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TRANSLATION AND ADAPTATION OF A VOCATIONAL INTEREST INVENTORY: AAP KI DILCHASPIAN

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In this study an interest inventory, Gordon Occupational Checklist (GOCL), was adapted and translated in Urdu for the matric students of Pakistan. It was named Aap Ki Dilchaspian (AKD). In AKD the items were reduced to 115 from the original 240 items of GOCL. The inventory was administered to 300 students (150 boys, 150 girls) of class VIII. The subjects were matched to study gender-wise differences in like/dislike scores and the reliability coefficient of the five areas, i.e., Business, Outdoor, Arts, Technology, and Service (BOATS). The differences were found significant at $p < .001$. The results of the study indicate that AKD is a reliable instrument which can be used on Pakistani students for measuring their vocational interest.

Vocational interest inventories are administered to more than 3.5 million persons each year (Tittle & Zytowski, 1980). They have been used for counselling and research settings for myriad purposes. They have also been used to help students, employees, and employers for making decisions; to investigate the vocational interests of persons from a single specific occupation; to determine how groups, institutions, or individuals change over time; to investigate how individuals choose a career or field; and to study how human work environments might be designed so as to increase work satisfaction (Hansen & Campbell, 1985).

One of the most recurrent results in the measurement of vocational interests is that regardless of age, country, linguistic, or cultural affiliation, the interest patterns of men and women have consistently shown marked differences (Cole & Hanson, 1975; Fitzgerald & Crites, 1980; Prediger & Hanson, 1976). From childhood onwards, vocational interests show a marked coherence and differentiation according to gender. As viewed within Holland's Typology (Holland, 1985), viz., Realistic, Investigative, Artistic, Social, Enterprising, and Conventional (RIASEC), interest tests continually lead to the same conclusion that boys and men more often obtain higher scores on the Realistic, Investigative, and Enterprising scales, whereas, girls and women tend to favour Artistic, Social, and Conventional activities (Fitzgerald & Betz, 1983; Gottfredson & Holland, 1975; Prediger

& Hanson, 1976). Similar findings have been obtained by using the Vocational Interest Inventory (Lunneborg, 1977), a measure of Roe's (1956) eight fields of occupational interest (viz., Service, Business Contact, Business Organization, Technology, Outdoor, Science, General Culture, and Arts and Entertainment). Findings of gender differences on basic dimensions of vocational interest are more evident and durable for Social and Realistic (technical) interests. Social interests are far more predominant among females, whereas Realistic interests are found far more frequently among males (Lunneborg, 1979, 1980; Prediger, 1980).

Previous researches have focused on identifying the role of culture in the assessment of vocational interests, both within the United States across ethnic groups and across national borders. One focus of cross-national research on vocational interests has been the similarity of occupational interests across cultures. The research findings indicate greater similarity of interests among individuals within an occupation across cultures than among individuals within a single culture across occupations. For example, Lonner (1968) found that U.S., German, Swiss, and Austrian psychologists' interests were more similar to each other than to accountants within the same country. Focusing on engineers and physicians, Shah (1970) found that large differences were more frequent between occupations within each country than between cultures among corresponding occupations. Some more studies (e.g., Fouad & Hansen, 1987; Fouad, Hansen, & Arias, 1986) found that Mexican student engineers and student lawyers were more similar to U.S. student engineers and student lawyers, respectively, than they were to each other.

Karayanni (1987) carried out a cross-cultural study on Jewish and Arab population and found that Arab students expressed relatively higher levels of vocational interest in outdoor, technology, and science occupations, whereas Jewish students expressed higher levels of vocational interest in arts and entertainment and in general culture as classified by Roe's (1956). The levels of vocational interest in business (low), service (high), and organization (moderate) were similar in both samples. Other studies have found that blacks and whites have exhibited different patterns of interests: Blacks expressed stronger interests in business, sales, verbal-linguistic, and social service occupations, whereas, whites expressed stronger interests in biological and physical sciences, technical and skilled trades, and aesthetic-cultural occupations (Hager & Elton, 1971; Whetstone & Hayles, 1975; Yura, 1985).

This paper documents the process of translating and adapting the GOCL (Gordon, 1967) in the context of Pakistani culture. It was carried out in the following way: (i) translation of GOCL as the first step towards

adaptation; (ii) determination of gender-wise differences in vocational interest; and (iii) determination of reliability coefficient of the five areas, i.e., BOATS by internal consistency *KR-20*, and test-retest techniques.

Gordon Occupational Checklist

In a comprehensive study of various available interest inventories, it was found that Minnesota Vocational Interest Inventory (MVII; Clark & Campbell, 1965) and Gordon Occupational Checklist (GOCL; Gordon, 1967) measure the vocational interests of the students who do not plan to get higher education after matric. After a comparative study of the two, it was decided to develop an indigenous interest inventory on the pattern of Gordon Occupational Checklist as it has the following characteristics: (i) The 240 items/occupations have been selected from the Dictionary of Occupational Titles (DOT, 1949), and Occupational Outlook Handbook (1961) published by the U.S. Department of Labour. In order to effectively counsel students of varied interests and abilities, the counsellor must have access to, and be familiar with, a large variety of cross-referenced source material. Since, such accessibility and familiarity have been lacking in the past, much occupational and vocational counseling has been fraught with uncertainties. However, the availability of the GOCL together with corollary information from the DOT facilitates a matching compilation of the personal qualifications required for effective performance in those occupations in which the individual manifests an interest, and will assist the counsellor in his interactions with the non-college bound student; (ii) Almost all the items/occupations are covered in statements and the occupational titles are avoided. The clustering of statements have been made on the basis of the underlying factor structure of the activity, the level of performance required, the nature of the tasks performed and the worker characteristics required, as well as other surface considerations, i.e., the items describe the essential characteristics of the job; (iii) Items are brief to permit rapid reading; (iv) Items are self-sufficient as individual phrases; and (v) It has simplicity as the language of the GOCL is at an easy reading level and the terms used are generally understood.

The MVII on the contrary is ipsative, i.e., it has difficulty in interpreting scores to clients. Bauernfeind (cited in Crites, 1972) concludes that the main drawback with MVII is the inaccurate interpretation of its scales, as he observes, it is 'a classic case of communication invalidity' for example, we may say " Your interests in Artistic activities are higher ... we don't know how much higher ... than your own average interests whatever that is ... relative to the interests of other boys in the national norms group" (p. 1434). Much of the same kind of interpretation of MVII scores must be

formulated while relating them to clients, and hence their psychological meaningfulness is considerably restricted. Moreover, the MVII also lacks a definite description of the tradesmen-in-general group (cited in Crites, 1972).

The GOCL contains 240 statements of job duties and tasks, found in occupations at the middle and lower levels of skill and responsibility. The statements are classified into five broad occupational groupings as Business, Outdoor, Arts, Technology, and Service (BOATS), which roughly correspond to the groups in Roe's (1956) occupational classification scheme. The levels are Professional and Managerial (higher), Professional and Managerial (lower), Semi-professional and Managerial, Skilled, Semi-skilled, and Unskilled. Instead of including the six levels of skill and responsibility of Roe, GOCL included only the lower four levels, which means that the top level professionals and managerial occupations are not included because they required higher educational qualification.

METHOD

Pilot Study

Two hundred forty statements about different occupations classified into five broad areas, i.e., Business, Outdoor, Arts, Technology, and Service (BOATS) and four descriptive questions of Gordon Occupational Checklist (1967) were translated in Urdu and was administered on a random sample of 200 students of class VIII (100 boys, 100 girls) selected from federal government schools of Islamabad.

The results indicate that some of the items in the checklist were not according to Pakistani culture and society, therefore, it was decided to make the inventory commensurate with our cultural and social norms. For this purpose, the unfamiliar, not common, unsuitable or socially unacceptable items in our society were discarded or changed. For example, Item no. 80 "give facials, shampoos, or style hair", and Item no. 214 "be a professional dancer" were changed to[#]" be a beautician in a beauty parlour", and[#] "be a professional musician or singer", respectively, because the former is not very common while the latter is socially disliked in our society.

Finally, a revised version of the checklist was prepared and given a new name Aap Ki Dilchaspian (AKD). Every attempt was made to make sure that AKD will reflect the socio-cultural needs of Pakistan. In this

[#]The original items are in Urdu language.

version, items were reduced from 240 to 115 as in the original form it was too lengthy. Besides, it was also simplified as the difficult, unfamiliar, and infrequently used words were avoided. However, the original lay-out of the inventory into five areas, namely BOATS, was maintained with the obvious difference that in each area the number of items were somewhat reduced as the result of weeding-out of certain items.

Main Study

Sample

A random sample of 300 students of class VIII (150 boys, 150 girls) of Rawalpindi/Islamabad federal schools were taken randomly. The age of the students ranged between 12 to 18 years with mean age of 15 years.

Procedure

The inventory was administered in groups of 20 to 25 students. Each student took about an average of 30 minutes, which also included the explaining of purpose and giving instructions.

RESULTS AND DISCUSSION

The statistical analyses of data for the present study include Kuder-Richardson formula 20 (*KR-20*), *t*-test, and correlations. Table 1 and 2 shows the inter-correlation for all the five areas (BOATS) as well as the total correlation of each area along with their level of significance.

Table 1

Intercorrelation of Area Scores for "Like" Items and Total Score on AKD

Areas	B	O	A	T	S	Total
Business (B)	-	.5412**	.4408**	.7384**	.5979**	.8407**
Outdoor (O)		-	.3312**	.6800**	.5552**	.7685**
Arts (A)			-	.4329**	.5913**	.6599**
Technology (T)				-	.5636**	.9025**
Service (S)					-	.8008**

** $p < .001$

Table 1 show the inter-correlations between the five areas on "like" item scores, and the total score correlations, which are significant at $p< .001$. Same is the case in Table 2 for "dislike" item scores where all the correlations are also significant at $p< .001$. Thus the AKD has internal consistency.

Table 2

Inter-correlation of Area Scores for "Dislike" Items and Total Score on AKD

Areas	B	O	A	T	S	Total
Business (B)	-	.5484**	.4495**	.7421**	.6024**	.8427**
Outdoor (O)		-	.3470**	.6888**	.5620**	.7753**
Arts (A)			-	.4427**	.5942**	.6650**
Technology (T)				-	.5714**	.9054**
Service (S)					-	.8027**

** $p< .001$

KR-20 was calculated further to determine the internal consistency of the items of the test for like/dislike scores for boys and girls.

Table 3

Reliability Index between Different Areas of the Test and Liking/Disliking of the Items (KR-20)

Areas	Boys		Girls	
	Like	Dislike	Like	Dislike
Business	.813	.821	.784	.783
Outdoor	.806	.812	.830	.772
Arts	.767	.773	.818	.814
Technology	.887	.892	.859	.862
Service	.759	.770	.773	.770
Total	.947	.950	.938	.939

The results shown in Table 3 indicate a highly significant degree of internal consistency of the test.

The reliability coefficient using test-retest method was estimated by repeating the test on the same sample with a time period of 3-6 months between the administration. Table 4 shows the reliability coefficient of the area scores as well as the total score for "like" items on AKD.

Table 4

Test-retest Reliability Coefficient for the "Like" Items

Areas	First Test		Second Test		
	Mean	*SD*	*Mean*	*SD*	*r*
Business	8.60	4.44	9.34	4.88	.496
Outdoor	6.65	3.67	6.66	4.05	.577
Arts	9.12	3.80	9.09	4.38	.607
Technology	15.71	7.81	15.79	8.01	.519
Service	15.57	4.34	15.67	4.87	.490
Total	54.98	19.66	56.55	20.74	.493

Table 5 below gives the reliability coefficient of the area scores as well as the total score for "dislike" items on AKD.

Table 5

Test-retest Reliability Coefficient for the "Dislike" Items

Areas	First Test		Second Test		
	Mean	*SD*	*Mean*	*SD*	*r*
Business	11.33	4.48	10.54	4.89	.466
Outdoor	8.27	3.71	8.25	4.07	.558
Arts	5.82	3.80	5.84	4.38	.594
Technology	24.12	7.91	23.97	8.05	.484
Service	9.35	4.37	9.18	4.82	.446
Total	55.88	19.78	57.78	20.81	.287

The results shown in Tables 4 and 5 indicate significant results. As, the test-retest reliability coefficient for item response frequencies within the sample for like/dislike items indicate the stability of the individual's response scored in each area and on the total score on AKD. This is evidenced by the fairly substantial correlations and the close similarity in mean scores in the repeated administrations. As would be expected certain areas were found to be more stable than others as Arts, Outdoor, and Technology.

Tables 6 and 7 give the mean, standard deviation, and *t*-values of the scores for the two groups (boys and girls). The results clearly indicate that the test items are able to discriminate between the interests of boys and girls.

Table 6

Gender Differences in the Mean Scores for "Like" Items

Areas	Boys (n=150)		Girls (n=150)			
	Mean	*SD*	*Mean*	*SD*	*t*	*p*
Business	9.200	4.61	8.000	4.19	2.36	.019
Outdoor	7.180	3.82	6.127	3.44	2.51	.013
Arts	7.633	3.49	10.613	3.52	7.36	.000
Technology	17.593	8.15	13.820	6.98	4.31	.000
Service	14.947	4.32	16.187	4.29	2.50	.013
Total	56.553	20.76	54.747	18.36	.80	.425

df= 298

Table 6 presents overall performance of boys and girls for the "like" items. Though the differences are significant in the areas of Business, Outdoor, Arts, Technology, and Service, but especially in the area of Arts and Technology. Their mean scores indicate that boys prefer various occupations in Technology, Business, and Outdoor which are not of much interest to girls. On the other hand, girls prefer occupations in areas of Arts and Service.The occupations related to Arts demand individualized expression of creative or musical talent and ability in designing, fine arts, and performing arts. The results of the present study are consistent with that of Lunneborg (1980) who found that women generally preferred the social (service) and artistic areas and men the realistic (technical), outdoor, and scientific areas.

Table 7

Gender Differences in the Mean Scores for "Dislike" Items

Areas	Boys (n=150)		Girls (n=150)			
	Mean	*SD*	*Mean*	*SD*	*t*	*p*
Business	10.720	4.70	11.933	4.19	2.36	.019
Outdoor	7.753	3.87	8.787	3.47	2.43	.015
Arts	7.307	3.52	4.333	3.48	7.35	.000
Technology	22.240	8.34	25.993	6.99	4.22	.000
Service	9.967	4.40	8.727	4.26	2.48	.014
Total	57.987	21.27	59.773	18.34	4.78	.437

df= 298

Table 7 shows the mean scores of five areas and their total for "dislike" items. Though there are significant differences between boys and girls in the areas of Business, Outdoor, Arts, Technology, and Service, but these differences are especially significant in the areas of Technology and Arts indicating the women's lack of technical interest. The results here are similar with that of Holland (1975) who found that males had substantial Social interest, between 11 per cent and 31 per cent choosing Social (service) jobs. Girls, in contrast, aspired for Realistic (technical) jobs from zero per cent to 3 per cent. This provides more evidence that women's lack of technical interest is the big problem, and not men's lack of service interest. These findings have also been supported in other studies (e.g., Hanson, 1974; Prediger, Roth, & Noeth, 1973).

CONCLUSION

This study found Aap Ki Dilchaspian (AKD) as a useful instrument for the future researches in Pakistan. Like GOCL, it is designed to permit the student to indicate his/her interest in performing particular occupational activities who do not plan to study further on college level. It can also be utilized for research and guidance purposes in schools, community, and vocational guidance centres.

This inventory is very useful because studies conducted on vocational choices, interests, aspiration, and preferences of the students in different parts of Pakistan indicate that most of the students are unaware of the choices available to them and the potentialities existing in them. Besides, they do not have the awareness about various occupations except the stereotyped ones, as they are not vocationally aware and mature (Ansari, 1981; Chaudhry & Shah, 1981; Zaidi, 1979).

We do not have many standardized psychological tests in Pakistan. The fact that the development of an entirely new test is very expensive, time consuming, and a scientific process, it has made it imperative that we make alternative arrangements, if research is to continue in this field (Dar, 1982). The present work of the development and adaptation of an Urdu version of Gordon Occupational Checklist, i.e., Aap Ki Dilchaspian indicates that there is a scope in administering such tests in Pakistan as it has the potential in differentiating between the gender's interest. Besides, this has helped to reduce a lot of expense, labour, and time, which would have been needed in any attempt at standardization of new tests.

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