DOCUMENT RESUME

ED 110 483 TM 004 756

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TITLE Matching Factors of Vocational Interests by Grade, Sex, and Race.
PUB DATE [74]
NOTE 14p.

EDRS PRICE MF-$0.76 HC-$1.58 PLUS POSTAGE
DESCRIPTORS Caucasians; Factor Analysis; *Factor Structure; Females; Grade 8; Grade 9; Interest Research; Junior High Schools; *Junior High School Students; Males; Negroes; *Racial Differences; *Sex Differences; *Vocational Interests
IDENTIFIERS *Ohio Vocational Interest Survey

ABSTRACT

Vocational interests among eighth and ninth grade students were examined and factor structures by grade, sex, and race were compared. The Ohio Vocational Interest Survey (OVIS) was the only inventory given. Results indicate that: (1) eighth and ninth grade students have similar interest patterns, (2) black and white eighth and ninth grade students have similar interest patterns, and (3) male and female eighth and ninth grade students have similar interest patterns except for on the artistic dimension. Possible implications of this study are that similar interests for both eighth and ninth graders may be indicative of a more stable interest pattern among junior high school students than many theorists have assumed, that OVIS can be used effectively to measure similar interests of both blacks and white students, and that OVIS, since it is not a sex-restrictive instrument, can be a useful test with both men and women. (BJG)

MATCHING FACTORS OF VOCATIONAL INTERESTS BY GRADE, SEX AND RACE

by

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The field of interest measurement has made many assumptions over the years. Strong (1943) postulated that male and female interests differed to such an extent as to require separate interest inventories. Besides Strong, the expression that females demonstrate a greater social orientation than males has often times been discussed (Gaier & Wamback, 1960; Berdie & Hood, 1964). These assumptions required empirical testing of interests to determine the validity of the respective interest inventories for interpretation.

Sex differences have not been the only area of interest measurement requiring empirical testing; many others have assumed interest differences for age, socio-economic class, and race (Ace, Graen & Davis, 1972; Gribbons & Lohnes, 1968). The purpose of this present paper is to examine vocational interests among eighth and ninth graders and compare the factor structures for these students by their grade, sex and race. The researcher was interested in determining if differences exist. If there are differences, the investigators intend to make these different factors evident to interest test users for interpretation. However, because of the great variety of interest inventories, only one test could be examined; the Ohio Vocational Interest Survey (OVIS) was selected for this examination. The reader is cautioned that the results should only be generalized for the ipsative scores of the OVIS and not to any other population.

Description of OVIS

The OVIS (1970) is a forced choice with free-response inventory providing both normative and ipsative data. The inventory was developed in accordance with twenty-four (24) rationally derived interest scales defined by the job classification system of the Dictionary of Occupational Titles (DOT). While most interest inventories purport to measure a single dimension; vocational interest, the OVIS attempts to measure a three-dimensional student interest toward jobs dealing with Data, People, or Things (D'Costa & Winefordner, 1969). This present study will provide OVIS test users with information needed for interpretation and recommendation of the OVIS regarding possible biases or restrictiveness of the instrument.

Method

Students were selected randomly from all of the junior high schools in a large northeast Ohio city. The students in the eighth and ninth grades were pooled, and 639 students were selected. All of the students were administered the OVIS. The students were then assigned to three groups each, according to the matchings to be completed (i.e., 396 eighth graders vs. 243 ninth graders; 419 males vs. 220 females; and 139 whites vs. 500 blacks). The test results were factor analyzed, and the factor structures were compared using the Kaiser Factor Matching technique (Veldman, 1967). The results of the factor matchings are given in the following section.

Results

EIGHTH VS. NINTH GRADERS

The results of factor matching the eighth vs. ninth graders on the OVIS were that the eighth graders and ninth graders both had a four factor structure (see Table 1) and that each of the eighth grade factors correlated very highly with the corresponding factors for the ninth graders (see Table 2). These results also demonstrate that a similar interest pattern exists for eighth and ninth graders.

INSERT TABLE 1

INSERT TABLE 2

MALES VS. FEMALES

The factor matching of the eighth and ninth grade females vs. the eighth and ninth grade males provided the following results: (1) Male interests demonstrate a four factor structure, (2) Female interests demonstrate a five factor structure, and (3) all of the male factors and all of the female factors are significantly related (see Tables 3 and 4). These results imply a difference in the male vs. female interest structure with regard to their perceptions of artistic interests. Medical and clerical female interest patterns are highly correlated with male artistic interests. The female artistic factor correlates with the organizational structure of the males.

INSERT TABLE 3

INSERT TABLE 4

BLACKS VS. WHITES

The analysis for racial differences provided results that both eighth and ninth grade blacks and eighth and ninth grade whites have a highly correlated five factor interest structure (see Tables 5 and 6). These results imply that a similar interest pattern exists for the Blacks and Whites.

The overall results are that all comparison groups show very similar factor structures for vocational interest except that males and females don't correlate significantly on the artistic and clerical factor.

Discussion

The results of the study have numerous implications for research in vocational interests. One implication is that it appears the similar interests of both eighth and ninth graders may be indicative of a more stable interest pattern among junior high school students than many theorists have assumed. This result may be a function of similar education and backgrounds, since all of the subjects reflect one school system. The similarity of educational background between the black and white students may also be etiological for their similar interest patterns. An implication of this for OVIS users is that the test can be used effectively with both blacks and whites to measure similar interests.

The results with males and females indicate that the OVIS is also useful with both men and women and the test is not a sex-restrictive (Prediger & Hanson) instrument. These results tend to indicate the fairness and lack of bias for using the OVIS with junior high school students.

The conclusions to be made from this study are: (1) Eighth and ninth graders have similar interest patterns, (2) Black and white eighth and ninth graders have similar interest patterns, and (3) Male and female eighth and ninth graders have similar interest patterns except for the artistic dimension.

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TABLE 1

EIGHTH VS. NINTH GRADE FACTOR INTEREST STRUCTURES

FACTOR	COMPONENT INTEREST SCALES
Eighth Grade	
1. Social Service	Caring, Customer Service, Nursing, Literary, Promotion, Teaching-Counseling, Medical
2. Technology	Manual Work, Machine Work, Crafts, Training, Numerical, Appraisal, Agriculture, Applied Technology, Management, Sales Representative
3. Personal Services	Manual Work, Personal Services, Inspection, Customer Service, Skilled Personal Services
4. Artistic	Literary, Promotion, Artistic, Music, Entertainment
Ninth Grade	
1. Service	Personal Service, Caring, Clerical, Customer Service, Nursing, Skilled Personal Service, Teaching-Counseling, Medical
2. Manual Work	Manual Work, Machine Work, Inspection, Crafts, Agriculture, Applied Technology
3. Numerical	Numerical, Appraisal, Applied Technology, Promotion, Management, Sales Representative
4. Artistic	Literary, Artistic, Music, Entertainment

TABLE 2

CORRELATIONS OF EIGHTH VS. NINTH GRADE INTEREST FACTORS

EIGHTH GRADE FACTORS	NINTH GRADE FACTORS			
	1 Service	2 Manual Work	3 Numerical	4 Artistic
1. Social Service	.999*	.025	.022	.019
2. Technology	.029	.992*	.050	.114
3. Personal Services	.012	.006	.879*	.441
4. Artistic	.024	.125	.438	.900*

* $p < .01$

TABLE 3

MALES VS. FEMALES (8th and 9th GRADE) FACTOR INTEREST STRUCTURES

FACTOR	COMPONENT INTEREST SCALES
Males	
1. Service	Personal Services, Caring, Clerical Nursing, Literary, Promotion, Artistic, Teaching, and Counseling
2. Organization	Machine Work, Crafts, Training, Numerical, Appraisal, Applied Technology, Promotion, Management, Sales Representative
3. Manual Work	Manual Work, Personal Services, Inspecting, Agriculture
4. Artistic	Skilled Personal Services, Literary, Artistic, Music, Entertainment
Females	
1. Communication	Numerical, Applied Technology, Promotion, Management, Sales Representative
2. Manual Work	Manual Work, Machine Work, Personal Services, Inspection, Crafts, Skilled Personal Services, Agriculture
3. Artistic	Literary, Artistic, Music, Entertainment, Teaching and Counseling
4. Medical	Caring, Nursing, Medical
5. Clerical	Personal Services, Clerical, Customer Services

TABLE 4

CORRELATIONS OF MALE VS. FEMALE INTEREST FACTORS

FEMALE FACTORS	MALE FACTORS 1 Service	2 Organization	3 Manual Work	4 Artistic
1. Communication	.997**	.078	.009	.024
2. Manual Work	.008	.004	.998**	.018
3. Artistic	.973	-.966**	.012	.018
4. Medical	.004	.168	.057	.692*
5. Clerical	.038	.183	.030	.721*

* $p < .05$
** $p < .01$

TABLE 5

BLACK VS. WHITE (8th and 9th GRADE) FACTOR INTEREST STRUCTURES

FACTOR	COMPONENT INTEREST SCALES
Blacks	
1. Social Service	Caring, Nursing, Teaching and Counseling, Medical
2. Manual Work	Manual Work, Machine Work, Inspecting, Crafts, Training, Appraisal, Agriculture, Applied Technology
3. Organization	Personal Services, Clerical, Inspecting, Customer Service, Skilled Personal Service
4. Entertainment	Music, Entertainment
5. Numbers	Numerical, Promotion, Management, Sales Representative
Whites	
1. Social Service	Caring, Nursing, Teaching and Counseling, Medical
2. Manual Work	Manual Work, Machine Work, Inspecting, Crafts, Training, Appraisal, Agriculture, Applied Technology
3. Organization	Manual Work, Personal Services, Clerical Work, Inspection, Customer Services, Skilled Personal Services
4. Communication and Arts	Training, Literary, Artistic, Music, Entertainment, Teaching and Counseling
5. Numbers	Clerical Work, Numerical, Appraisal, Applied Technology, Promotion, Sales Representative

TABLE 6

CORRELATIONS OF BLACK VS. WHITE FACTOR INTEREST STRUCTURE

BLACK FACTORS	WHITE FACTORS				
	1 Social Service	2 Manual Work	3 Organiza-tion	4 Communi-cation and Arts	5 Numbers
1. Social Service	.996*	.029	.069	.003	.059
2. Manual Work	.016	.986*	.154	.052	.038
3. Organization	.073	.156	.985*	.057	.003
4. Entertainment	.015	.050	.066	.964*	.254
5. Numbers	.057	.023	.004	.255	.963