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ABSTRACT

This follow-up study aimed to determine whether a similar relationship between anxiety in the school situation and racial-socioeconomic status in upper elementary school children could be found in an expanded population. A population of 1201 fifth- and sixth-grade children from eight schools representing various combinations of urban-suburban, private-public, inner-outer city, and racial compositions were given a "General Anxiety Questionnaire." In addition, IQ, achievement gains, and teacher ratings of pupil behavior were used in this study. Results show that black inner city children do manifest a higher anxiety level than white children. Researchers argue that this anxiety is rooted in unmet physical and security needs in the inner city environment. Thus, a relationship can be established between social-emotional cognitive structures and racial-socioeconomic situations. [Not available in hard copy due to marginal legibility of original document.] (KG)

Racial-Socioeconomic Situation, Achievement, I.Q., and Teacher Ratings of Behavior as Factors Relating to Anxiety in Upper Elementary School Children: A Follow-up Study*

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INTRODUCTION

In 1969 Hawkes and Koff (5) reported the results of a normative study which examined the effects of social class (indexed by school attended), sex, and grade on the responses of upper elementary school children to a general anxiety questionnaire. Through a content analysis of the test items, they also explored theoretical and practical issues relevant to the manifestation of anxiety in "culturally disadvantaged" children.

The Hawkes and Koff data showed that fifth and sixth grade children in an inner city school had significantly higher scores ($p < .001$), indicative of higher levels of anxiety, than had their private school counterparts. At the same time, the "lie" scores were uniformly low for both groups. An analysis of the types of anxiety; e.g., real fear, school achievement, anxiety symptomatology, etc., revealed that the average inner city child was as high or higher on all types of anxiety than was his private school counterpart.

Hawkes and Koff collected their data in one black inner city school and one predominantly white laboratory school connected with a large university. Both schools were located in the same large midwestern city. A considerable proportion of the inner city school children came from families who were receiving welfare benefits, while the private school population came mostly from upper middle class professional homes.

This paper is the first of a series of reports of a replication of the original study, expanded to include eight schools, representing various public-private, urban-suburban, "inner" and "outer" city school situations. In addition, where possible, anxiety and lie scores were supplemented with the collection of IQ, achievement, achievement gains and teacher ratings of student behavior data. The present study was conducted in 45 fifth and sixth grade classrooms of 8 schools in a large metropolitan area on the eastern seacoast.

THE STUDY

Purpose

The present study was interested in ascertaining whether the same relationship between anxiety and school situation as obtained in the earlier study (5) would be found using a much larger population located in another geographical location. In addition, this study included data on IQ, achievement, achievement gains, and teacher ratings of pupil behavior to determine relationships which might exist between these measures and manifest anxiety.

METHOD

Instruments

1. Anxiety: The "General Anxiety Questionnaire" (GAQ) is the same instrument which was derived by Hawkes and Koff (5). The GAQ contains two scales, an anxiety scale and a lie scale. The anxiety scale is composed of 31 items taken from the "Childrens Manifest Anxiety Scale" (2) and 8 items taken from the "General Anxiety Scale for Children" (9). The items of the GAQ and the serial position in which they occur are found in Table 10. In addition, interspersed among the anxiety items are the 11 items of the lie scale of the "General Anxiety Scale for Children" (9). These are shown in Table 11. The Hawkes and Koff study reports the rationale used for the inclusion of the various items in the GAQ.

An answer of "yes" to any anxiety item on the GAQ is indicative of anxiety. An answer of "no" on any "lie" item is interpreted as being indicative of lying.

2. Intelligence: An attempt was made to obtain individual IQ scores from the personal records of each student in the study. For schools E, F, G, and H this was the Lorge-Thorndike General Intelligence score. For school C, the Kuhlman-Anderson total IQ score was used. For school D, the California Test of Mental Maturity was obtained. School B provided scores from the Stanford-Binet Intelligence Test. There were no available IQ scores at school A.

3. Achievement: All of the schools used in this study had Iowa Test of Basic Skills (ITBS) scores available. The composite score of achievement for each student for the year of the study (1969) was collected. The previous year's achievement score was also collected in schools E, F, G, H.

4. Achievement Gain: An achievement gain score was derived for each subject in schools E, F, G, H by taking the difference between current achievement and previous year's achievement scores.

5. Teacher Ratings of Behavior: In schools E, F, and H it was possible to obtain from the personal records, a score which indicated the teachers' ratings of student deportment. On a five point scale, a score of 5 was indicative of a superior rating by the teacher; a score of 1 indicated that the teacher viewed the child's behavior in unsatisfactory terms.

Subjects and Schools

1201 children from the upper elementary grades of eight schools were tested in this study. The entire fifth and sixth grade classes in each school were represented in the sample population. Only children absent from class on the day of testing were excluded.

The schools were selected to represent, as much as possible, various combinations of urban-suburban, private-public, inner-outer city, and

racial compositions.

Although permission for the collection of the data was granted from each of the school systems involved, final approval rested with each principal. The investigators personally contacted each school principal and also collected all of the data. The investigators are unaware of any unduly biasing effect in the selection of schools which would render invalid generalizations of results to other schools of similar characteristics. Chart A contains the number of subjects by grade, sex, and race in each of the 8 schools used in this study.

Insert Chart A

School A is a private, non-sectarian school which served children from primarily middle and upper middle class professional homes. There are a few scholarship students. The school is located in a country-like atmosphere in a suburb near the large city. The school has small classes and an experimental philosophy which includes some non-graded instructional periods during the school day.

School B is a private school which also served children from middle and upper middle class professional families. It, too, is located in a nearby suburb with a rural surrounding. There are little overt differences between schools A and B in either aims, methods or clientele.

Both schools also have very devoted parent bodies; with some mothers working in the schools for both financial and/or interest reasons.

School C is one of three public elementary schools serving a small city thirty miles from the center of the large metropolitan area. The children in this school come from white families representing all but the lowest level of socioeconomic status. During the year of the study, some fifth grade black children were bussed or school C from another township area as a first attempt at district racial integration.

School D serves a middle class suburban community which is one district removed from the large city. The children in this school are all white, and come from lower middle and middle-middle class families. Available occupational and educational data on parents of these children indicate that the great majority had one to four years of education beyond high school and were in serve or lower management positions.

School E is an outer city school that is located two miles from the heart of the center of the city. It is located in an upper lower and lower middle class area with a major segment of the community being second and third generation Italian Americans. Most of these families have lived in the area for some time. Also included in this school was a sizable (30%) minority of black children who were bussed into the area as a result of a desegregation program recently initiated in the large school system. These children are bussed into the school from a ghetto area closer to the center of the city.

School F serves an upper lower and lower middle class community and is also an outer city school several miles removed from the inner city. However, this school has seen a most rapid turnover in population during the past five years. Prior to that time, the school served a predominantly white middle class, Jewish population. At present, the community is undergoing a very rapid change in racial and ethnic composition. The school reflects this change. The present school population consists of about 80% black children newly moved into the area from the inner city and 20% white children representing those older families who have remained in the community.

Schools G and H are in the heart of the inner city. Both schools have 100% non-white populations. Black, lower socioeconomic families are predominant in the communities. A sizable proportion of the students come from homes which receive welfare aid.

Procedure

The principal investigators administered the GAQ called, "Student Questionnaire," to the students in their regular classrooms. A total of 45 classrooms were visited. The testing procedure was preceded by an introduction in which the researchers explained to the children that they were collecting information about the cares, concerns and aspirations of fifth and sixth grade boys and girls in order to better help new teachers understand the children they would be teaching.

The investigators, after requesting that the subjects read along with them, read the following instructions which were printed on the cover sheet of each questionnaire:

> "This questionnaire covers items 1 - 50 on your answer sheet. These questions are about how you think and feel, and have no right or wrong answers. People think and feel differently. The person next to you may very well answer each question differently. If you were asked if you like school, you might answer yes while someone else might answer no. For questions 1 to 50, you are to mark your answer sheet as follows.
>
> If you would answer Yes to the question, put an X in the space by yes. If you would answer No to the question, put an X in the space by no. For each question, put an X next to yes if your answer is Yes, or put an X by no if your answer is No.

The subjects were also told that if they could not answer an item, or did not feel like answering an item, they could leave the item blank. 13 subjects exercised this option to some degree.

Each question was then read aloud by the researchers and was repeated. The children were allowed thirty seconds to check "yes" or "no" on the answer sheet. Reading each question aloud permitted all subjects, regardless of reading ability, the opportunity to respond.

RESULTS

The descriptive statistics for anxiety, lie, IQ, past and present achievement, achievement gain, and teachers ratings of behavior are presented in Tables 1 through 7 for each school by grade and sex. Table 8 presents summary data for the entire sample by sex, by grade, and by race--the latter indicative of racial-socioeconomic situation. T-tests for uncorrelated measures are found in Table 8 for these variables testing for differences by sex, grade, and racial-socioeconomic situation. The authors chose this summary form because they felt that these three factors represented the major effects in this sample. It is apparent from the description of the total sample that most of the black children, irrespective of school, were either residents of the inner city ghettos or had just recently moved from the inner city, while most of the white children were residents of urban or suburban lower middle and middle class communities. Table 9 presents Pearson Product Moment Correlations relating anxiety, lie, present and past achievement, achievement gain, IQ, and teacher ratings of behavior for each grade and sex subsample. Table 10 presents a Chi-square analysis for each of the GAQ anxiety items comparing the responses of the total white and black subsamples, these latter representative of racial-socioeconomic situation. Table 11 presents a similar analysis for the lie items in the GAQ.

Descriptive Statistics

Tables 1-7 report the Ns, means and standard deviations for the anxiety, lie, intelligence, current achievement, previous achievement, achievement gain and teacher ratings of behavior scales by grade and by sex for each school.

Insert Table 1-7

The data in Tables 1-6 also allow for some interesting comparisons to be made between subsamples of the population. T-tests for uncorrelated measures were computed on anxiety, lie, intelligence, and achievement scores between the following pairings:

a. Private-Suburban vs. Public-Suburban
b. Public-Suburban vs. Public Outer City
c. Public Outer City vs. Public Inner City

In each case, statistically significant differences were found showing higher anxiety scores for those students closest to the inner city situation. The intelligence and achievement scores also showed statistically significant differences. Not surprisingly, the further away from the private suburban situation, the lower were the scores. However, lie score comparisons proved to have no significant differences between any of the groups.

Comparisons between the black and white children within the outer city school situations on anxiety scores indicated that the black children manifested statistically higher anxiety scores than did their white classmates. It should be remembered that for both outer city school situations the white children came from higher socioeconomic level homes than did the black children.

When a comparison is made between these black children from the outer city school situation and their black counterparts in the inner city schools, the children from the outer city showed significantly less anxiety than did their peers in the ghetto situation.

Table 7, which includes teacher behavior ratings for the two outer city schools and one inner city school, also reveals some interesting comparisons. The outer city school teacher behavior ratings of children are significantly higher than are the behavior ratings for the inner city children. When the behavior ratings of the white children are compared with their black classmates' scores within the outer city schools, the behavior ratings for the white children are significantly higher. In addition, when the black children in the outer city situations are compared to the black children in the inner city schools, the outer city children are found to have significantly more positive teacher ratings of their behavior.

In sum, it would seem that the further away from the inner city one goes in school situations, the lower the anxiety, the higher the intelligence, achievement and teacher ratings of behavior.

Grade, Sex, and Racial-Socioeconomic Situational Differences

Table 8 is a summary table which allows statistical comparisons to be made for the total boy subsample to the total girl subsample, the total fifth grade to the total sixth grade, and the total white to the total black subsample--the latter a comparison of racial-socioeconomic situation. T-test comparisons were made fot tho anxiety, lie, behavior rating, and IQ scores by sex, grade, racial-socioeconomic situation.

Insert Table 8

An examination of Table 8 reveals several areas in which significant differences are well beyond the .001 level. The results of the analyses show that girls are higher on anxiety, teacher behavior ratings, and IQ scores. Boys, however, are significantly higher than girls on the "lie" scores. The black population from predominently lower socioeconomic situations had both anxiety and "lie" scores which were significantly higher than the white population from predominantly lower middle socioeconomic situation. The white population had significantly more positive ratings on behavior as rated by their teachers than had the black students. The white, higher socioeconomic population, also had higher IQ scores than did their black peers from lower socioeconomic situations.

None of the analyses reached statistical significances for differences between the two grade levels (fifth and sixth).

The findings of sex differences on the anxiety and "lie" scales are consistent with the Hawkes and Koff (5) data and with previous findings (8, 9) regarding the manifestation of anxiety and lying between the sexes.

The finding of significant racial-socioeconomic situational differences on anxiety is also consistent with the Hawkes and Koff study.

The finding that the black children from predominantly lower income homes scored higher on the "lie" factor is not consistent with the previous study. However, in both studies, the average lie scores are exceedingly low, an average of less than 3 items out of the 11 items, with the differences between the races being less than 1 item. Thus statistical significance in this case may not have much relevance to social significance.

Although the data for the present study suggests slightly higher anxiety scores for the younger children (fifth grade) than for the older group (sixth grade) the analysis did not prove significant. This finding is not congruent with the previous findings which have indicated lower anxiety in the older child (5, 8, 9).

Relationships Between Variables

Insert Table 9

Table 9 presents the results of the Pearson Product Moment Correlations among the seven major variables in the study by grade and sex. Several patterns are readily observable. In each grade and for each sex there are significant negative relationships between anxiety and the lie, IQ, past and present achievement scales. Anxiety and achievement gain scores show significant negative relationships for fifth grade girls and 0 or negligible negative relationships for the other populations. Anxiety and teacher ratings of behavior show significant negative relationships for fifth grade boys and girls and sixth grade girls; but for sixth grade boys this relationship is small and in a positive direction.

Lie scores have significantly negative relationships with IQ for fifth grade girls and sixth grade boys. For fifth grade boys and sixth grade girls this relationship is either nil or slightly negative. Lie scores and past achievement show significant positive relationships in fifth grade girls only. For the other groups lie scores and past achievement show small but negative relationships. Lie scores and present achievement are related negatively and significantly for fifth grade girls and sixth grade boys; while the other two groups show small negative trends. Lie and achievement gains show no significant relationships with slight positive trends for both fifth and sixth grade girls and slight negative trends for the fifth and sixth grade boys. Lie scores

relate significantly and negatively to teacher ratings of behavior for fifth grade girls, and sixth grade boys.

IQ scores relate positively and highly significant with past and present achievement and teacher behavior ratings for each group. Achievement gain scores and IQ show a significant negative correlation for the fifth grade boys; while all other comparisons reveal small but positive relationships.

Present achievement scores relate positively and significantly to past achievement and to teacher ratings of behavior for all groups. Present achievement, however, is unrelated to achievement gains for all groups.

Achievement gains are related in a slightly positive direction to behavior ratings for three groups with a very slight negative relationship for sixth grade girls.

Insert Tables 10 and 11

Anxiety and Lie Item Analysis by Racial-Socioeconomic Situation

Table 10 presents an analysis of "yes" answers to the anxiety items for the white and black populations. Chi-square analyses indicate that the black children from predominantly lower socioeconomic backgrounds were in terms of statistical significance more likely to answer "yes" on 31 of the 39 items, with no significant differences obvious between populations on 7 items. Only one question resulted in significantly more "yes" answers by the white children than by the black pupils.

These findings are most consistent with the similar analysis of items done in the Midwest study. In the present study, with a much larger population, many more of the items reached significance at and beyond the .05 level. Again, the type of anxiety indicated in the content analysis of the items showed that the black children from lower socioeconomic background manifest greater degrees of real fear, concern for school achievement, a general anxiety, and specific symptomatology of anxiety than do their white peers from more affluent socioeconomic levels.

The sole exception to this conclusion involves an interesting item. To the question, "I have worried about things that did not really make any difference later," more white children answered "yes" than did their black counterparts. A quite plausible speculation might be that the concerns or worries manifested by the black ghetto child would hardly be of the type which would be likely to disappear or to warrant only passing concern.

Summary of Results

1. This study, using a much larger population located in a different geographical region, replicated the findings of a previous

study (5) on the relationship between anxiety and sex, and anxiety and racial-socioeconomic situation.

a. Girls manifest significantly more anxiety than do boys.
b. Black pupils from predominantly lower socioeconomic home situations manifest significantly more anxiety than do white students from higher socioeconomic situations.

2. The present study failed to replicate the previous findings that older children (sixth grade) manifest lower anxiety scores than do younger children (fifth grade).

3. Although there was a statistically significant difference between white and black subjects on the lie scale, the absolute scores on that scale were low, and there was less than a one item difference between the two populations.

4. The present study also computed correlations among anxiety, lie, achievement, IQ and teacher ratings of behavior to each other. Of particular interest are the significant negative relationships between anxiety and the following variables: lie, IQ, present achievement, past achievement, for the four comparison groups: fifth grade boys, fifth grade girls, sixth grade boys and sixth grade girls. Teacher behavior ratings and anxiety also had significant negative relationships in three of the four comparison groups with only the sixth grade boys showing an insignificant relationship between the two variables. Also of interest, was the negligible relationship between achievement gains and any other variable.

5. An item analysis of the anxiety questionnaire proved to have similar results to the Midwest study. In 31 of 39 items, the black students from predominantly lower socioeconomic backgrounds evidenced significantly higher anxiety than did the white population from higher socioeconomic levels. These black children evidence more concern for school achievement, greater degrees of real fear, general anxiety and specific symptomatologies of anxiety than did their white counterparts from higher socioeconomic levels.

6. It was deduced from analysis of the types of schools, and social compositions that the further away from the inner city one goes in school situation the lower the anxiety and the higher the intelligence, achievement, and teacher ratings of behavior, irrespective of race.

DISCUSSION

What does it mean that more of the black children in the inner city schools answer the anxiety items with a "yes," than their white middle class peers? One might speculate that the "yes" answers by the

black children indicate a social naivete concerning what is socially desirable to reveal or not to reveal concerning ones feelings, aspirations, or concerns (4). If such is the case, then one must dismiss any child scoring high on a "manifest" anxiety questionnaire as being naive and dismiss any of the work demonstrating the relationship between anxiety and performance as fallacious. One must also dismiss the face validity of the items. One could speculate that the inner city school children who may be slower intellectually at least (as measured by standardized IQ tests) than their middle class peers, respond automatically to complex stimuli questions with a "yes" rather than a "no." One would then have to speculate concerning what is complex, and why a "yes" rather than a "no." One could also speculate that the inner city school child uses a different language code than his middle class peers and that, when he says "yes" to the same words that his middle class peer says "no" to, he is saying it to words which have a different meaning for him. Hawkes and Koff (5) in the original construction of the questionnaire talked with the children concerning the words used, and could not discern any differences in meaning. One could make all of the above plausible speculations which would maintain the assumption that there are no differences in anxiety between racial-socioeconomic situations.

However, a more plausible speculation to us is to assume that there are differences in anxiety, or social-emotional cognitive structures, between racial-socioeconomic situations. If one assumes the latter, then one might speculate that the more frequent "yes" answers by the black children represent, or are a reflection of, the harsh realities of the existential world of the inner city child compared to the realities of his middle class peers (3, 7, 5).

When one surveys the differentiating items in Table 10 it is apparent that the most differentiating items refer to real fear types of situations, e.g., concern about something happening to oneself, friend, or parent.

This does not mean that there are not highly anxious middle class children, or that there are children in the inner city who are not highly anxious. It only means that the predisposing environmental factors to anxiety are much more likely to be present for the inner city child than for his peer in the suburb. It suggests that anxiety or the social-emotional cognitive structures tapped by this questionnaire are not just the result of particular types of interactions between parent and child, but can also be rooted directly or indirectly in unmet physical and security needs. There is plenty of support for such an idea in modern popular black literature and popular educational literature concerning education in the ghetto.

If one does accept the anxiety differences between racial-socio-economic situation, the "yes" answers in Table 10 cast serious doubts on some very prevalent stereotypes held in this society. For example, when we look at the items concerned with school achievement, we see that both the suburban school children and the inner city children worry about how they are doing in school, only the inner city school children more so. If one sees as the genesis of worry an individual's inability

(either through his own efforts or because of external conditions which are overpowering) to cope with the world, then the findings above make sense. When we look at the differences between the white children and the black children on achievement and teachers ratings of behavior, it is obvious that the white children are much more successful in their school efforts than their black peers.

We will not speculate concerning causation; we would only emphasize the relationships that do exist between anxiety and achievement, IQ and teachers ratings of behavior. They are negative and they are strong. This is not consistent with a theory of anxiety as a middle class phenomena in which parents train children to achieve or to be the best while parents from lower socioeconomic situations are unconcerned and care little for their child's success either in school or any place else. This view also implies that the child's anxiety is a direct reflection of the parental pressures. Our data does not support this notion. If Fortnoy's mother is anxious about her child, Fortnoy, in our study, is not. He is more successful and less anxious than are his counterparts from other socioeconomic strata.

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TABLE 1

Anxiety Scores
Ns, Means and Standard Deviations by Grade and Sex for Eight Schools

		Fifth			Sixth	
		N	Mean	S.D.	N	Mean	S.D.
Private-Suburban							
School A	Boys	6	19.16	4.53	5	8.20	3.27
	Girls	4	19.00	10.09	3	9.00	3.05
School B	Boys	11	15.18	7.15	11	15.54	7.65
	Girls	4	22.60	5.16	12	17.41	5.29
Public-Suburban							
School C	Boys	26	19.30	6.23	19	14.78	5.36
	Girls	25	16.96	8.22	17	16.47	6.12
School D	Boys	53	15.03	7.25	56	17.16	6.32
	Girls	54	19.62	7.59	58	20.48	6.76
Public-Outer City							
School E	Boys	47	19.92	6.23	40	17.47	6.91
	Girls	45	21.64	6.58	43	21.60	5.45
School F	Boys	40	19.82	5.66	33	20.78	5.43
	Girls	30	22.70	5.83	34	22.79	5.92
Public-Inner City							
School G	Boys	52	22.50	5.88	72	21.41	5.92
	Girls	51	24.45	6.23	69	24.85	5.99
School H	Boys	60	22.71	5.53	63	21.30	5.69
	Girls	65	25.67	5.65	81	23.24	5.97

TABLE 2

Lie Scores
Ns, Means and Standard Deviations by Grade and Sex for Eight Schools

		Fifth			Sixth	
	N	Mean	S.D.	N	Mean	S.D.
Private Suburban						
School A	Boys	6	2.33	1.86	5	4.00	2.82
	Girls	4	.75	1.15	3	4.66	1.52
School B	Boys	11	2.27	1.48	11	3.09	1.86
	Girls	4	1.00	2.00	12	1.75	1.21
Public-Suburban							
School C	Boys	26	2.53	1.92	19	2.31	1.24
	Girls	25	3.20	2.53	17	2.00	1.62
School D	Boys	53	3.43	1.88	55	2.20	1.95
	Girls	54	2.44	1.80	58	2.03	1.42
Public-Outer City							
School E	Boys	47	2.52	1.61	40	3.27	2.25
	Girls	45	2.06	1.82	43	2.11	1.76
School F	Boys	40	3.10	2.19	34	2.58	1.74
	Girls	30	2.43	1.86	34	2.32	1.53
Public-Inner City							
School G	Boys	52	2.47	2.02	72	3.54	2.33
	Girls	51	2.65	1.78	69	1.95	1.52
School H	Boys	60	2.70	2.10	63	3.17	1.90
	Girls	65	2.60	1.78	81	2.53	1.94

TABLE 3

IQ Scores
Ns, Means and Standard Deviations by Grade and Sex for Eight Schools

		Fifth			Sixth	
		N	Mean	S.D.	N	Mean	S.D.
Private-Suburban							
School A	Boys		No Data			No Data	
	Girls		No Data			No Data	
School B	Boys	10	115.30	13.16	8	116.75	20.09
	Girls	3	124.33	14.04	12	115.16	18.01
Public-Suburban							
School C	Boys	15	98.13	12.51	13	104.92	16.97
	Girls	21	106.23	11.74	11	113.09	16.29
School D	Boys	49	108.83	16.28	53	112.50	14.47
	Girls	50	113.34	17.38	58	114.86	11.30
Public-Outer City							
School E	Boys	42	98.04	17.57	34	96.85	14.68
	Girls	42	101.94	14.12	37	100.89	10.01
School F	Boys	37	91.45	12.12	25	97.44	19.32
	Girls	27	95.74	12.10	27	92.11	12.81
Public-Inner City							
School G	Boys	43	84.67	12.63	59	84.77	9.62
	Girls	39	87.66	9.23	57	90.15	11.04
School H	Boys	55	82.72	14.84	53	83.07	16.57
	Girls	60	88.40	8.98	70	86.54	12.31

TABLE 4

Current Achievement
Ns, Means and Standard Deviations by Grade and Sex for Each School

		Fifth			Sixth		
		N	Mean	S.D.	N	Mean	S.D.
Private-Suburban							
School A	Boys	6	6.25	1.27	5	6.70	1.38
	Girls	4	7.40	.21	3	6.53	.70
School B	Boys	11	7.50	1.37	12	8.82	1.57
	Girls	3	5.26	.61	11	7.10	1.52
Public-Suburban							
School C	Boys	16	5.86	1.18	15	7.21	1.05
	Girls	22	6.30	.98	11	8.01	.80
School D	Boys		No Data		54	7.30	1.25
	Girls		No Data		58	7.59	1.06
Public-Outer City							
School E	Boys	47	4.87	1.38	40	5.49	1.31
	Girls	44	5.19	1.22	43	5.73	1.02
School F	Boys	37	4.25	1.10	33	5.49	1.65
	Girls	30	4.75	1.09	34	5.51	1.18
Public-Inner City							
School G	Boys	49	3.70	.86	66	4.43	.87
	Girls	47	3.90	.79	64	4.85	1.03
School H	Boys	49	4.03	.76	48	4.72	1.16
	Girls	50	4.00	.70	74	4.91	1.01

TABLE 5

Previous Achievement
Ns, Means and Standard Deviations by Sex and Grade for Schools E, F, G and H

		Fifth			Sixth	
		N	Mean	S.D.	N	Mean	S.D.
Public-Outer City							
School E	Boys	43	3.94	1.18	41	4.86	1.44
	Girls	40	4.20	1.19	40	5.17	.91
School F	Boys	38	3.63	1.13	32	4.59	1.42
	Girls	27	4.00	1.20	33	4.61	.96
Public-Inner City							
School G	Boys	46	2.98	.83	69	3.58	.79
	Girls	45	3.23	.67	64	4.05	.88
School H	Boys	55	3.02	.87	61	3.67	.90
	Girls	61	3.12	.68	79	3.79	.91

TABLE 6

Achievement Gain
Ns, Means and Standard Deviations by Grade and Sex for Schools E, F, G and H

		Fifth			Sixth		
		N	Mean	S.D.	N	Mean	S.D.
Public-Outer City							
School E	Boys	43	.97	.45	40	.77	.40
	Girls	39	1.03	.45	40	.63	.45
School F	Boys	36	.66	.50	32	1.00	.61
	Girls	27	.71	.45	33	.89	.43
Public-Inner City							
School G	Boys	45	.72	.39	64	.91	.60
	Girls	43	.72	.42	61	.85	.56
School H	Boys	46	1.02	.59	67	1.11	.84
	Girls	48	.88	.50	72	1.08	.56

TABLE 7

Teacher Behavior Ratings
Ns, Means and Standard Deviations by Grade and Sex for Schools E, F, G and H

		Fifth			Sixth	
		N	Mean	S.D.	N	Mean	S.D.
Public-Outer City							
School E	Boys	45	3.41	1.23	36	3.25	.99
	Girls	42	4.19	.96	40	4.12	.85
School F	Boys	39	3.05	1.00	34	3.32	1.19
	Girls	27	4.07	1.00	34	3.87	.85
Public-Inner City							
School G	Boys	No Data			No Data		
	Girls	No Data			No Data		
School H	Boys	60	2.46	1.17	62	2.69	1.32
	Girls	61	3.36	.91	79	3.45	1.22

TABLE 8

Summary Comparison, Anxiety, Lie and Behavior Ratings for
Boys and Girls, Fifth and Sixth Grade, Black and White Populations

	N	Mean	S.D.	N	Mean	S.D.	t ratio
Sex							
Boys				Girls			
Anxiety	593	19.47	6.64	595	22.31	6.83	7.23***
Lie	594	2.90	2.00	596	2.31	1.80	4.90***
Behavior	276	2.97	1.20	282	3.74	1.05	8.19***
IQ Scores	496	94.84	18.44	514	98.37	16.45	3.38***
Grade							
Fifth grade				Sixth grade			
Anxiety	573	21.14	7.08	615	20.66	6.69	1.20
Lie	574	2.65	1.94	616	2.56	1.91	.81
Behavior	247	3.33	1.17	284	3.39	1.21	.60
IQ Scores	491	96.30	17.32	519	96.95	17.75	.58
Racial-Socioeconomic Situation							
White				Black			
Anxiety	489	18.10	6.96	699	22.84	6.12	12.12***
Lie	490	2.45	1.85	700	2.71	1.97	2.38*
Behavior	135	3.96	1.08	423	3.71	1.16	2.13*
IQ Scores	416	108.68	15.44	594	88.20	13.54	22.02***

***
$p < .001 = 73.37$
$p < .01 = 2.58$
$p < .05 = 1.96$

TABLE 9

Intercorrelations Among Anxiety, Lie I.Q., Present Achievement, Past Achievement, Achievement Gain, Teacher Ratings of Behavior by Grade and Sex

Total Fifth Grade Boys (N=297)

	Lie	I.Q.	Ach '68	Ach '69	Ach Gain	Behavior Rating
Anxiety	-.41(295)**	-.40(248)**	-.33(180)**	-.37(213)**	-.06(168)	-.22(142)**
Lie		.00(248)	-.11(180)	-.07(213)	.00(168)	-.03(142)
I.Q.			.78(172)**	.78(187)**	-.16(161)*	.34(136)**
Achievement '68				.88(170)**	-.08(170)	.40(136)**
Achievement '69					.37(170)**	.47(131)**
Achievement Gain						.11(125)

Total Fifth Grade Girls (N=281)

	Lie	I.Q.	Ach '68	Ach '69	Ach Gain	Behavior Rating
Anxiety	-.42(278)**	1.31(240)**	-.26(171)**	-.40(171)**	-.20(155)**	-.21(127)*
Lie		-.14(241)*	-.22(172)**	-.15(199)**	.02(156)	-.18(129)*
I.Q.			.80(164)**	.83(176)**	.11(150)	.45(128)**
Achievement '68				.89(157)**	-.11(157)	.45(127)**
Achievement '69					.34(157)**	.51(115)**
Achievement Gain						.16(113)

Total Sixth Grade Boys (N=304)

	Lie	I.Q.	Ach '68	Ach '69	Ach Gain	Behavior Rating
Anxiety	-.36(298)**	-.40(242)**	-.28(199)**	-.36(268)**	-.00(181)	.11(128)
Lie		-.14(243)*	-.02(200)	-.17(269)*	-.10(182)	-.20(129)*
I.Q.			.74(169)**	.85(228)**	.12(152)	.49(108)**
Achievement '68				.88(182)**	-.04(183)	.43(128)**
Achievement '69					.33(182)**	.41(115)**
Achievement Gain						-.01(113)

Total Sixth Grade Girls (N=319)

	Lie	I.Q.	Ach '68	Ach '69	Ach Gain	Behavior Rating
Anxiety	-.32(316)**	-.36(270)**	-.32(215)**	-.39(299)**	-.08(206)	-.23(151)**
Lie		-.11(270)	-.08(215)	-.11(299)	.02(206)	-.10(151)
I.Q.			.72(190)**	.83(265)**	.09(182)	.45(133)**
Achievement '68				.86(207)**	-.10(206)	.47(149)**
Achievement '69					.39(206)**	.49(145)**
Achievement Gain						.07(142)

Note: Number in parenthesis represents available pairs of scores for correlations.

* $p < .05$
** $p < .001$

TABLE 10

Analysis of Anxiety Items: "Yes" Answers by Racial Socioeconomic Situation

No.	Item	Black 704 %	White 495 %	Chi-Square
8.	Do you worry that you might get hurt in some accident?	.78	.52	89.60
39.	I often worry about something bad happening to me.	.73	.47	83.27
20.	I worry most of the time.	.43	.18	82.94
30.	My feelings get hurt easily when I am scolded.	.65	.40	73.64
10.	Do you get scared when you have to go into a dark room?	.49	.25	70.30
13.	I wish I could be very far from here.	.51	.27	68.70
31.	I feel someone will tell me I do things the wrong way.	.65	.42	63.26
11.	It is hard for me to keep my mind on anything.	.41	.20	60.05
21.	I worry about what my parents will say to me.	.74	.54	51.94
5.	Are you sometimes frighten when looking down from a high place?	.71	.51	49.32
28.	I worry about what is going to happen.	.71	.52	45.57
22.	I get angry easily.	.55	.37	37.76
36.	I often worry about what could happen to my parents.	.94	.84	31.99
38.	I have bad dreams.	.55	.39	29.72
32.	I am afraid of the dark.	.28	.15	28.22
11.	Do you sometimes get the feeling that something bad is going to happen to you.	.77	.63	27.63
33.	It is hard for me to keep my mind on school work.	.48	.33	27.17
6.	Do some of the stories on radio or television scare you?	.63	.48	26.61
26.	My feelings get hurt easily.	.53	.38	26.27
18.	I have trouble making up my mind	.73	.59	25.99
29.	I worry about how well I am doing in school.	.88	.78	24.70
34.	I worry when I go to bed at night.	.44	.30	24.59
37.	I get tired easily.	.31	.19	21.65
3.	I feel I have to be best in everything.	.38	.26	18.92
15.	I am secretly afraid of a lot of things.	.43	.31	18.28
23.	Other children are happier than I am.	.40	.31	18.28
16.	I feel that others do not like the way I do things.	.58	.47	13.83
9.	Without knowing why do you sometimes get a funny feeling in your stomach.	.76	.69	7.08
27.	I worry about doing the right things.	.75	.68	6.72
19.	I get nervous when things do not go the right way for me.	.63	.56	6.12
7.	Do you think you worry more than other boys and girls.	.30	.24	5.12
17.	I feel alone when there are people around me.	.30	.27	1.19
35.	I often do things I wish I had never done.	.85	.84	.00
4.	When you are in bed at night trying to go to sleep do you often find that you are worrying about something?	.71	.70	.00
24.	I worry about what other people think of me.	.46	.46	.00
2.	I get nervous when someone watches me work.	.47	.48	.13
12.	At times I feel like shouting.	.72	.73	.12
14.	Others seem to do things easier than I can.	.64	.65	.12
25.	I have worried about things that did not really make any difference latter.	.55	.64	9.86

Note: Chi-square of 3.84 significant at $p < .05$ with 1 df.
Chi-square of 6.635 significant at $p < .01$ with 1 df.
Chi-square of 10.827 significant at $p < .001$ with 1 df.

TABLE 11

Analysis of Lie Items: "Yes" Answers
by Racial-Socioeconomic Situations

		Black	White	Chi-Square	Level of Sign.
59.	Do you ever worry about knowing your lessons?	.82	.86	3.98	.05
58.	Do you ever worry about what other people think of you?	.45	.60	25.93	.001
65.	Have you ever had a scary dream?	.85	.90	6.89	.01
66.	When you were younger were you afraid of getting hurt?	.62	.83	66.72	.001
72.	Have you ever been afraid of getting hurt?	.69	.57	18.14	.001
92.	Do you ever worry about what is going to happen?	.71	.59	18.02	.001
82.	Do you ever worry about something bad happening to someone you know?	.85	.80	5.09	.05
87.	Are you ever unhappy?	.84	.91	14.39	.001
61.	Do you every worry that you won't be able to do something you want to do?	.78	.75	1.05	n.s.
96.	Do you ever worry?	.89	.92	3.04	n.s.
77.	Has anyone been able to scare you?	.78	.80	.69	n.s.