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RESEARCH

VALIDATION OF THE TURKISH VERSION OF THE RETIREMENT SATISFACTION INVENTORY

ABSTRACT

Introduction: Retirement is an important milestone that indicates one's transition into the later period of life which causes one's social status to change affecting all domains of life. This study aims to provide psychometric data for Turkish adaptation of scale of Retirement Satisfaction Inventory.

Materials and Method: Retirement Satisfaction Inventory measures motivation for retirement, satis-faction with life in retirement and leisure activities. The Retirement Satisfaction Inventory scale was applied to 444 Turkish pensioners with mean age of 54.12±5.67 years. Confirmatory factorial analysis and exploratory factor analysis were performed using AMOS 22 module the SPSS package respec-tively.

Results: The adaptation of the RSI to Turkish indicated a three scale structure: the reasons for retire-ment, satisfaction with life in retirement, and leisure activities. These scales showed a structure with four, two and three main factors, respectively, which is slightly different from those reported in the original instrument. The confirmatory factorial analysis demonstrated the adequate fit of the model for the three scales.

Conclusion: Overall, the Retirement Satisfaction Inventory Turkish RSI-T appears to be a leading valid and reliable instrument for determining the level of retirement satisfaction, reasons for retirement, and sources of retirement satisfaction in Turkish culture. However, it could be suggested that RSI should be assessed in other non-Western cultures as well.

Key Words: Satisfaction With Life in Retirement; Reasons for Retirement; Leisure Activities; Sources of Enjoyment; Validity.

ARAŞTIRMA

EMEKLİLİK DOYUM ENVANTERİNİN TÜRKÇE FORMUNUN GEÇERLİK VE GÜVENİRLİK ÇALIŞMASI

ÖZ

Giriş: Emeklilik bireyin bütün yaşamını etkileyen, statüsün değişmesine yol açan ve bireyin yaşamının son dönemine girdiğini gösteren önemli bir dönüm noktasıdır. Bu çalışma Emeklilik Doyum Envanterini Türkçeye uyarlamayı ve psikometrik özelliklerini incelemeyi amaçlamaktadır.

Gereç ve Yöntem: Emeklilik Doyum Envanterini emeklilik öncesi geçiş dönemini, emekli olma nedenini, emeklilik doyumunu, emekliliğe uyum ve değişimi, emeklilik dönemindeki boş zaman faaliyetlerini, emeklilik doyum kaynaklarını ve genel yaşam doyum düzeyini ölçmektedir. Emeklilik Doyum Envanteri yaş ortalaması 54,12±5,67 olan 444 Türk emekliye uygulanmıştır. Betimleyici analizler SPSS 22 paket program kullanılarak ve doğrulayıcı ve açımlayıcı faktör analizi AMOS 20 paket programı kullanılarak yapılmıştır.

Bulgular: Emeklilik doyum envanterinin Türkçeye uyarlaması sonucu üç alt ölçek ortaya çıkmıştır: emekli olma neden, emeklikte yaşam doyumu ve boş zaman faaliyetleri. Bu alt ölçek sırasıyla dörtlü, ikili ve üçlü alt boyutlara ayrılmıştır. Bu açıdan orijinal ölçme aracından farklılık göstermektedir. Yapılan doğrulayıcı faktör analizi üç alt ölçekten oluşan emeklilik doyum envanterinin yeterli uyum indeksine sahip olduğunu göstermiştir.

Sonuç: Emeklilik Doyum Envanterinin Türkçe formu bireylerin emeklilik doyumu düzeyini, emekli olma nedenini ve emekli dönemindeki sosyal kaynakları ortaya koymak içi geçerli ve güvenilir bir ölçme aracıdır. Bununla birlikte, farklı gruplara da ve diğer kültürlerde de uyarlama çalışması yapılması önem arz etmektedir.

Anahtar Sözcükler: Emeklik Doyumu; Emekli Olma Nedeni; Sosyal Kaynaklar; Geçerlik; Güvenirlik.

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INTRODUCTION

The RSI was developed by Floyd et al. (1) in order to assess both current retirement satisfaction and perceptions of retirement related experiences predicting adjustment and well being in later life. Original Inventory had three scales: Reasons for retirement, Satisfaction with life in retirement, Sources of enjoyment and group of items measuring transition of pre and post retirement, other reasons for retirement, social activity and overall. Floyd et al. (1) stated that the inventory had acceptable test-retest reliability. Satisfaction correlated with concurrent measures including pre and postretirement experiences, and discriminated voluntary and involuntary retirements. However, few studies have also been published in European countries such as France (2), Spain (3), and Italy (4). These studies' results demonstrate that the RSI is a valid and reliable instrument for assessing retirement satisfaction in America and Europe.

However, the previous studies lacked cross-validation in different samples. As results of exploratory and confirmatory factor analysis might differ, cross-validation of an instrument in different samples is important. Although the RSI has been used in western individualist cultures like America, France, Italy and Spain, the psychometric properties of RSI in a collectivist culture sample have not been studied yet. Additionally, to date there is no evidence exists concerning development and adaptation of any other retirement satisfaction scales within the Turkish sample, a collectivist culture. Finally, developing culturally appropriate instruments meeting the needs of a population is a prerequisite of understanding retirement period for further researches and intervention. Therefore, the present study will contribute to retirement-related research and applications in Turkey and other countries with similar cultural patterns. The purposes of the current study were: (a) to explore the factor structure of the RSI in sample Turkish retirees, (b) to cross-validate the structure of the model and assess the psychometric properties of the RSI with an independent sample of Turkish retirees.

MATERIALS AND METHOD

Subjects

Two independent samples of retirees from different cities in Turkey with a mean age of 54 were used. Sample 1 served as the calibration sample for the first objective study to explore the appropriate RSI structure. This sample consisted of 234 retired subjects (55% women, and 45% men). Their ages ranged from 40 to 75, with a mean age of 54.67 (sd=5.67). Sample 2 served as the validation sample and consisted of 210 retirees (51.4 % women and 48.6% men). Their ages ranged from 41 to 79, with a mean age of 53.55 (sd=5.62).

Ethics Statement

Consent was taken from retirees who participated in the study and it conformed to the provisions of the Declaration of Helsinki. All participants were informed about the purpose of the study and ensured that their answers were used anonymously for research purposes only. The researcher has taken into consideration the laws and regulations of the Turkey. The researcher provided monitoring information to the school management.

Procedure

The inventory was translated by two researchers who were native Turkish speakers and fluent English language speakers and had completed PhDs. Then, a professional translator from the department of English Language Teaching, Hacettepe University back-translated the translated versions independently. A linguist with an English Language PhD compared the back-translated version with the original version for meaning accuracy. Finally, the meanings of several words were clarified and reworded.

Participants in samples were contacted via students who were retirees' children, relatives, and acquaintances in classes during the pedagogic formation program in the school of education in Isparta City, Turkey. The author of the research informed and trained the students about the study and the RSI inventory. Inventories that included consent instructions and information about the study and privacy policy were delivered to the students. The participants completed the forms at home, and the students returned them to the researcher. All participants were informed that the responses would be kept anonymous and only the research data would be reported. Finally, another subgroup of 38 participants participated in a retest and filled out the survey forms.

Measures

Retirement Satisfaction Inventory –RSI (1). Original Inventory had three scales: Reasons for retirement (15 items:4-18), Satisfaction with life in retirement (11 items:20-30), Sources of enjoyment (15 items:36-50) and group of items measuring transition of pre (3 items: 1, 2, 3) and post retirement (2 items:31, 32), other reasons for retirement (1 item for coun-

seling purpose: 19), social activity (3 items: 33, 34, 35) and overall satisfaction (1 item:51). The first three items measuring pre-retirement work functioning and anticipated retirement satisfaction investigate the *meaning of the person's earlier working condition and their expectations regarding retirement satisfaction*, using a seven-point scale (1=*"not at all"*, 7=*"very much"*). A total of 15 items (scale of reasons for retirement), between 4 and 18, *searched for reasons for retirement*, using a seven-point scale (1="*very unimportant*", 7="*very important*"). Also, *an open-ended response*, item 19, was included for counseling purposes, and this item was not considered in the analysis. A total of 11 items (scale of satisfaction with life retirement), between 20 and 30, evaluated *current satisfaction level with life in retirement* with various aspects, using a seven-point scale (1=*"very dissatisfied"*, 7=*"very satisfied"*). Items 31 and 32 investigated *retirement adjustment and change*. Item 31 investigated the ease or difficulty in the period following retirement, using a seven-point scale (1=*"very difficult"*, 7=*"very easy"*). Item 32 investigated the retiree's quality of life in pre-retirement, using a seven-point scale (1=*"much worse"*, 7=*"much better"*). Items 33, 34 and 35 investigated *current activities* with a five-point scale (from 1 *"never"* to 5 *"always"*). The following items (scale of sources of enjoyment) between 36 and 50 investigated *sources of enjoyment*, using a five-point scale (1=*"very unimportant"*, 5=*"very important"*). Item 51 investigated *global satisfaction with retirement* and evaluated general satisfaction, using a seven-point scale (1=*"very dissatisfied"*, 7=*"very satisfied"*).

Life satisfaction scale. The Life Satisfaction Scale was developed by Diener, Emmons, Larsen, and Griffin (5) and adapted into the Turkish by Durak, Durak and Gencoz (6). It is a Likert-type scale composed of five items, each with seven options. The minimum and maximum scores range from 7 to 35. The scale's test-retest reliability is 0.85. In the present study, the scale's internal reliability score was 0.81.

Data Analysis

All preliminary analyses, Pearson's correlations, and EFA (exploratory factor analysis) were performed using SPSS version 15 for Windows (SPSS Inc., Chicago, IL, USA). CFA (confirmatory factor analysis with maximum likelihood [ML]) estimation and fit statistics were conducted using AMOS 22.0 (SPSS Inc., Chicago, IL, USA).

Results

Prior to the analysis, assumptions were checked. For the normality assumption, the skewness and kurtosis values were calculated, and the values were in an acceptable range for a normal distribution. The numeric variables were converted to their standard z-score values to detect univariate outliers and those smaller than -3 and larger than +3 were excluded. Finally, the assumptions of linearity and homoscedasticity were met.

As conducted in Floyd et al. (1), three sets of factor analysis were conducted on three parts of the inventory measuring reasons for retirement (15 items), satisfaction with life in retirement (11 items), and sources of enjoyment (15 items).

Reasons for Retirement (RFR)

CFA indicated original model indices did not suggest an acceptable fit to the data. Therefore, EFA was conducted to explore factor structure of original 15-item RFR. The data's adequacy for factor analysis was supported by a Kaiser's measure of a sampling adequacy value of 77. Principal-component analyses were followed by Varimax rotation of factors with eigenvalues greater than one and loading more than one item (Table 1).

Three items with poor loadings (items 4, 14, and 18 <.30) were deleted. The most appropriate solution suggested a 12-item four factor model. The items assessing the reason for retirement produced four factors labeled: pressure from employer (PE, 4 items), pursue own interests (OI, 3 items), job stress (JS, 3 items), and retirement due to circumstances (RC, 2 items). The total variance explained by the four factors was 59.1%. Factor 1 (PE) consisted of items 8, 9, 10 and 11, explaining 30.0% of the variance. Factor 2 (OI) included items 7, 12, and 13, explaining 12% of the variance. Factor 3 (JS) contained items 15, 16, and 17, explaining 9% of the variance. Factor 4 (RC) consisted of items 5 and 6, explaining 8.2% of the variance. Based on the EFA results, the four-factor model with 12 items was consequently tested using CFA with the maximum likelihood method for generalizability and validation of the model. The CFA results demonstrated the model adequately described the data (χ^2/ df=1.95, CFI=.91, RMSEA=.06). Parameter estimates ranged from .32 to .87. Intercorrelations among the four subscales of the reasons for retirement ranged from .06 to .37.

Satisfaction with Life in Retirement (SLR)

CFA was conducted using the three-factor model proposed by Floyd et al. (1). The model indices were as follows: ^{2}/ df=1.50,

Table 1— EFA: Scale of Reasons for Retirement.

Items	PE	OI	JS	RC	M	SD
10.Pressured by employer	**.78**	.09	.14	.10	1.61	1.97
8.Laid off, fired, hours reduced	**.76**	.03	.09	.21	1.55	1.67
9.Difficulties with people at work	**.72**	.23	.19	.04	1.65	1.22
11. Offered incentives	**.67**	-.02	.29	.15	1.80	1.39
13. Wanted time for own interests	.03	**.86**	.11	.10	3.38	1.84
12. Wanted time with family	-.02	**.81**	.18	.05	3.73	1.88
7. Could finally afford retirement	.39	**.48**	-.10	.16	2.33	1.52
16.Too much stress at work	.26	.08	**.80**	-.07	2.55	1.69
15. Disliked job	.11	.14	**.73**	.05	2.08	1.54
17. Difficulty with physical demands	.15	.05	**.68**	.25	2.46	1.68
5. Poor health	.12	.04	.24	**.74**	2.38	1.71
6. Spouse's poor health	.32	.13	.17	**.70**	2.12	1.61
Eigenvalue	4.49	1.78	1.36	1.23		
% variance	30	12	9	8		
Alpha	.75	.78	.70	.63		

CFI=.70, RMSEA=.10, suggesting an unacceptable fit. Thus, EFA was conducted to explore the factor structure of the 11 item RSI. Principal-component analysis was conducted followed by Varimax rotation of the factors with eigenvalues greater than one and loading by more than one item. The data's adequacy for factor analysis was supported by a Kaiser's measure of a sampling adequacy value of 0.78. These items produced two factors labeled satisfaction with health, activity, marriage, and home (HAM, 8 items) and satisfaction with services and resources (SR, 3 items). Thus, the most appropriate solution suggested an 11-item two-factor model explaining satisfaction in retirement. The total variance explained by two factors was 48%. Factor 1 (HAM) included items 20, 21, 22, 23, 24, 25, 26, and 27, explaining 32% of the variance. Factor 2 (SR) contained items 28, 29, and 30, explaining 16% of the variance (Table 2).

Following the EFA results, a two-factor model with 11 items was tested using CFA with a maximum likelihood for

Table 2— EFA: Scale of Satisfaction with Life in Retirement.

Items	HAM	SR	M	SD
20.Marriage	**.67**	-.09	4.85	1.15
22.Physical Health	**.62**	.11	4.30	1.25
24.Quality of residence	**.59**	.10	4.32	1.23
21.Financial situation	**.56**	.24	4.14	1.27
25.Relations with extended family	**.55**	-.01	4.72	1.07
23.Spouse's health	**.52**	.10	4.00	1.39
27.Access to transportation	**.49**	.12	4.58	1.28
26.Level of physical activity	**.41**	.22	3.85	1.25
29.Goverment services	-.02	**.93**	3.73	1.37
28.Community agency services	.08	**.69**	3.44	1.33
30.Personal safety	.34	**.41**	4.22	1.31
Eigenvalue	3.50	1.77		
% variance	32	16		
Alpha	.78	.71		

Table 3— EFA: Scale of the Social Activity.

Items	SA	RS	FC	M	SD
44.Retirement groups	**.73**	.15	-.01	2.54	1.16
46.Volunterism	**.61**	.26	.17	2.68	1.18
48.More time to think	**.61**	.34	.31	3.00	1.14
42.More travel	**.52**	.25	.32	2.81	1.25
39.More time with friends	**.50**	.11	.33	3.09	.86
43.Less stress	.14	**.68**	.19	3.19	1.15
47.Less anxiety	.37	**.62**	.10	2.90	1.15
40.Control over own life	.10	.42	**.68**	3.30	1.02
38.More time with family	.13	.07	**.58**	3.53	.84
36.Freedom to pursue own interests	.23	.26	**.47**	3.35	.90
Eigenvalue	4.85	1.40	1.04		
% variance	42	12	9		
Alpha	.83	.70	.68		

the generalizability and validation of the model. The CFA results indicated the model sufficiently explained the data (χ^2/ df=2.27, GFI=.93, AGFI=.89, CFI=.90, RMSEA=.07). Parameter estimates varied between .42 and .87. Inter-correlation among two subscales of the satisfaction in retirement was .37.

Sources of Enjoyment (SE)

A CFA was conducted using AMOS for the stability of the original structure of the three-factor Sources of Enjoyment (1). The model indices were χ^2/ df=3.08, GFI=.84, AGFI=.78, CFI=.72, RMSEA=.12 suggesting the fit of the model to the data was unacceptable. Then, an EFA and CFA were conducted to further discover the factor structure of the 15-item RSI-SE (Table 3).

The data's adequacy for factor analysis was supported by a Kaiser's measure of sampling adequacy value of .88. A principal-component factor analysis with Verimax rotation was conducted. The items with poor loadings (37, 41, 48, 49, and 50 <.30) were deleted. EFA was repeated with the remaining items with a three-factor solution, as suggested by Floyd et al (1). The most appropriate solution suggested a 10-item three-factor model. The total variance explained by three factors was 60%. Finally, factor 1 (SA) contained items 39, 42, 44, 46, and 48, explaining 40% of the variance. Factor 2 (RS) included items 43 and 47, explaining 12% of the variance. Factor 3 consisted of items 36, 38, and 40 explaining 9% of the variance.

Depending on the EFA results, the three-factor model with 10 items was finally applied using CFA with a maximum likelihood for the generalizability and validation of the model. The results indicated a good fit of the three structures of the 10-item RSI-SE to the data with values of χ^2/ df=2.54, GFI=.93, AGFI=.89, CFI=.87, RMSEA=.07. The 10 items produced three factors labeled social activity (SA, 5 items), reduced stress/responsibilities (RS, 2 items), and freedom and control (FC, 3 items) accounting for 61% of the total variance in sources-of-enjoyment. Parameter estimates varied between .49 and .68. Inter-correlations among three subscales of the satisfaction in retirement were .34, .48, and .61.

Internal Consistency and Test-retest Reliability

Alpha values were adequate to strong: RSI-T total scale=0.83, RFR total=0. 82 (PE=0.75, OI=0.78, JS=0.70, RC=0.63), SLR total=0.78 (HAM=0.78, SR=0.71), and SE=0.83 (SA=0.83 , RS=0.70, FC=0.68). Test-retest correlations were computed for the overall mean satisfaction scores, three sets of factor scores, and the other individual items measuring pre-retirement work functioning, adaptation, and change associated with retirement as well as participation in activities. Correlations for the two tests ranged from r=.49 to r=.79 (mean r=.70) for multiple-item scales and from r=.58 to r=.73 (mean r=.71) for the single-item ratings.

Concurrent Validity

Concurrent validity was evaluated by four scores from the RSI-T assessing existing satisfaction in retirement: overall mean score for the satisfaction items, the scores of two subscales obtained from the items, and the global rating of retirement satisfaction. As expected, the overall mean satisfaction

Table 4— Correlations among Retirement Satisfaction Scores (RSI-T)[a] and Life Satisfaction Scale.

	1	2	3	4	5
1. Mean of satisfaction items	-				
2. Satisfaction with health, marriage, home	.92*	-			
3. Satisfaction with life in retirement	.67*	.32*	-		
4. Global retirement satisfaction rating	.25*	.20*	.21*	-	
5. Life Satisfaction Scale	.49*	.45*	.32*	.28*	-

*P< 0.01

[a]Turkish version of Retirement Satisfaction Inventory.

score, the scores of two subscales, and the global rating of retirement satisfaction were positively associated with life satisfaction (Table 4).

Discussion

The present study's results supported the RSI original with three scales and nine individual items, but CFA with original RSI yielded an unacceptable fit to the data, although some indices were high. Therefore, a series of EFA and the calibration sample and CFA on a cross-validation sample were conducted. The adaptation of the Turkish version of RSI was structured in three scales and nine individual items consistent with RSI original (1) RSI-French (2), RSI-Italian (4), and RSI-Spanish (3): reasons for retirement, current satisfaction with retirement, sources of enjoyment and individual items measuring pre-retirement functioning, adjustment and change, current activities, and global satisfaction, with some differences regarding the factors' surface structure, which might be related to cultural differences.

Considering the scale of reasons for retirement, the number of items and subscales are consistent with Floyd et al. (1) and Zaniboni et al. (4) but differ from Fouquereau et al. (2) and Fernandez et al. (3) in terms of the number of items. However, the present study is different in the number of subscale items. For example, item 18 (spouse wanted) was included in the factor of job stress, and item 7 (afforded financially) was included in the subscale of own interests, which might be due to close Turkish family relationships.

Further discrepancy exists between two sets of results in terms of satisfaction with life in retirement. The main difference is concerned with the number of the factors. RSI-T has two main factors composed of satisfaction with health, marriage, home, and satisfaction with services, while RSI original has three factors (satisfaction with health, satisfaction with marriage and home, and satisfaction with services). Two factors (satisfaction with health and satisfaction with marriage and home) were combined to form one factor, in line with Fernandez et al. (3). Items 27 (access to transportation) and 21 (financial situation) were included in factor 1 concerning satisfaction with health, marriage, and home instead of in factor 2 (satisfaction with services).

Finally, in sources of enjoyment, the factor structure observed in the Turkish sample was similar to American RSI with some differences. Items 37 (not having to work), 41 (no boss), 49 (more relaxed), and 50 (can be alone more) with poor loadings were deleted. Items 48 (more time to think) and 42 (more travel) were included in factor social activity, and item 38 (more time with family) was included in factor freedom and control. The main difference might be due to collectivist form of Turkish culture and family structure, in which individual and family experience emotional interdependence (7,8).

The current study also has some limitations. Cross-sectional designs provide information about the population's current condition; however, this cross-sectional does not allow cause-effect relationships to be established. Another limitation was that the participants included were drawn from a convenient sample of retirees. In this study, only the Global Life Satisfaction Scale was used for concurrent validity, but future studies should use other scales, such as the life satisfaction scale for elders, scale of social support, and scale of self-esteem. Alternatively, a comparative cross-cultural study might be conducted. Overall, the RSI-T appears to be a leading valid and reliable instrument for determining the level of retirement satisfaction, reasons for retirement, and sources of retirement satisfaction in Turkish culture. However, it could be suggested that RSI should be assessed in other non-Western cultures as well.

Conflict of Interest

The author has no financial disclosures to declare and no conflicts of interest to report.

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