DOCUMENT RESUME

ED 106 340 TM 004 455

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TITLE Drawing Test Performance of Black and White Preschoolers as a Function of Biracial Testing.
PUB DATE [Apr 75]
NOTE 13p.; Paper presented at the Annual Meeting of the American Educational Research Association (Washington, D.C., March 30-Arpil 3, 1975)

EDRS PRICE MF-$0.76 HC Not Available from EDRS. PLUS POSTAGE
DESCRIPTORS Caucasian Students; Clinic Personnel (School); Lower Class; Low Income; Middle Class; Negro Students; *Performance Factors; Preschool Children; Preschool Education; *Racial Differences; *Role Models; Sex Differences; Social Differences; *Test Bias; *Testing; Testing Problems
IDENTIFIERS Goodenough Drawing Test

ABSTRACT

Six speech and language clinicians, 3 black and 3 white, administered the Goodenough Drawing Test (1926) to 144 preschoolers. The 4 groups, lower-socioeconomic black and white and middle-socioeconomic black and white, were equally divided by sex. The biracial clinical setting was shown to influence test scores in black preschool age children. Although not statistically significant, marginally higher test scores were achieved in the same-race clinical setting by white preschoolers. Sex differences in the direction of higher scores for girls were noted in white but not black preschool children. (Author)

Drawing Test Performance of Black and White Preschoolers as a Function of Biracial Testing

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American Educational Research Association 1975, Washington, D.C.

ABSTRACT

Six speech and language clinicians, 3 black and 3 white, administered the Goodenough Drawing Test (1926) to 144 preschoolers. The 4 groups, lower-socioeconomic black and white and middle-socioeconomic black and white, were equally divided by sex. The biracial clinical setting was shown to influence test scores in black preschool age children. Although not statistically significant, marginally higher test scores were achieved in the same-race clinical setting by white preschoolers. Sex differences in the direction of higher scores for girls were noted in white but not black preschool children.

Although the Goodenough Drawing Test (1926) has traditionally been used by psychologists as part of their test battery, speech and language pathologists typically use this measure in assessing a child's visual-motor ability and concept of body image. While speech and language pathologists do not typically compute an intelligence quotient from children's drawings, an intelligence quotient was used as the indicator of performance for the purposes of this study. A child's performance on this test may assist a clinician in developing impressions of a child's level of functioning which are necessary for the development of realistic goals in the clinical intervention process.

Areas of study on the possible effect of biracial testing (white examiner-black examinee or visa versa) have included: measured intelligence (Canady 1936, Shuey 1966, Caldwell and Knight 1970, and Savage 1971), discrimination ability (Kennedy and Willcutt 1963, and Kennedy and Vega 1965), and recently language encoding (Marwit and Marwit 1973). Speech and language clinicians, particularly in an urban setting, may frequently be confronted with a biracial testing arrangement during the course of evaluation and habilitation. There is a need for more research concerning the differential effect of black or white clinicians on the performance of black or white children on many clinical measures including the Goodenough Drawing Test (1926).

The literature is inconclusive regarding the effect of different-race examiners on children's performance in most response categories. For example, Caldwell and Knight (1970) using the Stanford-Binet Intelligence Scale (1960) indicated that race of the examiner had little effect on black sixth graders' intelligence test performance. Shuey's (1966) investigation yielded similar findings with this same measure. On the other hand, Savage (1971) using 10 white examiners and 10 black examiners, indicated that first, third, and fifth

grade black children were depressed an average of 10 points in measured IQ on the Block Design subtest of the Stanford-Binet Intelligence Scale by white examiners. On the same task, white children were depressed an average of 10 points in measured IQ when tested by black examiners. The effect, however, did not hold true for the Digit Span subtest of this battery. Savage stressed that the nature of the task appeared to mediate the racial effect of testers.

In light of the literature showing that preschoolers are aware of racial differences in testers (Clark and Clark 1939, Landreth and Johnson 1953, and Goodman 1966) biracial testing may have a biasing influence on drawing test performance. This contention is further strengthened by Pasamanick and Knobloch's (1955) determination that the biracial testing arrangement was punitive to black preschool age childrens' performance on the Gesell Developmental Examination. The present study compared preschoolers' drawing test performance in a biracial clinical setting with their performance when tested by same-race clinicians. In general, cross-race testing studies have been performed using only lower-socioeconomic black subjects. An important dimension of this investigation was the inclusion of both a middle-socioeconomic and lower-socioeconomic group of black and white children.

PROCEDURES

Each of the 4 subject groups, lower-socioeconomic black (BLSES) or white (WLSES) and middle-socioeconomic black (BMSES) or white (WMSES), was composed of 36 preschoolers ranging in age from 4 years 3 months to 5 years 6 months with a mean age of 4 years 10 months. There were 18 boys and 18 girls in each group. The socioeconomic ordering of the groups was accomplished using information compiled from the Warner, Meeker, and Eells (1949) Social Status Index. The 4 groups were drawn from geographically separate and racially homogeneous areas of metropolitan Chicago, Illinois. The BLSES children were from the Lawndale-

Garfield Park section of the West Side of Chicago while the BMSES children were from the South Shore. The WLSES children were from the Near North section while the WMSES children were from suburban Glenview, Illinois.

The data was collected as one aspect of a preschool-day-care screening activity carried out by the senior author while affiliated with the Department of Communicative Disorders at Northwestern. This service activity facilitated the preschool centers' ability to provide appropriate headstart activities when necessary.

All the children had normal hearing sensitivity, language, and articulatory proficiency typical of preschool children in their community and evidenced no unusual psychological or medical history. All 144 preschoolers achieved age deviation scores falling within normal limits on the Columbia Mental Maturity Scale (1972). The following scores were obtained; WMSES ($\bar{X}$ = 108.75, SD = 10.05), WLSES ($\bar{X}$ = 100.33, SD = 11.55), BLSES ($\bar{X}$ = 98.16, SD = 8.66) and BMSES ($\bar{X}$ = 104.36, SD = 12.78).

Reviews of cross-cultural research, Dregor and Miller (1968) and Sattler (1970), point to the inadequacy of cross-race examiner studies in which one black and one white examiner are used. Dregor and Miller indicate that the use of a single black and white examiner reduces the generality of the conclusions on the examiner variable. Personal variability in clinicians must be considered if test response differences are to be attributed to childrens' awareness of differences in the racial characteristics of testers.

Six graduate speech and language clinicians, 3 black and 3 white, were trained in the administration of the Goodenough Drawing Test (1926) and they screened the child-care centers. The 6 clinicians used standard speech and language patterning.

Each of the clinicians tested an equal number of children, boys and girls, from each of the 4 groups. The order in which the children were tested was

determined by random-order procedures. In order to prevent the operation of any bias on the part of the scorer subject group identification was removed and the drawings were coded for blind scoring.

RESULTS

Table 1 shows the mean IQ's and standard deviations obtained by the 4 preschool groups. Scores for the boys and girls from each group, as well as scores for children tested by black or white clinicians are displayed. The highest mean scores were obtained by the BMSES group while the lowest scores were achieved by the WLSES children. Both middle-socioeconomic groups outscored their lower-socioeconomic counterparts. Examination of the eight means for the Clinician Race variable revealed higher test scores by each group of children when they were evaluated by same-race clinicians. In addition, sex differences in the direction of higher IQ scores by girls were obtained in each group. Closer inspection of Table 1 reveals that the most substantial sex differences resulted in both middle-socioeconomic groups. A separate Socioeconomic Group by Sex by Race of Clinician analysis of variance is reported for the black subjects and then for the white subjects in order to detail the effect of clinician's race on black or white preschoolers' drawing test performance. This was done instead of collapsing the analysis within a single factorial treating both race subjects in order to avoid masking the critical clinician race variable.

TABLE 1 INSERT

Black Preschoolers

An analysis of variance including the 2 black groups revealed a significant difference for Clinician Race (F (1,64) = 4.14, $p < 0.05$). Both BLSES and BMSES preschoolers displayed a superior drawing performance when they were tested by

black rather than white speech and language clinicians. The Socioeconomic Group, Sex, and Interaction analyses were not significant.

White Preschoolers

Although both the WLSES and WMSES preschoolers achieved higher mean scores with same race white clinicians (Table 1), an analysis of variance including the 2 white groups did not reveal a significant difference for Clinician Race. The main effect for Socioeconomic group in addition to the Interactions were not significant. A significant Sex effect (F (1,64) = 5.57, $p < 0.05$) was demonstrated for the white children. Girls achieved higher scores than boys in the WMSES and WLSES groups.

DISCUSSION

The contention that black children perform better in same-race clinical settings was supported in this investigation. In particular, the drawing task was shown to be a biased clinical measure for black preschool children in a biracial clinical setting. The present data lead to some conclusions and suggestions concerning the effect of black and white clinicians on preschooler's test scores.

Landreth and Johnson (1953), Clark and Clark (1939), and Goodman (1966) have shown that black and white children from different socioeconomic backgrounds are exposed and conditioned to various stereotypes regarding blacks and whites at an early age. Racial awareness which involves a spectrum of learned attitudes concerning another race precedes the change in an individual's response patterns when being examined in a biracial clinical setting. Implicit in this study of a clinical measure is that 4 and 5-year-old BMSES and BLSES children are not only aware of a clinician's racial characteristics, but that these children are influenced to perform differently in a biracial clinical setting which they may not be use to and may regard as threatening. It was shown that the performance of black preschoolers was influenced more dramatically by white clinicians than visa versa. Although statistical significance was not achieved, both the WLSES and WMSES groups

scored higher with white rather than black clinicians (Table 1). Perhaps some white children also regard being tested by a clinician of another race as threatening, thus the test scores are lower in this biracial setting. These findings hint at such a hypothesis. While the current need for experimentation centers on black children being tested by whites, the impact on white childrens' test scores obtained by increasing numbers of black speech and language clinicians must eventually be delineated.

A clinician's request of a child for drawings of human figures (Goodenough 1926, Harris 1963) may heighten racial awareness and a ntuate the biracial nature of a diagnostic setting. A preschooler may regard the biracial setting as threatening and be influenced in the direction of limiting the information revealed in his or her drawings. If anxiety is provoked by the combination of the human figure drawing task and the biracial setting this may interfere with many children's motivation to perform. More specifically, anxiety in an evaluation setting may exceed a child's particular threshold of optimum performance, thus depressing scores with different-race clinicians. This same effect might not be observed with other psychometric measures since the combination of particular test and biracial situational anxiety may not exceed the level of anxiety tolerable for optimum performance.

The particular make-up of a test appears to mediate the racial effect of testers. The open-ended nature of the drawing test allows a child to cease drawing when he desires. The importance of this task administration factor must be considered. The open-ended type of test administration involved in a drawing task is not the same as in some other non-oral measures. For example, administration of the Columbia Mental Maturity Scale (1972) is based on a preselected number of items which must be completed by the child for the test to be valid. The child taking the drawing task retains an indirect control over the longevity of testing, since

he may cease drawing at any time. The detail of the drawing performance is influenced by the child's psychosocial state. In contrast, a test such as the Columbia Mental Maturity Scale which requires a child to identify the one "different" pictured stimulus item, out of four or five, can not accentuate the biracial arrangement as does the drawing of human figures. Clearly, the make-up of a test has a great deal to do with childrens' responses in the biracial clinical setting.

Rather than the test scores being biased noticeably in the direction of greater achievement by white children, the drawing task seemed to provide a fair estimation of preschoolers' mental maturity levels in those groups studied. As shown in Table 1, the middle-socioeconomic children, black and white, scored higher than either lower-socioeconomic group. In fact, the highest group mean score was by the BMSES children.

While the results of this study are limited to a single measure commonly used by speech and language clinicians in evaluations, the implications for the field of speech and language pathology are far reaching. Currently we need investigations demonstrating the biasing effects of clinician characteristics on speech and language measures. It is imperative that support be given to a much closer examination of the instruments used clinically in biracial evaluative and habilitation settings.

ACKNOWLEDGMENTS

Particular appreciation is expressed to six speech and language clinicians, Charlene Chiney, Maureen Foy, Jovita Martin, Sylvia Mayworm, Mavis Mitchell, and Carol Ratusnik for the excellent testing of the preschoolers. This study was made possible by a research grant, No. 2680-265-05, under the Spencer Foundation Northwestern University Program for Interdisciplinary Research in Education. Support was also provided by the National Institutes of Neurological Diseases and Stroke, No. NS05420-11.

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TABLE 1. MEAN IQ'S AND STANDARD DEVIATIONS DERIVED FROM THE GOODENOUGH DRAWING TEST (1926) FOR BLAC ND WHITE PRESCHOOLERS FROM LOWER AND MIDDLE-SOCIOECONOMIC BACKGROUNDS.

	GROUP	RACE OF CLINICIAN		SEX	
	Group IQ (Boys and Girls Combined) N = 36	IQ Obtained With Black Clinicians N = 18	IQ Obtained With White Clinicians N = 18	Boys' IQ N = 18	Girls' IQ N = 18
BLSES					
M	103.62	108.63	98.61	102.00	105.25
SD	15.21	15.80	13.17	14.39	16.24
BMSES					
M	109.80	112.00	107.61	104.86	114.75
SD	16.51	13.87	18.94	17.23	14.58
WLSES					
M	101.69	100.75	102.63	98.66	104.72
SD	12.06	13.36	10.92	9.58	13.73
WMSES					
M	106.11	103.94	108.27	102.02	110.19
SD	13.73	13.91	13.58	13.29	13.28