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A Factor Analysis of Urban Disadvantaged Children's Interests

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MUCH attention has been given in recent years to the disparity in life styles between "disadvantaged" and "middle-class" children. Studies (Horton and Crump, 1962; Boger, 1952; Feldman and Weiner, 1964) have indicated that norms based on predominantly middle-class subjects are not appropriate for disadvantaged subjects. In light of this fact, a study was undertaken in conjunction with a project entitled *Formulation of Models for Preparing Occupational Materials for Pupils from Various Socio-Economic Levels in Grades Three through Eight*.¹ The

¹ This Atlanta (Georgia) Board of Education project is supported by grant OEG 3-7-703454-4554, Public Law 89-10, Title III.

materials produced by the project are in part aimed at students (Ss) from disadvantaged homes. The project staff will ultimately develop paradigms for the preparation and presentation of occupational information at the elementary school level. Before the development of materials could begin, an empirical description of the Ss being involved was needed.

One aspect of the empirical base was a survey of Ss interests as measured by the

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What I Like To Do inventory (Thorpe, Meyers, and Bonsall, 1954). The published norms, developed on 3,803 urban and rural pupils, represented nine geographic regions in the United States (Bonsall, Meyers, and Thorpe, 1954, p. 12). This study investigated performance of educationally disadvantaged Ss to determine if they responded similarly to the published norms on the eight scales:

1. Art
2. Music
3. Social Studies
4. Active Play
5. Quiet Play
6. Manual Arts
7. Home Arts
8. Science.

Method

The inventory was administered by the senior author to 223 Ss in grades four through seven in schools in disadvantaged areas during November 1967. The Ss were tested in groups of 15 to 20 and all were provided ample time to complete the inventory. Administration time ranged from 30 to 40 minutes.

The means of the disadvantaged Ss were compared with the published norms and their scale scores factor analyzed. Unity was

utilized in the diagonals of the correlation matrix. The analysis, using the BMDO3M Factor Analysis computer program, yielded eight factors which were rotated through six iterative cycles.

Results and Discussion

The disadvantaged Ss obtained consistently higher scale scores on the *What I Like To Do* inventory than did the norm group (See Table 1). All 16 means of the disadvantaged Ss appeared higher than the published norms. Nine of the differences were significant ($p .05$).

The pattern of significant differences suggests that lack of knowledge concerning the items on specific scales may have resulted in high means on those scales. The senior author noted that a "yes" response set appeared to affect the Ss responses. High scores across both sexes on three scales (Art, Music, and Quiet Play) may have resulted from the Ss unfamiliarity with items on those scales. Two scales (Social Studies and Science) which correlated highly ($r = .81$) generally contain items most familiar to boys. In these data only the girls differed from the norms on these scales. The reverse held true for the scale (Home Arts) with which the boys are least familiar.

Table 2 presents the rotated factor matrix of the eight scales of the inventory.

	Boys				t-Value	Girls				t-Value
	Mean Subjects	Mean Norms	SD Subjects	SD Norms		Mean Subjects	Mean Norms	SD Subjects	SD Norms	
	(N=109)	(N=67)				(N=114)	(N=78)			
Art	17.5	13.1	5.8	6.5	4.65*	20.6	17.3	5.2	4.8	4.49*
Music	15.8	10.6	6.3	6.1	5.40*	20.6	17.2	5.6	11.7	2.70*
Social Studies	28.8	26.2	11.2	10.5	1.52	32.2	23.6	8.6	10.2	6.31*
Active Play	28.3	28.2	7.1	6.8	0.01	24.7	24.6	7.1	6.6	0.08
Quiet Play	22.3	19.1	6.3	6.8	3.20*	23.3	19.8	6.2	6.4	3.83*
Manual Arts	16.0	15.2	6.8	6.4	0.78	13.1	12.0	6.5	6.3	1.15
Home Arts	15.5	12.7	7.6	8.6	2.27*	20.9	20.1	6.4	5.6	0.86
Science	45.4	43.6	17.2	17.8	0.07	47.5	37.1	15.0	16.3	4.58*

* $p > .05$

Table 1. Means, Standard Deviations, and Values of t

Scale	Factor Loadings							
	1	2	3	4	5	6	7	8
Art	20	15	20	84*	18	32	15	20
Music	21	09	26	31	09	85*	16	18
Social Studies	47	15	20	31	13	28	18	70*
Active Play	17	91*	11	12	27	08	17	09
Quiet Play	23	35	30	21	31	25	71*	18
Manual Arts	21	36	22	17	83*	09	20	09
Home Arts	19	13	88*	18	20	24	18	13
Science	83*	22	21	19	22	21	16	25
N = 223								
* Factor Loadings > .50								

Table 2. Factor Loadings After Rotation (decimals omitted)

Each factor contained a single variable which loads above .7. Only the first factor had more than one variable which loaded above .4. An examination of the second highest variables on each factor illustrates the similarity between the norm group and the disadvantaged respondents. Factors 1 and 8 (Science and Social Studies), factors 4 and 6 (Art and Music), and factors 5 and 7 (Manual Arts and Quiet Play) "pair up" in that the first and second highest loadings are common but reversed within the pair. The correlations between the scales most highly loaded on those factors are the greatest in the correlation matrix describing the norm group.

These results are significant in that, while the disadvantaged Ss received higher scores, the manifest interests were in consonance with the national norms. In the case of each factor, one of the inventory's scale scores emerged as contributing decisively more to that factor than any other scale score.

It is concluded that the instrument does adequately sample interest levels of disadvantaged children in grades four through seven. Second, it is concluded that while there is a difference in the level of response on each scale, there is no significant discrepancy in the interaction of interests of

disadvantaged pupils and those of the norm group. It appears that in spite of mean differences, the *What I Like To Do* scale scores are as appropriate for disadvantaged Ss as they are for advantaged children.

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