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This paper presents normative data and a content item analysis of a general anxiety scale composed of items from the Children's Manifest Anxiety Scale (CMAS) and the General Anxiety Scale for Children (GASC). This scale was developed to provide a cross cultural comparison measure of some characteristics of mental health and a comparison of similar research results. The scale was given to two groups of children, 249 fifth and sixth grade students in an inner-city school serving mostly lower class Negro students, and 211 fifth and sixth grade students in a large urban university laboratory school. Significant statistical differences were found by school (representing social class), sex, and grade. Because the social class difference was considered socially significant, findings were discussed in terms of differences in content of anxiety, and speculations were made about the practical implications of the normative basis for determining maladjustment. (Author/BP)

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SOCIAL CLASS DIFFERENCES IN ANXIETY OF ELEMENTARY SCHOOL CHILDREN

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SOCIAL CLASS DIFFERENCES IN ANXIETY OF ELEMENTARY SCHOOL CHILDREN*

The Children's Manifest Anxiety Scale (CMAS) developed by Castaneda, McCandless, and Palermo (3), and the General Anxiety Scale for Children (GASC) developed by Sarason and associates at Yale University (10) are attempts to measure anxiety in upper elementary school children. The CMAS is an adaptation of Taylor's manifest anxiety scale (11), a measure of anxiety in adults. The GASC was developed to be used for research within a psychoanalytic framework. Both measures have lie scales embedded in them. The CMAS and the GASC have been shown to relate positively to each other, and to have complex relationships with various measures of I.Q., achievement, social status, race and various indexes of personal and social adjustment (9). However, there is a notable lack of normative socio-economic data on both these instruments.

This paper will present normative data and a content item analysis of a general anxiety scale that was composed of items from the CMAS and the GASC. This general anxiety scale was administered to 211 middle and upper-middle class children and 249 Negro children from a lower socio-economic background.

The practical problem from which this study originated was the selection of problem students (i.e., children regarded as classroom problems, but not requiring individual therapy) for participation in an experimental program of human relations. Human relations training groups were selected in a private laboratory school associated with a large mid-western urban university, and concurrent, comparative groups in a "slum" or inner-city school populated by "disadvantaged" Negro students. The screening instruments (2) for selecting

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this type of child are normed on the individual classroom. The development of the general anxiety scale was primarily motivated by two concerns: first, the need for a cross cultural comparison measure of some characteristic of mental health, and second, the need for an instrument that would allow a comparison of our research interests and results with others concerned with the same types of problems.

Method

Instrument. The general anxiety scale was composed of 31 anxiety items from the CMAS and 8 anxiety items from the GASC. These items are reported in Table 3 along with the serial number in which they appear in the scale. In addition, interspersed among these items are the eleven items of the GASC lie scale which are reported in Table 4. Of the eleven items which were not included in the general anxiety scale from the CMAS, eight of the items require information about physiological concomitants of an anxiety (e.g., I get headaches, I am nervous, I have trouble swallowing. I have to go to the toilet more than most people, My hands feel sweaty. Often I have trouble getting my breath, I blush easily. I notice my heart beats very fast sometimes.) Two of these items, and the remaining three CMAS anxiety items are covered substantively in the eight GASC anxiety items included in the general anxiety scale. Hafner and Kaplan (6) found that these physiological items generally did not discriminate between the upper quintile and the rest of the distribution on anxiety in their sample of fifth and sixth grade children.

The inclusion of the eight GASC anxiety items was primarily to augment the anxiety items drawn from the CMAS and to fit structurally with the eleven items of the GASC lie scale. Although both the CMAS and the GASC items require the respondent to reply with a "yes" or "no," the CMAS asks the respondent to affirm a statement about himself, whereas the GASC asks an answer to a question concerning personal anxiety. The primary reason for the choice of the GASC lie

scale over the CMAS lie scale centered on the content of the items. The GASC lie items are statements about anxiety; the CMAS lie scale items are not anxiety relevant.

Subjects. The general anxiety scale was administered to all of the fifth and sixth grade classes of a private laboratory school, and all of the fifth and sixth grades classes of an inner-city elementary school in the same city. The 211 subjects in the private laboratory school were sectioned into nine classrooms. Included in this group were 90 Caucasian boys, 91 Caucasian girls, 9 Negro boys, 8 Negro girls, 9 boys of oriental descent, and 5 girls of oriental descent. All of the subjects came from families in the middle and upper middle class range. The fathers of these children were either business or professional men, a great number being faculty members of the University. The subjects in the inner-city school were drawn from four fifth and four sixth grade classrooms. Included in this group were 114 Negro boys and 135 Negro girls. The school is reported by its principal to have a 30 percent turnover in population during the school year. A large percentage (approximately 20 percent) of the children are on Aide to Dependent Children programs.

We have chosen to discuss these two populations in socio-economic terms rather than racial terms because we consider the socio-economic factor the more important distinguishing and determining factor, and because we recognize that the two factors, race and socio-economic position, are thoroughly intertwined in societal expectations and reality.

Procedure. Research assistants administered the general anxiety scale on a classroom group basis. The general anxiety scale was one of several scales administered in a three hour testing period over two days. The general anxiety scale entitled "Student Questionnaire" was the second test administered. The research assistant, after requesting the subjects to read along with him, read the following instructions printed on the cover sheet of the test:

"This questionnaire covers items 51 to 100 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 liked school, you might answer 'yes' while someone else might answer 'no.' For questions 51 to 100 you are to mark your answer sheet as follows. If you would answer 'Yes' to the question fill in the letter 'A'. If you would answer 'No' to the question, fill in the letter 'B'. Do not fill in C, D, or E for any of the questions. For each question, pencil in the line next to 'A' if your answer is 'Yes,' and next to 'B' if your answer is 'No.'" The research assistant then read each item twice and allowed thirty seconds for the member of the class to answer the item. The primary reason for reading the items was in response to an expressed concern by the teachers of the inner-city school subjects about the reading ability of a few of their students.

Results

Insert Table 1

Table 1 shows the general anxiety scale means, standard deviations and Ns for the various groups classified according to grade, sex, and school (representative of socio-economic class). Several trends are readily apparent. First, in everyone of the four comparison groups by school, with grade and sex held constant, the inner-city school children are higher in anxiety. The four individual school comparisons are all significant at the .001 level. Further statistical analysis of the overall difference between the private school children and the inner-city school children resulted in a t-value of 11.93 which, with 458 degrees of freedom, is significant at well beyond the .001 level.

Examining the variable, sex, in each of the four comparisons of boys and

girls holding grade and school constant, reveals that the girls tend to be higher on anxiety than the boys. An overall comparison of boys and girls yields a t-value of 5.01 which, with 458 degrees of freedom, is also beyond the .001 level of significance. This finding is in accord with previous findings regarding the manifestation of anxiety between the sexes (9).

Examining ~~at~~ the variable, grade, we also find in each of the four comparisons, holding school and sex constant, that there is a tendency for the older children to be lower on anxiety. The overall comparison on grade yields a t-value of 1.97 which, with 458 degrees of freedom, is significant at the .05 level. This finding is congruent with previous findings (9).

Insert Table 2

Table 2 shows the lie scale means, standard deviations, and Ns for the various groups classified according to grade, school, and sex. Looking at the means of the various groups on the lie scale two things are immediately notable. The means are low, and the standard deviations are large, indicating a large skew to the lower end of the scale. Secondly, there are fewer discernible trends in these means than there were in the anxiety means. For example, comparing the respective schools on the lie scale holding sex and grade constant we find that two of the comparisons favor the private school subjects, and two favor the inner-city school subjects. The t-value on non-transformed scores is .75. Also with respect to grade there is no clear trend. Although three of the comparisons on grade holding sex and school constant favor the sixth grade, the overall comparison on grade using non-transformed scores yields a t-value of .68.

The one clear trend is sex. In this instance, in each of the comparisons between boys and girls, the boys have the higher lie scores. An overall com-

parison of the means of more transformed scores for boys and girls yields a t-value of 3.69 which, with 448 degrees of freedom, would be significant beyond the .001 level. This finding fits previous findings using the GASC lie Scale (9).

This general anxiety scale was readministered to 46 of the fifth grade boys and 52 of the fifth grade girls in the private school six months after the original administration. The test-retest reliability Pearson product-moment correlations were .67 for the boys and .65 for the girls. Both of these correlations are significant at the .01 level. These correlations are not as high as test-retest correlations found in the literature (3,9). However, the correlations in the literature were computed on the basis of a one week test-retest interval. For the lie scale the respective test-retest correlations were .46 and .30. Both are significant at the .01 level. Again these test-retest correlations are not as high as those found in the literature, the same comment covering test-retest time interval is applicable.

Discussion

Tables 3 and 4 present the percentage of "yes" answers of each of the 8 groups classified by sex, grade, and school. The asterisks indicate the degree of significance as determined by Chi-square of the differences in frequency of "yes" responses between the sets of four comparison groups by school holding sex and grade constant. For heuristic purposes, the items in Table 3 are classified into three groups, first, those items which differentiated most, operationally three or four of the Chi-squares were significant at least at the .05 level; second, the least differentiating items, operationally those items on which only one, or none of the four comparisons by school did not reach the .05 level of significance; and finally, the remaining items on which two out of the four comparisons reached at least the .05 level of significance.

Insert Tables 3 and 4

Ruebush (9), in a review of the origins of the CMAS from which the majority of items of our general anxiety scale were drawn, traces the CMAS items to the MMPI. These items were adjudged by psychologists using Cameron's definition of anxiety (4). Ruebush states, "This definition (Cameron's) characterizes anxiety as a diffuse and chronic condition of psychological and somatic tension, restlessness, distractability, fatigue, irritability, predisposition to anxiety attacks on slight provocation and the like. By definition, therefore, the CMAS is a measure of the child's tendency to experience a general and chronic state of anxiety, rather than of a tendency to experience anxiety only in specific situations or as a process or transitory phenomenon."

(9, p. 475)

Examining then the items which differentiated most between the private school children and the inner-city school children, we find that only one of the 72 comparisons does not show the inner-city children as being higher on the item and that comparison does not reach statistical significance.

Looking at the content of these items at least four themes are discernible. The inner-city school children exhibit more concern about some unspecified event or situation which will be in the future personally harmful to themselves. For example, the majority of the inner-school children answer "yes" to such items as: "Do you worry you might get hurt in some accident? I often worry about something bad happening to me. I often worry about what could happen to my parents. Do you sometimes get the feeling that something bad is going to happen to you? I worry about what is going to happen. I worry most of the time." These items would seem to indicate persistent feelings of discomfort, unspecified fear, and vague feelings of dread. One might wonder whether the

items represent anxiety or objective fears. For the inner-city child concern about parents, or accidents might be a very real objective fact of life. In speculation concerning the etiology of anxiety Ruebush (9) notes that the theoretical and practical distinction between fear and anxiety in children is an extremely difficult one to make. No matter, anxiety or real fear both are uncomfortable, and can be debilitating.

Another theme is a concern of the inner-city school children with personal social threat. They answer "yes" more frequently than their private school counterparts to such items as: "I feel that others do not like the way I do things. I worry about what my parents will say to me. My feelings get hurt easily when I am scolded. I feel someone will tell me I do things the wrong way." These items represent a high sensitivity to external expectations for behavior, and at the same time a sense of inadequacy in meeting these expectations.

Along the same line there are a series of items which represent a reaction to a special set of expectations, those of the school. The inner-city children were more likely to answer these items with a "yes;" "I wish I could be very far from here." (The reaction to this item might have been to this particular test, but it could also mean school in general.) "I worry about how well I am doing in school. It is hard for me to keep my mind on my school work." One can speculate about the interaction between school press and teacher expectation and the individual's capability and need to meet this press.

There is another set of items which cannot be classified on an anxiety or fear theme but rather the items represent symptoms of underlying anxiety. For example, the inner-city school children answer more "yes's" to such items as: "It is hard for me to keep my mind on anything. Do you get scared when you have to go into a dark room? I am afraid of the dark. I worry when I go to bed at night. I have bad dreams." Even here one can speculate that the inner-

city child who lives in a highly transient, high crime rate neighborhood might objectively have something to fear of the dark or night.

With respect then to the most differentiating items between inner-city school children and the private school children we see four major themes. The inner-city children have vague apprehensions of some unspecified personal misfortune, a personal sensitivity to external expectations and a feeling of inadequacy to meet them, a specific concern about school, and finally more manifestations of symptoms characteristic of anxiety.

The great majority of the rest of the items on the general anxiety scale, although not as significant, shows the inner-school children more prone to answer the items with "yes." One might argue that what is happening is affected by a greater awareness of "social desirability" (5) by the private school children than is found in the inner-city school children. However, if this is so, one would have to deal with the fact that each of the differentiating CMAS items in the general anxiety scale was also found to differentiate between the highly anxious children and the rest of the population in the study by Hafner and Kaplan (6). The deduction from this fact would be that the great differences between the inner-city child and his private school counterpart are not due to a lack of "social desirability" awareness, unless lack of awareness of "social desirability" becomes a major component of the anxiety concept.

A few words are now in order about the lie scale item analysis in Table 4. As one would expect from the inspection of the means in Table 2, there are few significant differences between the inner-city school children and the private school children on the lie items. However, one item is of particular interest in that it is the only item in which less than a majority of the students, in this case the inner-school children, answer "yes" to the item. The item is, "Do you ever worry about what other people think of you?" In every comparison fewer of the inner-city school children answer "yes" to this item. This is peculiar

when one considers the inner-city child's concern about meeting expectations, or possible feelings of inadequacy. However, one might speculate that even though the inner-city child is aware of external expectations, one way of dealing with this awareness is to say to oneself, "although they feel about me this way (i.e., that I can't meet their expectations) and even though I would like to meet those expectations, still I really don't care what they think of me." There seems to be a sensitive awareness of reality, but a protective denial of that reality for one's own concept of self, i.e., it is not a denial of reality, rather a denial of the implications of the reality.

If one assumes that our measure of general anxiety is valid, then accounting for the differences between the inner-city children and the private school children becomes a challenging task. A number of interesting theoretical and practical questions are raised. Can these differences be attributed to differential social class socialization processes? What is the relationship between fear and anxiety in children and does this have meaning for the development of anxiety in adults? Is there such a thing as absolute levels of anxiety that not only arise out of interpersonal relationships between parent and child, but also levels of anxiety that arise out of lack of such things as physiological and security needs that are tenuously met? Can these differences be ascribed to conflicts between primary and secondary group memberships and loyalties? Are the differences attributable to an artifact of language or to specific reactions to test taking? What is the interaction effect between achievement and anxiety? What are the implications for educational practices? All of these could lead to plausible, testable research hypotheses.

However, if we assume the actual differences and the validity of the measuring instrument then there is still another problem to which we would like to address ourselves. The items, "Do you think you worry more than other boys and girls?" and "Others seem to do things easier than I can," are representative of

this problem. Both of these items were among the least discriminating items on the scale. We speculate this is so because the referent is the child's own friends or classmates. This points to a broader question and that is what is the normative basis for determining adjustment or maladjustment. When one considers that those children which are usually brought to the attention of psychologists, counselors, or teachers for being behavior problems, it is generally because they are at the negative extreme of an adjustment continuum.

Thus when one sees in the literature that maladjustment in the lower socio-economic classes is characterized by "organic brain damage, psychoses, and character disorders, and are less likely to have neurosis" (7), one cannot help wondering whether such a classification is the result of selection. Possibly, by default, great numbers of children with neurotic type disorders which are as serious as their middle class counterparts are left out of consideration in either discussions, theories, or mental health programs because they are part of the lower socio-economic norm for adjustment.

Summary

A general anxiety measure was administered to two groups of children, a group of 249 fifth and sixth grade students in an inner-city school serving predominantly lower class Negro students, and a group of 211 fifth and sixth grade students in a private laboratory school associated with a large urban university. Significant statistical differences were found by school (representative of social class), sex, and grade. Because the social class difference was considered socially significant, the particular findings were discussed in terms of differences in content of anxiety, and speculations were made about the practical implications of the normative basis for determining maladjustment.

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TABLE 1

GENERAL ANXIETY SCALE MEANS AND SD'S FOR THE DIFFERENT GROUPS CLASSIFIED BY GRADE, SCHOOL, AND SEX

	GRADE					
	N	Fifth M	SD	N	Sixth M	SD
Private School						
Boys	53	22.28	6.89	60	21.51	7.85
Girls	55	24.29	6.67	43	22.72	6.94
Inner-City School						
Boys	50	30.10	7.37	59	27.72	8.13
Girls	64	32.76	6.77	76	31.21	6.31

TABLE 2

GASC LIE SCALE MEANS AND SD'S FOR THE DIFFERENT GROUPS CLASSIFIED BY GRADE, SCHOOL AND SEX

	GRADE					
	N	Fifth M	SD	N	Sixth M	SD
Private School						
Boys	53	2.15	1.68	60	2.66	2.39
Girls	55	1.50	1.53	43	2.16	2.58
Inner-City School						
Boys	50	2.36	1.71	59	2.49	2.02
Girls	64	2.20	1.49	76	1.73	1.31

Group:	Boys				Girls			
	Fifth		Sixth		Fifth		Sixth	
	Inner-City (N=50) %	Private (N=53) %	Inner-City (N=64) %	Private (N=55) %	Inner-City (N=59) %	Private (N=60) %	Inner-City (N=76) %	Private (N=43) %
	Anxiety Items							
	Most Differentiating Items							
51.	56	17	38	9	42	22	27	9
60.	80	33	77	44	69	18	80	27
63.	52	28	70	48	32	10	63	18
64.	70	55	80	61	71	40	80	55
68.	52	12	58	26	55	13	53	25
71.	60	28	53	44	44	25	58	20
76.	38	2	46	13	37	18	40	11
78.	63*	19	59	36	64	32	64	23
86.	61	37	72	42	61	35	70	34
88.	81	62	87	65	89	69	89	67
89.	60	37	77	50	50	30	72	51
90.	56	33	53	32	57	20	63	25
91.	40	10	61	21	13	11	41	16
93.	52	25	54	13	32	23	25	9
94.	34	17	53	28	27	33	40	20
97.	89	53	88	59	86	47	98	62
100.	70	30	82	38	62	18	74	30
99.	49	33	79	46	44	28	63	34
	Least Differentiating Items							
52.	44	53	69	51	42	47	55	51
55.	56	62	69	57	50	50	55	51
57.	66	58	74	69	49	38	74	60
59.	38	10	30	23	16	25	29	25
67.	54	66	61	80	44	54	67	67
69.	56	41	53	36	57	52	67	44
70.	34	23	50	34	32	18	57	20
73.	40	21	40	28	23	27	32	18
81.	45	32	33	48	37	47	50	46
83.	36	53	50	67	47	64	46	72
84.	49	32	48	34	35	25	59	34
95.	76	62	79	80	88	62	79	72

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

Group:

Anxiety Items	Boys		Girls	
	Fifth	Sixth	Fifth	Sixth
	Inner-City (N=50) %	Private (N=53) %	Inner-City (N=59) %	Private (N=60) %
In-between Items				
53. I feel I have to be best in everything.....	50 ***	14	35	42
56. Are you sometimes frightened when looking down from a high place.....	72 *	50	64	47
62. Without knowing why do you sometimes get a funny feeling in your stomach.....	76	58	62 **	37
74. I have trouble making up my mind.....	58	46	52	37
75. I get nervous when things do not go the right way for me.....	62	46	57 **	28
79. I get angry easily.....	43	28	38	32
85. I worry about doing the right things.....	70 *	46	64	62
98. I get tired easily.....	34 *	16	33	25
80. Other children are happier than I am.....	40 ***	17	30	18

TABLE 4
ANALYSIS OF LIE ITEMS: "YES"

Group:

Lie Items	Boys		Girls	
	Fifth	Sixth	Fifth	Sixth
	Inner-City (N=50) %	Private (N=53) %	Inner-City (N=59) %	Private (N=60) %
54. Do you ever worry about knowing your lessons.....	68	76	74	69
58. Do you ever worry about what other people think of you	44	55	49	61
61. Do you ever worry that you won't be able to do some-thing you want to do.....	74	67	51	49
65. Have you ever had a scary dream.....	82	80	81	76
66. When you were younger, were you ever scared of any-thing.....	66 *	83	61	72
72. Have you ever been afraid of getting hurt.....	64	57	69	55
77. Has anyone ever been able to scare you.....	70	76	76	69
82. Do you ever worry about something bad happening to someone you know.....	65	55	72	61
87. Are you ever unhappy.....	65 **	91	72	86
92. Do you ever worry about what is going to happen.....	61	46	67	53
96. Do you ever worry.....	78	87	83	83