DOCUMENT RESUME

ED 133 615 95 CG 003 180

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TITLE The Forgotten Woman: A Report On The Vocational Interests Of Women In Nonprofessional Occupations.
SPONS AGENCY Office of Education (DHEW), Washington, D.C.
PUB DATE 31 Aug 68
GRANT OEG-3-6-061820-0755
NOTE 20p.; Paper presented at the Annual Meeting of the American Psychological Association (San Francisco, California, August 1968)

EDRS PRICE MF-$0.83 HC-$1.67 Plus Postage.
DESCRIPTORS Career Choice; *Females; *Labor Force; Labor Market; *Nonprofessional Personnel; Occupational Aspiration; Research Projects; Vocational Counseling; *Vocational Interests; *Working Women

ABSTRACT

This paper describes a research project aimed at discovering the vocational interests of women employed in the labor market in nonprofessional occupations. Women from 17 nonprofessional occupations were contacted by mail and asked to complete a revised form of the Strong Vocational Interest Blank (SVIB) for women, and a questionnaire concerned with their occupational choice and job description. Based on responses to this aspect of the study, two scales were constructed--one for Women-in-General (WIG-1) which includes both professional and nonprofessional women, and one for women in nonprofessional occupations (WIG-2). Subsequently it was determined that the WIG-1 scale was the most useful where no information is available as to occupational level. The paper includes extensive appendices comparing the various populations and job categories, and concludes that intragroup interests of women in nonprofessional occupations differ considerably. Such information can be useful to the counselor who can more adequately counsel nonprofessional working women. (NG)

THE FORGOTTEN WOMAN: A REPORT ON THE VOCATIONAL INTERESTS OF WOMEN IN NONPROFESSIONAL OCCUPATIONS[1]

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It is accurate to call women who want to enter occupations which require noncollege preparation "forgotten." Counselors and researchers have ignored the problems these women face in choosing an occupation for two reasons. First, women are regarded as transients in the world of work--with no other needs to be satisfied than the need to find a husband and settle down. Even the woman who has invested several years in preparation for a career meets this attitude. The woman who goes job hunting with only minimal training certainly encounters it. Secondly, even if it were considered important to help women plan for careers at less than a professional level, women engaged in these types of occupations are regarded as so similar that neither they nor their jobs provide any basis for differential choices.

While women are certainly more transient in the world of work than men, they have a certain stability. The typical woman worker is no longer young and unmarried but fortyish and married with about 20 years of employment before her. In 1964, only 20 percent of the 25 million employed women had attended college at all, so it follows that at least 20 million

[1]A paper presented at the American Psychological Association Convention in San Francisco on August 31, 1968. This research was sponsored by United States Office of Education research grant number OEG-3-6-061820-0755.

of them were employed in occupations which required technical training, a high school education, or less (United States Department of Labor, 1966). Clearly the woman who spends 20-25 years in a nonprofessional occupation is not unusual. Some attention should be given to helping her make satisfying career choices, if indeed some choices may prove more satisfactory than others.

This study was undertaken to show that women in various nonprofessional occupations have vocational interests which differentiate them from each other and from women in professional occupations. It was supported by a United States Office of Education grant and carried out at the Center for Interest Measurement Research at the University of Minnesota in cooperation with Dr. David P. Campbell.

Methods

The 17 occupations studied were chosen because: 1) they did not require college training, 2) they represented a broad range of paramedical, industrial, clerical, and service occupations, 3) they were either occupations which large numbers of women enter or occupations which were so unusual that they added a new dimension to our understanding of the occupational world, and 4) representatives of the occupation were available for study in some practical way. We were unable to select subjects on an individual basis so we studied groups for which we could gain access to large mailing lists through organizational directories, licensing agencies or company employee rosters.

Once subjects had been chosen, they were contacted by mail and asked to complete a revised form of the Strong Vocational Interest Blank (SVIB) for women and a questionnaire which included questions about their

reasons for choosing their occupations and their description of their jobs. They were promised anonymity and a report of their scores which they have all received.

Table 1 presents a description of the 17 occupational criterion groups. Some respondents were rejected for use in criterion groups because they expressed dissatisfaction with their jobs or had too little experience to indicate a conclusive commitment to the occupation.

Once criterion group members were identified, the construction of SVIB occupation scales began. The usual method is to compare the percentage of the criterion group who respond Like, Indifferent, or Dislike to each SVIB item with the percentages of a Women-in-General group making each response. Responses which differentiate the occupational groups and W-I-G are weighted plus or minus one depending on the direction of the difference in response percentage.

This was the point at which technical difficulties were expected. Strong (1943) believed that women in occupations like those chosen for study had homogeneous interests because they entered the occupations randomly as a stopgap until marriage. Darley (1941) hypothesized that men in the lower occupational levels were indistinguishable from men-in-general. If Strong and Darley were right, it might prove impossible to construct SVIB scales for these occupations. The problem was complicated by the fact that the composition of the W-I-G group used determines the degree of differentiation achieved both between the occupational criterion groups and W-I-G, and among occupational groups. We decided to attempt to construct two sets of scales one based on the usual SVIB Women-in-General group ($W\text{-}I\text{-}G_1$) which contains 1000 women from various professional and nonprofessional occupations, and the other based on a Women-in-General

group ($W\text{-}I\text{-}G_2$) composed of 420 women selected from 14 nonprofessional occupations.

Results

Table 2 gives a description of the 17 occupational scales based on comparisons between the occupational criterion groups and the $W\text{-}I\text{-}G_1$ group. Table 3 gives comparable data for the 14 occupational scales based on comparisons between the occupational criterion groups and the $W\text{-}I\text{-}G_2$ group. The scale validity is expressed as the percentage of overlap between the distributions of scores for the occupational and W-I-G groups as calculated by Telton (193). The average percentage of overlapping is much less for the scales developed using the $W\text{-}I\text{-}G_1$ group as might be expected from its composition.

Tables 4 and 5 give test-retest reliabilities for the two sets of scales. The subjects were 112 members of an introductory psychology class tested over two weeks. The scales developed using $W\text{-}I\text{-}G_1$ are longer and slightly more reliable.

It appeared that either set of scales differentiated the groups adequately from a W-I-G group, with those based on a comparison with $W\text{-}I\text{-}G_1$ slightly better than those based on $W\text{-}I\text{-}G_2$. However, differentiation between occupational groups is also important, so each scale was applied to 27 professional occupational groups and 16 nonprofessional occupational groups. Table 6 shows the average standard score for all professional and nonprofessional groups (each group weighted equally) on each of the scales based on $W\text{-}I\text{-}G_1$ and $W\text{-}I\text{-}G_2$. For comparison, it is helpful to know that each group averages 50 on its own scale. As might

be expected, the W-I-G_1 scales differentiated the nonprofessional groups from professional groups most efficiently while the W-I-G_2 scales differentiated among the nonprofessional groups most effectively. The W-I-G_1 scales produce better differentiation between nonprofessional groups than W-I-G_2 scales do between nonprofessional and professional groups so it was concluded that the scales developed using the W-I-G_1 group were most satisfactory for use with populations not previously classified as to occupational level.

It is interesting to contrast two groups in a way that highlights their differences. Table 7 shows some of the SVIB items which are included on the Beautician and Radiologic Technologist scales. Radiologic Technologists tend to endorse scientific occupations and school subjects while Beauticians reject them. Radiologic Technologists reject secretarial and sales occupations and school subjects.

Figure 1 shows how Beauticians and Radiologic Technologists describe their jobs. Here the largest differences are on the Sales-Nonsales and the Business-Nonbusiness dimensions rather than the Scientist-Nonscientist dimension.

Summary

It is technically possible to measure differences in the vocational interests of women in various nonprofessional occupations. SVIB scales have been constructed and are nearly ready for use. If counselors will realize that a women's working life is long, and that the interests, and probably the needs and motivations, of women in various nonprofessional

occupations differ markedly, the tools for effective counseling with women going into nonprofessional occupations are available. When counselors begin to counsel women with these ideas in mind, they will no longer be accurately termed "forgotten."

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Demographic Descriptions of the 17 Occupational Groups

Occupational Scale	Rate of Response Percent	Criterion Group N	Age X̄	Age S.D.	Education (Years) X̄	Education (Years) S.D.	Work Experience (Years) X̄	Work Experience (Years) S.D.	Percent Married
Beautician	51	262	30	9.0	12	1.2	7	4.4	82
Dental Assistant	64	417	39	11.2	13	1.3	12	7.6	59
Elementary Teacher	73	325	44	12.3	16	.9	17	10.7	63
Executive Housekeeper	47	280	53	6.8	12	1.9	10	6.0	54
Instrument Assembler	33	89	45	7.0	11	1.5	14	6.3	78
Interior Decorator	37	172	52	9.9	15	2.0	22	8.6	52
Licensed Practical Nurse	36	222	51	9.9	12	1.6	15	9.2	58
Life Insurance Saleswoman	60	187	53	9.7	14	2.2	15	9.5	40
Performer	18	104	34	9.7	13	2.3	13	8.9	—
Radiologic Technologist	59	306	34	11.1	13	1.2	10	7.2	48
Retail Saleslady	46	241	52	7.7	12	1.6	15	7.6	73
Secretary	76	366	36	12.3	13	1.2	12	9.0	53
Sewing Machine Operator	31	294	45	8.8	11	1.7	11	5.8	79
Stewardess	70	439	24	3.7	13	1.3	3	3.1	0
Telephone Operator	51	128	38	8.0	12	1.0	13	6.8	75
WAC	57	218	42	7.1	13	1.5	14	6.4	12
WAVE	56	213	32	8.0	12	.9	10	5.7	13
Averages	51		41		13		12		52

Characteristics of the Scales Based on W-I-G

Occupational Scale	Criterion Group (raw scores) N	Mean	S.D.	Women-in-General (N=1000) (standard scores) Mean	S.D.	Percent Overlap	Number of Items Scored	Minimum Percent Difference Scored
Beautician	262	23.8	19.6	31.3	11.2	38	77	19.6
Dental Assistant	417	24.6	15.2	28.7	14.6	39	75	14.6
Elementary Teacher	325	21.0	15.1	34.7	13.1	51	60	14.6
Executive Housekeeper	280	27.6	16.2	29.6	13.2	38	82	15.6
Instrument Assembler	89	26.0	17.6	27.2	14.0	34	68	18.6
Interior Decorator	172	48.4	14.2	17.9	16.7	23	89	19.6
Licensed Practical Nurse	222	33.3	18.3	26.9	13.8	33	86	17.6
Life Insurance Saleswoman	187	26.2	14.0	24.6	11.4	24	77	15.6
Performer	104	33.2	15.2	24.5	13.7	29	77	18.6
Radiologic Technologist	306	17.2	13.0	30.9	14.1	43	67	13.6
Retail Saleslady	241	31.7	17.3	26.1	15.2	35	79	18.6
Secretary	366	20.7	16.0	32.6	12.7	45	75	13.6
Sewing Machine Operator	294	29.4	14.8	18.7	16.0	23	80	25.6
Stewardess	439	33.5	17.3	26.8	14.2	34	78	18.6
Telephone Operator	128	24.5	13.8	25.0	17.1	36	71	19.6
WAC	218	8.7	15.0	31.0	11.2	37	70	16.6
WAVE	213	17.0	18.0	33.0	10.9	42	77	16.6
						range 23-51 $\bar{X}$=35.5		

Table 3

Characteristics of the Scales Based on W-I-G_2

Occupational Scale	Criterion Group (raw scores) N	Mean	S.D.	Nonprofessional W-I-G (N=420) (standard scores) Mean	S.D.	Percent Overlap	Number of Items Scored	Minimum Percent Difference Scored
Beautician	262	24.6	25.0	38.3	9.6	55	85	14.6
Dental Assistant	417	9.3	6.3	34.6	12.0	48	23	13.6
Elementary Teacher	325	25.4	11.1	27.2	13.0	32	70	13.6
Executive Housekeeper	280	16.8	8.9	30.8	12.4	39	47	13.6
Instrument Assembler	89	15.8	14.3	35.0	11.1	48	67	13.6
Licensed Practical Nurse	222	30.3	14.4	30.3	13.3	40	77	14.6
Radiologic Technologist	306	16.6	15.4	36.5	11.7	53	60	13.6
Retail Saleslady	241	18.9	10.8	30.1	14.3	41	60	13.6
Secretary	366	17.2	12.5	34.6	11.0	46	55	13.6
Sewing Machine Operator	294	29.1	18.3	31.3	12.5	41	83	17.6
Stewardess	439	35.2	18.5	26.2	14.3	33	86	19.6
Telephone Operator	128	13.2	7.3	35.3	14.2	54	34	13.6
WAC	218	15.1	21.3	34.8	9.7	44	86	14.6
WAVE	213	15.9	24.3	37.0	9.6	51	83	14.6
						$\bar{X}$=44.6		$\bar{X}$=14.6

Table 4

Test-Retest Reliability Over Two Weeks of the Scales Based on W-I-G_1

(N=112)

Occupational Scale	Test-Retest Correlation	Test Mean	Test S.D.	Retest Mean	Retest S.D.
Beautician	.94	31.7	8.8	31.1	9.1
Dental Assistant	.94	30.2	13.3	30.1	13.7
Elementary Teacher	.93	35.4	11.8	36.5	11.9
Executive Housekeeper	.93	26.4	11.7	26.9	11.8
Instrument Assembler	.94	25.5	11.9	26.2	12.2
Interior Decorator	.94	12.3	16.2	11.7	16.3
Licensed Practical Nurse	.95	26.7	13.6	27.6	13.9
Life Insurance Saleswoman	.95	23.8	13.3	24.8	13.7
Performer	.94	30.1	14.0	31.0	13.5
Radiologic Technologist	.94	34.6	13.4	34.9	13.8
Retail Saleslady	.93	26.0	12.8	26.4	13.0
Secretary	.94	34.4	10.7	34.5	10.9
Sewing Machine Operator	.96	14.3	13.7	14.4	13.6
WAC	.88	30.41	8.5	30.0	9.1
WAVE	.87	31.9	8.2	31.3	8.6

Mean correlation=.93

Table 5

Test-Retest Reliability Over Two Weeks of the Scales Based on W-I-G_2

(N=112)

Occupational Scale	Test-Retest Correlation	Test Mean	Test S.D.	Retest Mean	Retest S.D.
Beautician	.93	37.4	8.1	36.6	8.5
Dental Assistant	.86	35.9	10.8	36.7	10.7
Elementary Teacher	.87	35.5	11.2	35.9	11.3
Executive Housekeeper	.87	25.2	10.2	26.0	10.0
Instrument Assembler	.88	27.9	9.7	27.9	9.2
Licensed Practical Nurse	.95	26.3	14.7	26.9	14.3
[illegible]iologic Technologist	.93	40.8	10.9	40.8	11.4
Retail Saleslady	.91	23.6	12.4	23.3	12.7
Secretary	.93	36.8	11.8	35.9	11.9
Sewing Machine Operator	.92	21.1	9.3	20.4	9.4
Stewardess	.92	41.1	12.9	41.5	13.0
Telephone Operator	.93	26.6	14.0	28.0	13.6
WAC	.91	37.4	8.0	37.0	8.3
WAVE	.91	39.5	7.7	39.3	8.0

Mean correlation=.91

Mean Scores of Professional and Nonprofessional Groups on Nonprofessional Scales Based on Two W-I-G Groups

Occupational Scale	Mean Score of Professional Groups (N=26) W-I-G_1 Scales	W-I-G_2 Scales	Difference	Mean Score of Nonprofessional Groups (N=16) W-I-G_1 Scales	W-I-G_2 Scales	Difference
Beautician	26.76	34.69	- 7.93	36.87	39.00	- 2.13
Dental Assistant	25.31	31.73	- 6.42	36.43	31.43	+ 5.00
Elementary Teacher	33.88	32.69	+ 1.19	37.87	27.18	+10.69
Executive Housekeeper	27.77	35.23	- 7.46	36.37	30.69	+ 5.68
Instrument Assembler	23.15	31.04	- 7.89	34.93	34.25	+ .68
Licensed Practical Nurse	25.38	31.15	- 5.77	32.50	27.43	+ 5.07
Radiologic Technologist	29.15	42.35	-13.20	35.25	35.62	- .37
Retail Saleslady	21.96	23.77	- 1.81	29.37	29.62	- .25
Secretary	28.42	36.42	- 8.00	38.75	35.93	+ 2.82
Sewing Machine Operator	13.96	23.69	- 9.73	27.12	29.50	- 2.38
Stewardess	23.77	28.85	- 5.08	28.31	26.68	+ 1.63
Telephone Operator	20.12	22.58	- 2.46	33.50	31.75	+ 1.75
WAC	30.35	41.08	-10.73	34.18	35.25	- .93
WAVE	31.23	42.46	-11.23	36.18	37.43	- 1.25

Some Items from the Beautician and Radiologic Technologist Scales (based on W-I-G_2)

Beautician

Items Weighted Positively

	Occupations
15	Beauty Specialist
34	Dressmaker
46	Hostess
61	Manager-Style Shop

School Subjects

Items Weighted Negatively

	Occupations
3	Income Tax Accountant
10	Author-Novel
11	Author-Technical Book
13	Bacteriologist
16	Biologist
22	Chemist
23	City or State Employee
24	College Professor
29	Dean of Women
36	Educational Directof
38	Electronics Technician
54	Laboratory Technician
60	Magazine Writer
72	Nurse
74	Office Clerk
75	Office Manager
77	Pharmacist
78	Physician
80	Poet
96	Reporter
100	Scenario Writer
101	Scientific Illustrator
102	Scientific Research Worker
111	Surgeon
115	Teacher-Domestic Science
121	Supervisor in Telephone Office
126	Weather Forecaster
128	YWCA Secretary

School Subjects

367	Botany
369	Chemistry
370	Civics
375	English Composition
376	Geography
377	Geology
378	Geometry
379	History
388	Philosophy
392	Political Science
396	Sociology

Radiologic Technologist

Items Weighted Positively

	Occupations
11	Author-Technical Book
13	Bacteriologist
16	Biologist
22	Chemist
38	Electronics
54	Laboratory Technician
72	Nurse
77	Pharmacist
78	Physician
90	Veterinarian
101	Scientific Illustrator
102	Scientific Research Worker
111	Surgeon
127	X-ray Technician

School Subjects

367	Botany
369	Chemistry
377	Geology
390	Physics
391	Physiology
393	Psychology

Items Weighted Negatively

	Occupations
14	Bank Teller
18	Buyer of Merchandise
20	Cashier in a Bank
21	Caterer
37	Employment Manager
43	Supermarket Checkout Clerk
46	Hostess
48	Housekeeper
59	Life Insurance Saleswoman
74	Office Clerk
75	Office Manager
89	Railroad Reservations Clerk
95	Receptionist
98	Retailer
107	Specialty Saleswoman
109	Stenographer
113	Teacher-Commercial
116	Teacher-Grade School
121	Supervisor in Telephone Office

School Subjects

366	Bookkeeping
371	Home Economics
373	Education-Teacher Training
395	Shorthand

Figure 1

Beautician and Radiologic Technologist
Job Descriptions