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ABSTRACT

The Self-Directed Search for Educational and Vocational Planning (SDS) is a self-scoring, self-administering instrument designed by John L. Holland, author of the Vocational Reference Inventory. Preliminary use of the SDS led to the speculation that some people were very dissatisfied with their results and others were quite pleased. Of the 4,631 incoming freshmen at the University of Maryland who completed the SDS 485 were extremely satisfied and 343 were extremely dissatisfied with their results. The codes for these groups were compared using chi-square and t. Results indicated that a greater percent of those dissatisfied did not obtain codes with a corresponding occupation listed in the SDS booklet. Also the satisfied group received more Artistic and Investigative codes while the dissatisfied group received more Conventional codes. The possibility that the SDS favors people from upper socioeconomic levels and implications of the results were discussed. (Author)

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A COMPARISON OF SATISFIED AND DISSATISFIED USERS OF HOLLAND'S SELF DIRECTED SEARCH (SDS)

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ABSTRACT

Preliminary use of the SDS led to the speculation that some people were very dissatisfied with their results and others were quite pleased. Of the 4,631 incoming freshmen at the University of Maryland who completed the SDS 485 were extremely satisfied and 343 were extremely dissatisfied with their results. The codes for these groups were compared using chi-square and t. Results indicated that a greater percent of those dissatisfied did not obtain codes with a corresponding occupation listed in the SDS booklet. Also the satisfied group received more Artistic and Investigative codes while the dissatisfied group received more Conventional codes. The possibility that the SDS favors people from upper socioeconomic levels and implications of the results were discussed.

The Self-Directed Search for Educational and Vocational Planning (SDS) is a self-scoring, self-administering instrument designed by John L. Holland, author of the Vocational Preference Inventory. According to Holland (1971, p 3) the SDS has two main purposes: "To provide a vocational counseling experience for people who do not have access to counselors or who cannot afford their services, and to multiply the number of people a counselor can serve."

The SDS is composed of two booklets, one for self-assessment and one which lists occupations. A person fills out the Assessment booklet and obtains a three letter summary code. He then uses the Occupational Classification booklet to find the occupations which correspond to his summary codes.

The validity of the SDS is based on Holland's theory of personality types and on his assertion that the best way to ascertain what occupational choice a person will make is to ask him directly. He incorporates this beljef in the SDS by asking subjects to list "occupational daydreams" at the beginning of the Assessment booklet and to find the 3 letter codes which correspond to the day-dream occupations. The 3 letter codes represent combinations of Holland's six personality types: Realistic, Investigative (formerly Intellectual), Artistic, Social, Enterprising and Conventional. This 3 letter "summary code" is based on scores from five sections of the Assessment booklet (Activities, Competencies, Occupations and two Self-Estimates). A complete explanation of the theory can be found in Holland (1959, 1966).

Holland (1971) reported reliability coefficients (KR20) for individual scales of the SDS ranging from .53 to .87 for men and women. O'Connell and Sedlacek (1971) provided test-retest reliabilities of summary codes over a 7-10 month period for 65 college freshmen of .75 (Pearson), .92 (Spearman Rho), and .87 (average common elements).

Holland feels that about 50 or 60 percent of the student and adult population could benefit from taking the SDS without the aid of a counselor.

Preliminary use of the SDS with incoming freshmen at the University of Maryland led to speculation that some people were dissatisfied with their results, while others seemed quite pleased. Therefore, one area of concern regarding the SDS is the identification of those for whom the instrument works well and those for whom it has limited use. The need for this type of identification is intensified by the fact that the SDS is self-administering and a person may take it without the direct supervision of a counselor or psychometrist. Thus, it is vital that information on a satisfaction-dissatisfaction dimension be available so that people for whom the instrument is not helpful can be provided with further help.

The purpose of this study was to compare those extremely satisfied with the SDS results to those extremely dissatisfied. The null hypothesis was that there were no differences between the two groups. Alternative hypotheses were: that the dissatisfied group included a disproportionate number of people whose summary codes did not correspond to any occupations; and that the dissatisfied group included more persons who had R (Realistic) as the first letter of their summary codes than the satisfied group. The last hypothesis was based on the preliminary findings that "Realistic" occupations tended to be those identified with low socioeconomic levels (see Holland, 1971). College bound freshmen seem threatened and upset when they perceived the SDS as indicating that they should direct themselves toward jobs which do not require a college degree.

Method

A Likert item stating: "My summary code occupations seem reasonable for me," was added at the end of the SDS completed by 4,631 incoming freshmen at the University of Maryland, College Park. Students responded on a five point

agree-disagree scale. The study compared all students who responded "Strongly Agree" (N=485) on the Likert item with all who said "Strongly Disagree" (N=343). The satisfied group included 193 males and 292 females, while the dissatisfied group included 190 males and 153 females.

Mean differences on the six sub-scales (R-Realistic, I-Investigative, A-Artistic, S-Social, E-Enterprising, and C-Conventional) within each of the Assessment booklet's five sections (Activities, Competencies, Occupations, Self Estimate 1, and Self Estimate 2) were compared by using t tests. Differences between the two groups on the 3 letter summary codes and for the 3 letter codes for the five sections were compared, using chi-square.

Those students whose 3 letter summary codes did not correspond to any occupations listed in the Occupational Classification Booklet were identified. Of the 120 possible permutations of the six letters, corresponding to sub scales (R,I,A,S,E,C), 48 have no corresponding occupations listed in the Occupational Classification Booklet. The number of satisfied and dissatisfied students who got one of the 48 "no occupation" summary codes was tabulated for each group, and the differences were analyzed by chi-square.

Results

Significant differences between the satisfied and dissatisfied students were found on almost all the measures employed in the study . The null hypothesis that the two groups do not differ was therefore rejected.

The first alternative hypothesis that the dissatisfied group included a disproportionate number of students with summary codes that do not correspond to any listed occupations was supported. The study found that 115 (14%) of the 828 students in the two groups had codes which did not correspond to any occupations. Of the 115, 47 were from the "satisfied" group (N=485) and 68 were in the dissatisfied group (N=343). When these figures are transformed

into percentages, they show that 10% of the satisfied students received "no occupation" summary codes compared with 20% of the dissatisfied students (chi-square significant beyond .05). Therefore the dissatisfied group had a significantly larger proportion of students whose summary codes did not correspond to occupations than did the satisfied group.

Table 1 shows that the satisfied group tended to have more summary codes which included A (Artistic) and I (Investigative), while the dissatisfied group tended to have more summary codes which included C (Conventional), R (Realistic), and S (Social).

Table 2 shows that only 4 of 15 chi-square tests were not significant beyond .05 for letter codes in the sections of the SDS. Results were generally quite consistent with those in Table 1.

On the comparison of mean differences on the six sub-scales within each of the five sections of the Assessment booklet, significant differences beyond the .05 level were found on 14 of the 30 sub-scales, using t (Table 3). Significant mean differences between the two groups were found on all five of the Artistic sub-scales, on four of the five Investigative sub-scales, two of the Conventional sub-scales, and one of the Enterprising sub-scales. The satisfied group had higher means than the dissatisfied group on all the significant sub-scales except the two Conventional sub-scales. One interesting result of the t tests was that four of the six sub-scales of the Competencies section were significant. (See Table 3).

Discussion

The most important finding of the study is that dissatisfaction among Maryland freshmen taking the SDS appears to be related to certain outcomes of the instrument. A student whose summary code does not correspond to any listed occupations is more likely to be dissatisfied than one whose code links

to some occupations. The chi-square tests showed that a student with "Artistic" or "Investigative" as one part of his summary code is more likely to be satisfied with the SDS than one whose code includes "Conventional." This might be expected since Artistic and Investigative occupations generally have higher status (see Holland, 1971) but the scale names themselves seem value loaded. Who would not rather be called Artistic than Conventional?

The direction of mean differences on the t tests show that those who responded "Yes" or "Like" to many of the individual items are more likely to be satisfied with the instrument than those who responded "No" or "Dislike" and those who scored high on the Conventional sub-scale are more dissatisfied with the SDS than those who ranked themselves high on the Artistic and Investigative sub-scales.

In short, a student who has been favorably exposed to many occupations and to many artistic and scientific activities and competencies is likely to find the SDS a satisfying experience. Students with more limited backgrounds are more likely to find the instrument frustrating and "Unreas le" for them.

Some of the differences found may be a result of differences in students' educational and cultural backgrounds rather than of differences in vocational interests. For example, most of the items in the Investigative and Artistic activities sub-scales relate to activities to which a student from a low socio-economic background might have had limited exposure. These items include: reading scientific books or magazines, working in a laboratory, sketching, attending plays, etc. Similar items are found in the Competencies section, such as playing a musical instrument or working with a chemistry set. The student who has had a chance to participate in scientific or artistic activities is likely to find the SDS more satisfactory than those who have developed

office or mechanical skills through part-time jobs and score relatively high on Conventional.

Kimball, Sedlacek and Brooks (1971) found that blacks and whites generally did not obtain different summary codes except blacks more often obtained Social codes, and that removing the Competencies section from the SDS did not alter the obtained codes. They also found that blacks and whites were equally satisfied with the SDS. However, even though there were no differences in response to the SDS by race, it may prove fruitful to explore responses by socioeconomic level.

Perhaps the most important finding of the study is that 14% of the 828 satisfied and disssatisfied students received one of the 48 summary codes which does not correspond to any listed occupations. While occupations are listed for some of these codes when the letters are rearranged, 30 of the 48 "non-occupation" codes have no occupations for any of the permutations of the three letters. For example, a student who has a summary code of SAR will find no occupations listed for that code or for the 5 permutations of it; RAS, RSA, SRA, ASR or ARS. An additional 9 of the 48 no-occupation codes have only three occupations among them, even when the letters are rearranged.

Holland's theory implies that Artistic and Conventional or Artistic and Realistic are unusual combinations of personality traits and reflect some contradictory interests within the person who derives such combinations in his summary codes. One would, therefore, assume that students with no-occupation codes are highly atypical. But if the 14% rate of "no-occupation" codes found among this study's sample is at all representative of a college population or of the general public, then "atypical" personalities seem more numerous than one might expect from Holland's theory.

From a counseling point of view, this 14% figure seems seriously high, especially if the SDS is used without any formal supervision. Students who spend the time to take and score the SDS and then find they do not "fit" the instrument may become very upset by the experience. Unless they took the SDS under the supervision of a counselor or psychometrist there is little guarantee that they will receive further vocational guidance or even reassurance that they are not "weird," although the instructions on the SDS suggest seeing a counselor if the person still has questions.

If the SDS is designed for use without such supervision, then further attention to the no-occupation codes is imperative.

Several cautions in interpreting data from this study should be made. First, with the relatively large N one is likely to find significant results. However, since the results were so consistent across the analysis it is likely that the general conclusions reached are reasonable. Another potential problem is the comparison of extreme groups representing only a small percentage of a total group. The temptation to generalize to the entire continuum exists. The reader is cautioned against doing this since the focus of the study was on the extremes only. However, data from Kimball and Sedlacek (1971) show that a random sample from the same population used in this study provided results generally in between the extremes reported here.

A potentially important variable not examined in this study is sex. That nearly twice as many females were in the satisfied group as opposed to the dissatisfied group should be kept in mind as the groups in this study are compared. This finding is worth further exploration in future studies.

Overall, this study provides some evidence that different individuals may find the SDS differentially satisfactory in vocational counseling. Counselors or practitioners recommending use of the SDS should be aware of the generalizations about the instrument as well as its potential shortcomings in individual cases.

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Table 1.

Percentage Distribution of 3 Letter Summary Codes of Satisfied (N=485) vs. Dissatisfied (N=343) Groups

Summary Code	Group	Letter Code R	I	A	S	E	C	Total**	X^2
1st Letter	Satisfied	8%	25%	19%	39%	6%	2%	99%	33.89*
	Dissatisfied	14%	22%	7%	48%	6%	4%	101%	
2nd Letter	Satisfied	10%	23%	27%	29%	10%	2%	101%	43.66*
	Dissatisfied	9%	21%	15%	27%	17%	10%	99%	
3rd Letter	Satisfied	10%	22%	20%	16%	26%	6%	100%	31.87*
	Dissatisfied	10%	17%	16%	12%	28%	17%	100%	

* Significant beyond .05 level

** Totals do not always add up to 100% due to rounding

Table 2.

Percentage Distribution of 3 Letter Codes for SDS Sections of Satisfied (N=485) vs Dissatisfied (N=343) Groups

SDS Section	Group	Letter Code R	I	A	S	E	C	TOTAL**	X^2
Activities - 1st letter	Satisfied	7%	21%	25%	35%	10%	3%	101%	36.14*
	Dissatisfied	12%	12%	13%	43%	14%	4%	98%	
Activities - 2nd letter	Satisfied	6%	12%	24%	29%	22%	6%	99%	17.64*
	Dissatisfied	5%	13%	18%	27%	24%	14%	101%	
Activities - 3rd letter	Satisfied	8%	15%	21%	18%	28%	10%	100%	4.72
	Dissatisfied	10%	17%	18%	17%	25%	12%	99%	
Competencies - 1st letter	Satisfied	8%	40%	8%	38%	4%	2%	100%	10.56
	Dissatisfied	12%	39%	4%	40%	3%	2%	100%	
Competencies - 2nd letter	Satisfied	11%	27%	13%	29%	17%	3%	100%	20.22*
	Dissatisfied	10%	24%	8%	31%	16%	10%	99%	
Competencies - 3rd letter	Satisfied	7%	16%	23%	21%	25%	8%	100%	29.16*
	Dissatisfied	13%	20%	11%	18%	25%	13%	100%	
Occupations - 1st letter	Satisfied	6%	30%	29%	25%	7%	3%	100%	22.14*
	Dissatisfied	8%	21%	24%	30%	10%	7%	100%	
Occupations - 2nd letter	Satisfied	12%	21%	25%	26%	11%	5%	100%	9.57
	Dissatisfied	16%	19%	18%	26%	15%	6%	100%	
Occupations - 3rd letter	Satisfied	18%	18%	17%	18%	21%	7%	99%	10.91
	Dissatisfied	24%	16%	15%	12%	23%	10%	100%	
Self-Estimates-1-1st letter	Satisfied	13%	25%	27%	27%	5%	3%	100%	24.50*
	Dissatisfied	17%	18%	20%	29%	6%	8%	98%	
Self-Estimates-2-2nd letter	Satisfied	13%	22%	19%	31%	10%	5%	100%	18.77*
	Dissatisfied	13%	22%	13%	29%	13%	12%	102%	
Self-Estimates-1-3rd letter	Satisfied	15%	18%	18%	17%	22%	11%	101%	12.99*
	Dissatisfied	14%	19%	10%	19%	21%	17%	100%	
Self-Estimates-2-1st letter	Satisfied	21%	26%	17%	31%	4%	1%	100%	24.16*
	Dissatisfied	21%	32%	6%	33%	6%	3%	101%	
Self-Estimates-1-2nd letter	Satisfied	16%	23%	16%	30%	11%	4%	100%	12.61*
	Dissatisfied	16%	19%	13%	30%	13%	9%	100%	
Self-Estimates-2-3rd letter	Satisfied	19%	14%	18%	23%	19%	7%	100%	13.29*
	Dissatisfied	22%	17%	11%	20%	17%	11%	98%	

* significant beyond .05 level

** Totals do not always add to 100% due to rounding

Table 3

Means and Standard Deviations of Satisfied and Dissatisfied Groups on SDS Sub Scales

Sub Scale*	Satisfied Group Means	S.D.	Dissatisfied Group Means	S.D.	t**
Activities					
Realistic	2.72	3.04	2.85	3.10	0.64
Investigative	5.14	3.12	4.41	4.91	2.64
Artistic	6.38	2.82	4.97	2.97	6.95
Social	7.56	2.45	7.38	4.61	0.76
Enterprising	6.24	2.91	5.88	4.44	1.42
Conventional	3.65	2.71	4.10	4.06	1.91
Competencies					
Realistic	2.93	3.34	3.13	3.23	0.88
Investigative	7.15	3.26	6.38	2.59	3.63
Artistic	4.48	3.17	2.91	2.61	7.52
Social	7.48	2.58	7.01	2.58	2.58
Enterprising	5.15	2.85	4.47	2.70	3.46
Conventional	3.11	2.32	3.32	2.60	1.23
Occupations					
Realistic	2.06	2.55	2.04	2.60	0.11
Investigative	5.01	5.22	3.51	3.46	4.65
Artistic	5.18	4.27	3.75	3.61	5.04
Social	5.15	3.85	4.62	3.69	1.96
Enterprising	3.01	3.11	2.89	2.82	0.54
Conventional	1.62	2.49	1.94	3.03	1.62
Self Estimates 1					
Realistic	4.99	1.01	5.01	0.99	0.30
Investigative	5.12	1.01	4.84	0.97	3.93
Artistic	5.20	0.94	4.72	1.02	6.89
Social	5.05	1.00	4.94	1.00	1.52
Enterprising	5.02	1.00	4.97	0.99	0.74
Conventional	4.91	0.93	5.13	1.08	3.18
Self Estimates 2					
Realistic	5.03	1.00	4.96	1.00	0.95
Investigative	4.98	1.01	5.03	0.98	0.67
Artistic	5.21	0.99	4.72	0.94	7.15
Social	5.02	0.99	4.97	1.02	0.74
Enterprising	4.98	1.00	5.03	1.00	0.64
Conventional	4.89	0.96	5.16	1.03	3.88

** t values 1.96 or larger are significant at or beyond .05

* Scale ranges: Activities and Competencies 0-11; Occupations 0-14; Self Estimates 1 and 2 were converted to standard scores (mean =5, S.D.=1) since Holland altered the range in early forms.