subjects tend, in comparison with lower esteem subjects, to:

1. have been more successful in school (as self-reported), had no problems with study except the need for more time, be satisfied with schools attended and with their grades and themselves as students;
2. be uneasy less often, organize time well, be healthy, refrain from smoking, have fewer accidents and more regard for the truth, adopt long-range goals, spend less time on outside jobs, date more often, and come from smaller families.

Important conclusions can be drawn from the data: Self-esteem can be raised significantly for black students. Since the results also show that higher self-esteem is significantly related to positive attitudes toward teachers, school, and self, experiences designed to raise self-esteem may well have important social significance. While the study was not designed to test the hypothesis that the IEP program was responsible for the improved self-esteem of the IEP subjects or to evaluate generally the value of the IEP program, the results here reported suggest that the program did indeed contribute to the improved self-esteem and to the acceptable academic performance of the high-risk Black subjects included in the IEP group.

A recommended area for further research concerns the ACT scores. Many subjects protest standardized testing as a discriminating device, and many students are refused college admission on the basis of ACT scores. The IEP subjects had achieved in high school and achieved in college equally as well as those with higher P/C scores. If ACT subjects were the contributing factor in the P/C difference, and if the control and IEP subjects, the scores did not really discriminate between those subjects with great potential for college success and those with low potential.

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