MESLEKİ ALAN İLGİ ENVANTERİ (MAİ) GELİŞTİRME ÇALIŞMASI[1]

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ÖZET

Bu çalışmanın amacı geçerli ve güvenilir bir ilgi envanteri geliştirmektir. Araştırma verileri Ankara'da 11 lisedeki 1445 öğrenciden toplanmıştır. Analiz sonuçları, Mesleki Alan İlgi Envanteri (MAİ)'nin 13 yaş üzerindeki bireylerin mesleki ilgilerini ortaya koyabilecek geçerli ve güvenilir bir ilgi envanteri olduğunu göstermektedir. Envanterin nihai formu doğrulayıcı faktör analiziyle ortaya konulan 14 faktörden ve her alanda en iyi indeksleri sağlayan 11-12'şer maddeden oluşmuştur. Ölçeğin nihai formunda 156 madde yer almıştır.

Anahtar Sözcükler: Mesleki ilgi, envanter geliştirme, OFII, Mesleki Alan İlgi Envanteri, MAİ, DFA

OCCUPATIONAL FIELD INTEREST INVENTORY (OFII) DEVELOPMENT STUDY

ABSTRACT

The aim of this study is to develop a valid and reliable interest inventory. The data attained from 1445 people in eleven high schools, in Ankara. The results point out that the Occupational Field Interest Inventory (OFII) developed in the scope of the study is a validity and reliability which can be used on different ages beginning from 13, in Turkey. The final form of the inventory is created with the confirmatory factor analysis related to the 14 dimensions and by choosing the 11 or 12 sentences which are well matched in the maximum fit indexes in all dimension. 156 sentences take place in the final form of the inventory.

Keywords: Vocational interest, Development an inventory, OFII, Occupational Field Interest Inventory, CFA

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[1] Bu çalışma "Uzmanlık Gerektiren Mesleklere Yönelik Bir İlgi Envanteri Geliştirme Çalışması" (2008) adlı doktora tezinin bir bölümüdür.

INTRODUCTION

Occupation is defined as "the sum of activities which are carried out in order to produce useful goods or service and to earn money in return, and which are based on the systematic knowledge and skill gained as a result of a specific training, and whose rules are established by the society" (Kuzgun, 2004). The concept of job is used with various labels in the literature of the field. One term for the word is "occupation", and another term used in the literature is "profession". Occupation is characterized as "the job of a person", whereas profession is identified as "the job that necessitates advanced training and education" (Collins, 1999).

Anastasi (1982) points out that nearly all assessment tools, which are used for the purposes of self-recognition and self-awareness, may prove very functional while the individuals choose their occupations. The application of such scales, which not only bring into light the interests of the individuals but also help them choose the right occupation for themselves, might as well contribute to avoiding any possible bad feelings caused by their wrong preferences, which may last throughout their occupational career. While making occupational choices, individuals put personal information (interests, way of life, values, skills, etc.) and their options (occupations, sectors, place of the firms, social assurance etc.) side by side, and they make their career choices according to the consequential suitable matches. (Varçın et al, 2005).

Interest and Occupational Interest

Strong, who carried out various extended studies on assessment of interests in Carneige Technology Institute and who developed his interest inventory in 1943, identifies interest as "a person's reaction of 'like', 'dislike' or 'indifference' towards a person, a thing or an activity" (Herr & Cramer, 1996). Strong recognizes the term interest as Webster's Dictionary (1934) defines it. According to this dictionary, interest is the tendency to pay attention to or act towards an object. Strong (1943) emphasizes four important aspects of this definition. First and second aspects are the *continuity of attention and emotion*; the third aspect is *inclination* (individuals will be inclined to the things they like and they will restrain from the things they dislike); and the fourth one is

activities (if the individuals are interested in something, they will make activities about it) (As cited in Savickas, 1999).

Lokan (1997) points out that the interests of individuals have played an important role in their choice of occupation since the beginning of the twentieth century, and maintains that interests are defined in various ways such as *what we like, what we dislike, behavior bonds, the results of our behavior, activities, priorities, self-perception and personality aspects.* The concept of occupational interest is recognized as a dimension of a broader interest concept. In spite of their dissimilar points of view, there are many common features in the definition of occupational interest. Based on the information above, the researcher defines interest as *"an inner process in which the individuals not only pay attention to an object in line with their will but also maintain their attention to it without any deliberate effort, in which they are aware of the object, and in which they are ready to transform their awareness to reaction and behavior."*

Some studies (Hoyt, Smith, & Levy, 1957; Tracey, 2002; Tracey, Robbins, & Hofsess, 2005) demonstrate that occupational interests are highly unstable during the adolescence; and, on the other hand, that some studies (Hansen, 1984; Low et al., 2005; Swanson, 1999; Swanson & Hansen, 1988) show a quite stable composition in further ages (As cited in Rottinghaus et al, 2007). When the developmental phases of the occupational interests are taken into consideration, it can be recognized that adolescence proves significant in any possible assessment process. Assessment results obtained in adolescence may become important indicators of occupational interests for future periods. Consequently, adolescence –especially from the age of 13 on– produces predictive information in advance as to the assessment of occupational interests.

Assessment of Occupational Interests

Previously, the mentality of occupational interest assessment rested upon the determination people's interests according to their state of whether they liked the group of people in that occupational field. Recently, however, the mentality has moved towards a point where it is dominantly accepted that the people will be satisfied and contented in an occupation whose activities they possibly like. Today's commonly used occupational interest inventories include a list of occupational activities or occupation names (London et al, 1972). While giving answers to some of such inventories,

participants respond indicating the extent to which they like or dislike the given activities. Some inventories require the participants to choose one option out of two or three given; some ask them to put a group of statements about the occupation into an order; and some come with responding formats that are either a Likert-scale grading or answering with prompts such as "I like it" - "I don't like it" or "I like it" – "It doesn't matter" - "I don't like it" (Lokan, 1997).

Harmon (1999) classifies occupational interest scales into two types in accordance with how they are developed; namely, experimental and homogeneous scales. During the stage in which the experimental occupational interest scales are developed, a group of people working in an occupational area are given several statements and asked to give their responses as to whether they like or dislike them. These statements are acknowledged to reflect that specific area regarding the assessment of the occupational interests. Some examples of such scales are "Strong Vocational Interest Blank", "Strong Interest Inventory-SII" and "Kuder Occupational Interest Scales-KOIS".

In scales based on homogenous items, item groups are generated. These groups of items are generated within a framework or with the help of various statistical data (e.g. factor analyses), or using both. According to the resulting factor structures, conclusions are drawn as to what factors the scale covers. The first scale to be developed this way was the Kuder Preference Record that comprised ten factors (Harmon, 1999).

In the framework of this study, an interest inventory is developed, which is based upon homogenous items, and which asks the participants to choose one of the three given statements, just as the Kuder Preference Record requires.

The Aim of the Study

The aim of this study is to develop a valid and reliable interest inventory that the individuals, who are about to enter their university education, will make use of while they make their occupational choices. In order to reach this aim, answers were sought to the following questions pertaining to psychometric features of the inventory:

1. At what level is the validity of Occupational Field Interest Inventory (OFII)?

    a. At what level is the constructive validity of the Occupational Field Interest Inventory (OFII)?

    b. At what level is the content validity of the Occupational Field Interest Inventory (OFII)?

2.   At what level is the reliability of Occupational Field Interest Inventory (OFII)?

    a. At what level is the Cronbach α reliability of the Occupational Field Interest Inventory (OFII)?

    b. At what level is the test-retest reliability of the Occupational Field Interest Inventory (OFII)?

METHODOLOGY

Participants

The participants of the study are the 9th, 10th, and 11th grade students chosen from among the high schools located in Ankara city. The data gathered from 1373 students, whose answers forms were fully completed and filled out without any missing answers, were included in the analysis. The reason why the high school students were chosen as the participants of the study was the assumption that the group of students with this period of age had reached a level in which they had a better understanding of themselves and that their interests had become more explicit in comparison to earlier periods of their lives (Brown, 2003; Gysbers et al, 2003; Yost & Corbishley, 1988; Kuzgun, 1982; Isaacson, 1966).

While determining the group of participants, the list of all high schools located in Ankara was initially obtained. From the list, 18 schools, which included various types of high schools, were selected without employing any kind of random sampling method. 10 high schools out of 18 were used in developing the trial form of the inventory. Additionally, in one of the schools (Dr. Binnaz Ege-Dr. Rıdvan Ege Anatolian High School) test-retest reliability of the final form was calculated.

Data Collection

The Development of Occupational Field Interest Inventory (OFII)

The occupational interests of the students are aimed to be determined by this study, thus the inventory developed for the purposes of this study includes interest items pertaining to the university and the occupational environment subsequent to this education. The developed inventory is expected to be beneficial and practical for those who are to choose their occupation or their field of university education and who are on the brink of their final decision.

Occupational fields and description of interest fields within the scope of the Occupational Field Interest Inventory (OFII) are given in Table 1.

Table 1. Occupational Fields and Description of Interest Fields within the Scope of the Occupational Field Interest Inventory (OFII)

Fields	Description of Interest Fields
Education	Individuals willing to work in this field are keen on sharing their knowledge with other people as well as imparting it to them. They like to communicate with people and to deliver public speeches.
Agriculture-outdoor	Individuals eager to work in this field enjoy working in nature. They are fond of undertaking work that is related to soil and agricultural products and of working outdoors.
Political-Financial Science	Individuals enthusiastic to work in this field are keen on guiding, governing and leading the community. They like to carry out work associated with money and monetary policy, to address crowds, and to direct the masses.
Medicine	Individuals who are keen on working in this field love people and animals. They are interested in subjects related to human and animal health. They enjoy working in places such as hospitals and clinics for a long period of time.
Communication-Mass Media	Individuals willing to work in this field like to communicate with people. They are fond of interviewing people and sharing the obtained information. They enjoy reaching people and masses either through face to face communication or via mass media such as TV, radio and newspaper. They like to interpret people's ideas and to share their own.
Foreign Language	Individuals enthusiastic to work in this field are interested in different languages and cultures. They are fond of finding out about various languages and cultures, learning more than one language, and making verbal and written translations among languages.
Turkish Language	Individuals who are keen on working in this field enjoy investigating, learning and teaching Turkish language and culture. They are sensitive about the proper usage of Turkish language.
Psychology	Individuals willing to work in this field have a very warm and understanding approach towards people. They find pleasure in taking care of people's psychological problems and in helping them. They also like to listen to people with patience and to show them a way out.
Law	Individuals eager to work in this field like to persuade people into their own ideas and beliefs. They are fond of seeking solutions to people's legal problems. They take pleasure in making contributions to proper realization of law in order the society to be equal and harmonious.

Table 1. continue

Fields	Description of Interest Fields
Computer	Individuals willing to work in this field like to work with computers. They are fond of working with computers rather than communicating with people face to face. They prefer creating computer systems, working with mathematical codes, and writing computer programs.
Mathematics	Individuals who are keen on working in this field like to work alone and to deal with numbers. They enjoy spending extended hours on working to solve the problems which the other people have difficulty in solving.
Science	Individuals enthusiastic to work in this field are keen on working in nature or in laboratories. They prefer completing their work alone to communicating with people. They like to conduct research, to perform experiments, and to work with plants, animals, chemical formulas and mechanical tools.
Engineering	Individuals willing to work in this field prefer working in industry facilities such as factories, mines, construction areas and open fields. They like to work with machines, electronic and mechanical devices rather than people. They enjoy designing and drawing things.
Visual Arts	Individuals willing to work in this field are fond of reflecting their emotions and imagination through work of art such as paintings, sculptures and graphics. They like to work alone. They attach great importance to art and aesthetics.

Occupational Field Interest Inventory (OFII) is aimed to be composed of 14 subdimensions that cover various education programs/departments at the university. While these subdimensions are constructed, a variety of occupational fields that are being taught at the university are taken into consideration. These 14 fields do not include all the departments at the university. This is one of the limitations of the inventory.

While giving responses to the items in the inventory, participants are asked to choose one item that they are interested in the most in each three-item group. Afterwards, they are required to grade the chosen statement between 1 and 5. The remaining two statements in each group are left unmarked.

Current occupational interest assessment tools usually require the participants to give responses for each statement either as "I like it" – "It doesn't matter" - "I don't like it" or as "yes" – "no" (Campell, 1979). In addition, there is another kind of tool in which respondents are asked to mark the most and the least interesting statement out of three-statement groups, just as it is in Kuder Interest Fields Preference Inventory (Harmon, 1999).

By the inventory developed for this study, it is aimed not only to determine the activity that the individuals like, but also to put forward the extent to which they like it

by the use of a five point scale. Thus, if the participants encounter a three-item group in which they find two or three statements they like very much, they will be able to grade them "4" or "5". What is more, when they come across a group of statements they do not like, they will choose the one they feel comparatively closer to and will be able to mark it "1" or "2". Sample statements and answer form pertaining to the Occupational Field Interest Inventory (OFII) are given in Table 2.

Table 2. Occupational Field Interest Inventory (OFII) Sample Statements & Answer Form

1.	Teaching young learners and adult learners	1	2	3	4	5
2.	Planning the production of crops and plants	1	2	3	4	5
3.	Giving financial consultancy to a firm	1	2	3	4	5

For instance, individuals that show interest in teaching as an occupation will choose the first statement and will indicate the level of their interests by marking the scale between 1 and 5. Such a circumstance demonstrates that the individual prefers the occupation of teaching to the other two occupations. By grading the statement between 1 and 5, the individual will indicate his/her level of interest sensitively. Thus, Kuder's preference of the most liked statement in interest assessment is combined with the sensitivity provided by the Likert-scale. The analysis of the scores attained via this inventory is carried out by means of profiling the subdimensions just as it is in other interest inventories.

Development Phases of Occupational Field Interest Inventory (OFII)

1. Literature Review. Initially, while Occupational Field Interest Inventory (OFII) was developed, interest inventories in the world and in Turkey were investigated through a review of literature. As a result of the review, it was found out that nearly all scales had different group of statements; however, it was also seen that all inventories were generally made up of statements that contained occupational activities in terms of their contents.

2. Literature Review for the Trial Form Statements. In order to determine the statements to be given in the inventory, various occupational fields were investigated. During the investigation, answers were also sought to the question "Which occupational field can be best reflected by which statements?". In the framework of the review,

Turkish Occupation Association (İŞKUR) records, previously developed inventories, Student Selection and Placement Center (OSYM) guidebooks, and printed or internet-based documents on occupations and occupational organizations were scrutinized. In addition, occupational interest statements as to some specific fields were prepared by making use of views given by field experts.

3. Writing the Statements. In the light of the reviewed resources, 30 statements were written pertaining to each field. 5 of these statements were deleted due to their similarity, and the rest were reconsidered and revised.

4. Expert Opinion. As for the expert opinion, statements of each field were grouped in different forms after they were written. Next, the statements were delivered to 88 academicians for their reexamination (41 professors, 13 associate professors, 12 assistant professors, 7 lecturers and 15 research assistants), who worked in the corresponding faculties and departments of Ankara University, Gazi University, Hacettepe University and Dokuz Eylül University, and who had at least received a PhD degree in their field of expertise. In addition to these statements, the academicians were given a specifications document which identified the aim of the study, the scope of the study, and the aspects of the statements, as well as what was expected of them. The academicians were requested to express their expert opinions as to omit or to revise the statements that did not reflect their fields appropriately, and even to add new ones that could be necessary.

5. Converting the Statements into the Scale Format. The statements that went through revision based on the expert opinion were converted into the devised scale format. 117 sets, which were made up of three statements each, were formed by taking each statement from various occupational fields according to the intended format. For instance, the first three-statement set included educational, agricultural and political statements whereas the second set contained statements related to medical science, communication-media and foreign language. The trial form of the inventory enclosed 351 statements for totally 14 subdimensions; specifically, there were 25 items per each subdimension except for the subdimension of Psychology which had 26 items. The answer sheet was devised in three-statement sets according to the 351 prepared statements.

6. The Pre-trial Study. In order to determine its intelligibility as well as its approximate completion time, and thus to make necessary revisions prior to the trial study, the inventory was given to 60 participants from Kırkkonaklar Anatolian High School after the official application permit was obtained. Some deficient and ambiguous aspects of the inventory were revised in reference to the student views attained during and after the application.

7. Making Copies of the Inventory. After the official application permit was obtained from the schools and necessary revisions in reference to the pre-trial study were completed, multiple copies of the inventory and the answer sheet were made for distribution; and thus, two different forms were prepared.

8. Application of the Inventory. The application phase of the inventory commenced as appointments were made with the schools from which the permits were obtained. The completion time of the inventory fluctuated generally between 30 and 45 minutes since it varied according to the student characteristics and their reading speed. All inventories and answer sheets were collected in each class at the end of the application. The steps of the application were carried out likewise in all the participating schools.

Analysis of the Data

First, descriptive statistics were calculated using the gathered data. Later, exploratory and confirmatory factor analyses were carried out in order to determine the constructive validity of the inventory. As another indicator of the constructive validity, the correlation coefficients between the subdimensions were evaluated. Finally, in order to determine the reliability of the inventory, Cronbach α coefficient and test-retest reliability coefficient were calculated.

FINDINGS and CONCLUSION

Descriptive statistics, pertaining to the subdimensions of the Occupational Field Interest Inventory (OFII) trial form, obtained from the participant group (N=1373) is given below.The distribution of the participant students according to the schools and their grades is given in Table 3.

Table 3. The Distribution of the Participant Students According to the Schools and Their Grades

Schools	Grades			Total
	9	**10**	**11**	
Ankara Atatürk Anadolu Lisesi	21	-	-	21
Ankara Fen Lisesi	21	75	82	178
Mehmet Emin Resulzade Anadolu Lisesi	28	2	199	229
Mimar Kemal Lisesi	79	78	76	233
Ankara Lisesi	54	76	51	181
Çağrıbey Anadolu Lisesi	53	75	58	186
Kırkkonaklar Anadolu Lisesi	50	45	72	167
Başkent Lisesi	-	33	78	111
Dikmen Anadolu Meslek ve Endüstri Meslek Lisesi	2	27	-	29
Polatlı Anadolu Öğretmen Lisesi	-	14	24	38
Total	306	426	641	1373

Table 4. Participant Group's Descriptive Statistics (N=1373) Pertaining to the Subdimensions of the Occupational Field Interest Inventory (OFII) Trial Form

Subdimensions	9. grade		10. grade		11. grade		Total	
	($\overline{X}$)	(S_x)	($\overline{X}$)	(S_x)	($\overline{X}$)	(S_x)	($\overline{X}$)	(S_x)
Education	20,56	18,89	25,97	20,63	23,53	20,66	23,62	20,35
Agriculture-outdoor	15,50	15,20	14,67	14,83	13,50	14,45	14,31	14,75
Political-Financial Science	22,06	19,48	25,15	21,32	27,47	24,15	25,55	22,40
Medicine	35,08	27,36	26,06	25,47	28,37	27,83	29,15	27,21
Communication-Mass Media	27,20	23,43	32,14	24,36	32,75	24,96	31,32	24,53
Foreign Language	17,68	20,77	18,87	23,02	16,78	19,30	17,63	20,86
Turkish Language	9,91	14,08	17,30	21,79	18,65	24,13	16,28	21,79
Psychology	28,98	26,48	35,08	28,87	34,00	28,72	33,21	28,37
Law	32,45	31,73	31,15	32,28	31,43	35,50	31,57	33,70
Computer	38,72	36,78	36,51	35,17	33,41	34,02	35,55	35,06
Mathematics	30,77	29,83	24,65	26,65	26,33	26,67	26,80	27,49
Science	31,30	24,16	26,41	24,88	27,65	24,62	28,08	24,66
Engineering	35,05	23,29	30,40	23,89	33,09	26,98	32,69	25,30
Visual Arts	28,59	22,50	29,35	21,54	34,95	27,33	31,79	24,78

When the Table 4 is examined, it can be seen that the subdimension of Agriculture-outdoor possesses the lowest mean ($\overline{X}$=14,31) whereas the highest mean is possessed by the Computer subdimension ($\overline{X}$=35,55). That the standard deviation

values are fairly high for all subdimensions indicates that the subdimension scores are comparatively heterogeneous. This can be interpreted as that the participant group shows a heterogeneous structure. Mean and standard deviations have brought about very close values. The primary reason of this may be the fact that the participants were obliged to choose only one option from among the three alternative statements. In other words, since the students marked 117 items leaving out unmarked 234 items, from which they got zero, the means of subdimension scores might have decreased.

Findings Related the Validity of the Occupational Field Interest Inventory (OFII)

Constructive Validity of the Occupational Field Interest Inventory (OFII)

After the data that belonged to 1373 participants who completed the inventory as required was entered into the SPSS program, 351 statements were put to principal components factor analysis (using viramax rotation option). The following results were obtained at the end of the analysis.

The results of the Kaiser Meyer Olkin and Bartlett test, which are used to confirm the appropriateness of the gathered data, specify the sufficiency of the sample. In terms of the Kaiser-Meyer-Olkin value, the result that came out as 0.88 confirms that the data is at a considerably "good" level for the factor analysis. What is more, the result of the Bartlett's Sphericity test ($p < 0,05$) demonstrates a significant relationship among the variables of the inventory. This result, too, proves that the data is appropriate for the factor analysis (Kaiser, 1974; As cited in Şencan, 2005).

When the decline in the eigenvalues is taken into consideration, it is perceived that the decline until the 16th factor is significantly high (the decline between the 15th and 16th factors is 0,79), that eigenvalue decline after the 16th factor follows a noticeably stable course, and that the differences are very subtle (the highest decline is 0,05). These results indicate that the inventory might have a structure made up of 15 factors.

When the component (factor) matrix is scrutinized, it can be noticed that at least 5 items in the first 15 factors obtained a value over 0,30. Among the majority of the subsequent factors, either no or very few factors attained a value higher than 0,30. This finding does also corroborate the eigenvalue results. Based on these findings, in the next phase, the inventory as a 15-factor structure went through component factor analysis.

The results of the second principal components factor analysis are as follows. Table 5 illustrates the eigenvalues and values related to the variances that the factors explain.

Table 5. Eigenvalues That Belong to Occupational Field Interest Inventory (OFII) and Values Related to the Variences That the Factors Explain

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative	Total	% of Variance	Cumulative
1	39,26	12,79	12,79	18,25	5,94	5,94
2	19,58	6,37	19,16	16,65	5,42	11,37
3	15,76	5,13	24,30	13,13	4,27	15,65
4	13,46	4,38	28,68	13,09	4,26	19,91
5	10,71	3,49	32,18	12,59	4,10	24,02
6	9,20	2,99	35,17	12,37	4,03	28,05
7	8,50	2,76	37,94	9,68	3,15	31,20
8	6,66	2,17	40,11	9,38	3,05	34,26
9	6,25	2,03	42,15	9,24	3,01	37,27
10	5,73	1,86	44,02	9,02	2,94	40,21
11	4,86	1,58	45,60	9,02	2,94	43,15
12	4,58	1,49	47,10	8,64	2,81	45,97
13	4,00	1,30	48,40	7,16	2,33	48,31
14	2,74	0,89	49,29	3,03	0,99	49,29

As Table 5 illustrates, as a result of the principal components factor re-analysis with 15 factors, in each of the first 14 factors, at least 15 items had factor load values higher than 0,30. Only in 15th factor is it observed that one item attained a value over 0,30 and that in this factor there were no other items with high values. Thus, it has been concluded that the scale is 14 dimensional. Exploratory factor analysis results as to the above-mentioned findings are presented in Appendix 5.

The names of the 14 factors, which can be found in Table 5, have emerged according to the dimensions in the trial form of the inventory (F1: Computer; F2: Law; F3: Medicine; F4: Psychology; F5: Mathmatics; F6: Turkish Language; F7: Visual Art; F8: Foreign Language; F9: Political-Financial Sciences; F10: Science; F11: Communication; F12: Education; F13: Agriculture; F14: Engineering).

In the second phase of the factor analysis, based on the attained findings, a confirmatory factor analysis pertaining to each dimension was carried out by removing the items which obtained high load values in more than one factor, and which did not possess a high load value in any factors.

Lisrel program was used in the confirmatory factor analysis. As a result of the analysis, in line with the results of the exploratory factor analysis, subdimesions were generated using the items which possessed a higher load value of 0,30 under the same factor and which fitted best with each other. The confirmatory factor analysis was carried out with 216 participants who were randomly selected from among total sum of 1373 individuals that participated in the study. The statistical results and goodness of fit indexes related to the subdimensions are presented in Table 6.

Table 6. The Confirmatory Factor Analysis Results Pertaining to the Subdimensions of the Occupational Field Interest Inventory (OFII)

Subdimensions	x^2	sd	RMSEA	GFI	CFI	AGFI	NNFI
Education	63,69	44	0,046	0,95	0,97	0,92	0,96
Agriculture-outdoor	78,90	44	0,061	0,94	0,92	0,91	0,90
Political-Financial Science	92,11	54	0,057	0,93	0,96	0,90	0,95
Medicine	76,30	44	0,058	0,94	0,97	0,91	0,97
Communication-Mass Media	52,71	44	0,030	0,96	0,99	0,94	0,98
Foreign Language	84,51	54	0,051	0,94	0,96	0,91	0,95
Turkish Language	80,16	43	0,063	0,94	0,93	0,90	0,91
Psychology	80,24	44	0,062	0,94	0,97	0,90	0,97
Law	75,77	44	0,058	0,94	0,98	0,91	0,97
Computer	56,22	44	0,036	0,95	0,99	0,93	0,99
Mathematics	68,81	44	0,051	0,95	0,97	0,92	0,97
Science	115,21	44	0,087	0,91	0,92	0,87	0,90
Engineering	75,86	44	0,058	0,94	0,96	0,91	0,95
Visual Arts	88,11	44	0,068	0,93	0,95	0,90	0,94

As the second and the third columns of the Table 6 demonstrate, the ratio of chi-square value to the degree of freedom is less than twice in 12 subdimensions (Education, Agriculture-Outdoors, Political–Financial Sciences, Medicine, Communication-Media, Foreign Language, Turkish Language, Psychology, Law, Computer, Mathematics and Engineering). This can be interpreted as the sign of a satisfactory goodness of fit (Şimşek, 2007). This ratio is more than as much as two times in only the subdimensions of Science and Visual Art; yet, it does not exceed three times. These values, too, indicate a reasonably satisfactory goodness of fit. As to the RMSEA values, they are below 0,05 in three subdimensions fit (Education, Communication-Media and Computer); are between 0,05 and 0,08 in ten subdimensions (Agriculture-Outdoors, Political–Financial Sciences, Medicine, Foreign Language, Turkish Language, Psychology, Law, Mathematics and Engineering); and is 0,087 only in subdimension of Science. When the GFI, CFI, AGFI and NNFI values are taken into

consideration, it is perceived that all values are above 0,90 in the entire subdimensions with exception that the AGFI value is 0,87 in Science subdimension. These results can also be inferred as that the items generated for the subdimensions have goodness of fit with the total scores.

In the confirmatory factor analysis, it was aimed to construct the most suitable assessment model for each dimension. While these models were created, each dimension was handled one by one and separately. subdimesions related to 14 dimensions were constructed using the items with the highest goodness of fit, starting from the items with the highest load values.

At the end of the confirmatory factor analysis, 12 items were placed in the dimensions of "Foreign Language" and "Political-Financial Sciences", and 11 items in each of the remaining dimensions. These items were chosen from among each factors' items that showed the highest goodness of fit. The final form of the Occupational Field Interest Inventory (OFII) has ended up with a total of 156 items.

Another significant finding as to the construct validity of the inventory is the correlation values between the subdimesions. That the correlation values between the subdimesions are not high may be considered as an indicator of the divergence of the subdimensions. The correlation values between the subdimensions of the Occupational Field Interest Inventory (OFII) are given in Table 7.

Table 7. The Correlation Values between the Subdimensions of the Occupational Field Interest Inventory (OFII)

Subdimensions	1	2	3	4	5	6	7	8	9	10	11	12	13
1.Education													
2.Agriculture- Outdoor	-0,15												
3.Political- Financial Science	-0,19	-0,07											
4.Medicine	-0,06	0,15	-0,19										
5.Communication- Mass Media	-0,06	-0,12	0,06	-0,30									
6.Foreign Language	0,05	-0,19	0,05	-0,22	0,19								
7.Turkish Language	0,20	-0,07	0,12	-0,31	0,20	0,18							
8.Psychology	0,17	-0,17	0,06	-0,04	0,19	0,05	0,09						
9.Law	0,09	-0,17	0,36	-0,24	0,08	0,11	0,25	0,27					
10.Computer	-0,14	-0,01	-0,15	-0,10	-0,08	-0,16	-0,18	-0,36	-0,27				
11.Mathematics	0,05	0,05	-0,17	0,23	-0,30	-0,11	-0,22	-0,28	-0,29	0,21			
12.Science	-0,13	0,20	-0,22	0,50	-0,36	-0,18	-0,34	-0,31	-0,43	0,21	0,47		
13.Engineering	-0,12	0,23	-0,21	0,22	-0,28	-0,23	-0,30	-0,37	-0,37	0,49	0,36	0,48	
14.Visual Arts	-0,04	-0,04	-0,05	-0,11	0,43	0,11	0,07	0,19	-0,02	-0,24	-0,28	-0,24	-0,33

As Table 7 suggests, the highest negative correlation value is between the subdimensions of "Law" and "Science" (r= 0,43) whereas the highest positive correlation value is between the subdimensions of "Medicine" and "Science" (r= 0,50). The median of the correlation values between all dimensions is r= 0,07. That the majority of the correlation values are negative indicates that the subdimensions of the inventory are dissimilar. This finding supports the result that the subdimensions has come out as separate constructs as it has been concluded at the end of the exploratory and confirmatory factor analyses. The attained correlation values can point out that the construct validity of the inventory is at a sufficient level.

The Content Validity of the Occupational Field Interest Inventory (OFII)

In order to determine the level of the content validity of the inventory, field experts were consulted for their professional opinions. The inventory was given to 88 academicians for their examination (41 professors, 13 associate professors, 12 assistant professors, 7 lecturers and 15 research assistants), who worked in the corresponding faculties and departments of Ankara University, Gazi University, Hacettepe University and Dokuz Eylül University, and who had at least received a Ph.D. degree in their field of expertise. Expert opinions were sought from at least 5 academicians from each field.

Findings Related the Reliability of the Occupational Field Interest Inventory (OFII)

Cronbach α Reliability of the Occupational Field Interest Inventory (OFII)

The Cronbach α reliability of an inventory shows the degree of consistency between the scores of the inventory items and the test scores (Baykul, 2000). Since the inventory is multi-dimensional, a Cronbach α reliability coefficient was computed for each subdimension. Cronbach α reliability coefficients were computed using the items that were chosen from the final form of the inventory. The calculations were carried out separately with two different groups (Group1 n=700; Group2 n=673) who were randomly selected from among all the participating students. Thus, reliability values of different groups pertaining to the subdimensions of the inventory were attained. Cronbach α reliability coefficients pertaining to the subdimensions of the Occupational Field Interest Inventory (OFII) are presented in Table 8.

Table 8. Cronbach α Reliability Coefficients Pertaining to the Subdimensions of the Occupational Field Interest Inventory (OFII).

Subdimensions	Cronbach α (n=700)	Cronbach α (n=673)
Education	0,86	0,86
Agriculture-Outdoor	0,79	0,83
Political-Financial Science	0,86	0,86
Medicine	0,92	0,92
Communication-Mass Media	0,85	0,86
Foreign Language	0,89	0,88
Turkish Language	0,84	0,86
Psychology	0,92	0,92
Law	0,95	0,95
Computer	0,94	0,94
Mathematics	0,90	0,90
Science	0,89	0,89
Engineering	0,86	0,85
Visual Arts	0,90	0,87

As Table 8 points out, Cronbach α reliability coefficients that were attained for the subdimensions of the inventory varied between 0,79 and 0,95 for the first group (median= 0,89), and between 0,83 and 0,95 for the second group (median= 0,88). The lowest Cronbach α reliability coefficient in both groups belonged to the subdimension of "Agriculture-Outdoors" (Group1=0,79; Group2= 0,83). Similarly, the highest Cronbach α reliability coefficient in both groups belonged to the subdimension of "Law" (Group1=0,95; Group2=0,95).

It can be noticed that the Cronbach α reliability coefficients for the subdimensions are considerably high. These findings indicate the consistency between the items of each subdimension. The Cronbach α values of some multi-dimensional scales that were developed in this field are listed below:

a. Kore Career Indecisiveness Inventory: between 0,57 and 0,87(Tak & Lee, 2003);

b. Career Factors Inventory: between 0,77 and 0,86(Simon & Tovar, 2004);

c. Maslach Burnout Inventory-General Survey (MBI-GS): between 0,66 and 0,87 (Langballe et al, 2006);

d. Kuder Career Exploration Inventory: between 0,65 and 0,85 (Helledy, Zytowski & Fouad, 2004);

e. Broad Skills Trust Inventory: between 0,81 and 0,93 (Robinson & Betz, 2004);

f. Study Choice Task Inventory (SCTI): between 0,71 ile 0,90 (Germeijs & Verschueren, 2006);

g. Parent Attachment Inventory: between 0,64 and 0,77 (Fouladi, Moller & McCarthy, 2006);

h. Computerized and Face to Face Solidarity Attitude Inventory: between 0,77 and 0,90 (Rochlen, Beretvas & Zack, 2004);

i. Career Interest Profile Scale: between 0,92 and 0,96 (Bakker & Macnab, 2004).

It can be perceived that the internal consistency coefficients of the Occupational Field Interest Inventory (OFII) and those of other scales that were developed in this field show similarity.

Based on these findings, it can be concluded that the reliability of the subdimensions of the inventory are at satisfactory levels. When the internal consistency coefficients of the Occupational Field Interest Inventory (OFII) (between 0,79 and 0,95) and those of other scales (between 0,57 and 0,96) that were developed in this field are compared, it can also be deduced that the results attained from the Occupational Field Interest Inventory (OFII) bear a resemblance to those obtained from the other similar studies conducted in the field.

Test-Retest Reliability of the Occupational Field Interest Inventory (OFII)

In order to determine the level of test-retest reliability of the inventory, the scale was reapplied eight weeks later to a group of participants (Group 1= 109 participants) who were selected among the group that participated in the trial application. The correlation coefficients between the subdimension scores that the group attained in the first and the second application were interpreted as the test-retest reliability value of the inventory.

In addition, after the final form of the inventory was developed, it was applied to a group of subjects (Group 2= 72 participants) twice, the latter application being three weeks after the former one. The subdimension correlation coefficients acquired from the former and latter application of the final form of the inventory were interpreted as its test-retest reliability value. Test-retest reliability values of the Occupational Field Interest Inventory (OFII) are given in Table 9.

Table 9. Test-Retest Reliability Values of the Occupational Field Interest Inventory (OFII)

Subdimensions	Group 1 (n=109)	Group (n=72)
Education	0,80	0,82
Agriculture-Outdoor	0,85	0,75
Political-Financial Science	0,84	0,92
Medicine	0,89	0,94
Communication-Mass Media	0,88	0,86
Foreign Language	0,87	0,90
Turkish Language	0,88	0,86
Psychology	0,77	0,88
Law	0,84	0,95
Computer	0,82	0,94
Mathematics	0,84	0,90
Science	0,82	0,87
Engineering	0,87	0,87
Visual Arts	0,82	0,90

The subdimension correlation coefficients that were attained from the group of subjects (Group 1), who were selected among the group that participated in the trial application and who completed the inventory one more time eight weeks after the trial application, varied between 0,77 and 0,89 (median= 0,84). As Table 9 demonstrates, the lowest test-retest reliability value in Group 1 belongs to the subdimension of "Psychology" (r=0,77) whereas the highest test-retest reliability value in the same group belongs to the subdimension of "Medicine" (r=0,89).

The subdimension correlation coefficients obtained from the second group of subjects (Group 2), who were specifically chosen for the purposes of test-retest reliability determination application and who were given the inventory twice in a period of three weeks, varied between 0,75 and 0,95 (median= 0,89). As Table 9 suggests, the lowest test-retest reliability value in Group 2 belongs to the subdimension of "Agriculture-Outdoors" (r=0,75) whereas the highest test-retest reliability value in the same group belongs to the subdimension of "Law" (r=0,95). These values illustrate that the inventory gives similar results when it is reapplied. Based on the mentioned findings, it can be maintained that the test-retest reliability values of the inventory are satisfactory.

The test-retest reliability values of some scales that were developed in this field are given below:

a. Kore Career Hindrance Inventory: between 0,59 and 0,94(Tak & Lee, 2003);

b. Kuder Career Exploration Inventory: between 0,79 and 0,92 (Helledy, Zytowski & Fouad, 2004);

c. Computerized and Face to Face Solidarity Attitude Inventory: between 0,77 and 0,88 (Rochlen, Beretvas & Zack, 2004).

When the test-retest reliability values of the Occupational Field Interest Inventory (OFII) and those of these scales are compared, it can be suggested that the inventory produced satisfactory test-retest reliability values.

Bearing in mind the test-retest reliability values of the above-mentioned developed and published scales (between 0,59 and 0,94) and those of the Occupational Field Interest Inventory (OFII) (between 0,75and 0,95), it can be concluded that the inventory has a satisfactory level of reliability.

DISCUSSION and SUGGESSION

In this part, deducible conclusions and discussion based on the attained findings are stated.

- As a result of the exploratory and confirmatory factor analyses, it can be concluded that the presence of the 14 subdimensions of the inventory has been put forward and these subdimensions possess the anticipated goodness of fit. These results may be interpreted as the conclusion that construct validity level of the inventory is satisfactory.

- The low correlation values between the subdimensions that were obtained by the factor analysis support the construct validity of the inventory. This information, too, suggests that inventory possess a sufficient level of construct validity.

- That the Cronbach α reliability coefficients pertaining to each subdimension of the inventory are high has shown that items in each subdimension have adequate correlation with the totality of that particular subdimension; thus, this has confirmed that inventory is reliable in terms of its internal consistency.

- That 88 academicians from various universities with at least a PhD degree in their field of expertise stated as their expert opinions that statements in the inventory reflected the corresponding occupational fields indicates that the Occupational Field Interest Inventory (OFII) sufficiently reflects the occupational field to be assessed.

- Participants' grading the occupation names via a scale according to their interests and the consequent high correlation values between the subdimension scores and the graded preferences marked by the participants may suggest that the subdimensions of the inventory possess a satisfactory level of validity.

- The high test-retest reliability values attained from the inventory imply that similar results can be obtained when the inventory is reapplied. Based on this finding, it can be concluded that the test-retest reliability of the inventory is at a sufficient level.

According to the conclusions, Occupational Field Interest Inventory (OFII) can be used in determining the people's occupational interests. In future studies, various subdimensions can be added to the instrument by other researchers.

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