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Leisure Boredom Scale: the Factor Structure and the Demographic Differences

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Abstract

The purpose of this study was to investigate the reliability and validity of the Turkish version of the Leisure Boredom Scale (Iso-Ahola & Weissinger, 1990) for adults in Turkey. The second purpose was to investigate the differences based on demographic variables (gender, marital status, working sector) regarding leisure boredom. In total 312 employees from public and private sectors (167 female, 145 male) residing in Ankara participated in this study. Exploratory Factor Analysis (EFA) and Confirmatory Factor Analysis (CFA) were conducted to test the structural validity of the scale. EFA demonstrated that this scale yielded two subscales in the Turkish version. The first factor was named "boredom" and the second factor was named "satisfaction" by the participating researchers after reviewing the related literature and examining the factor structure of the scale. The scale consists of 10 items; the item factor loadings for the overall scale range between 0.38 and 0.83; and the Cronbach Alpha coefficient for the subscales was determined 0.72 for boredom and 0.77 for satisfaction in the final form of the scale. According to t-test results regarding the demographic variables, there was statistically significant difference in gender only in the "satisfaction" subscale, and between women and men participants, with men participants having higher mean scores ($p<.01$). There was no significant difference in terms of marital status in total LBS and the subscales. Concerning the working sectors of the participants, the analysis showed significant differences in total LBS and the "boredom" subscale between public and private sector's participants, with public sector's participants having higher mean scores than the latter ($p<.01$). In conclusion, the results of the research demonstrated that the Turkish adaptation of "The Leisure Boredom Scale" can be used as a valid and reliable measurement tool to examine and evaluate the leisure boredom levels of Turkish adults. Another conclusion of the study worth noting is that there were significant differences between the different components of gender and working sector variables in terms of leisure boredom levels.

Keywords: Leisure boredom, reliability, validity.

INTRODUCTION

Boredom, a concept subjected to interdisciplinary research in fields such as sociology (10), philosophy (9), psychology (49), anthropology (32) and education (4, 27), has been attracting wider academic interest in the last decades. Besides being a frequent subject of discussion in the literature, boredom has been mentioned alongside with many concepts such as workplace boredom (15), sexual boredom (50) and academic boredom (1). The concept of 'boredom' was defined by O'Hanlon (37) as a psycho-physiological state that occurs when one is subjected to long lasting monotonous stimulus. Barbalet (2), on the other hand, defines 'boredom' as a state of nervousness and discomfort, and indifference towards or acceptance of situations that are perceived same or similar by the individual, whereas Mikulas and Vodanovich (30) see boredom as "the state of low or insufficient stimulation or dissatisfaction". The concept of boredom, has been mostly defined in the context of a situation and an emotional state, and sometimes specified a personality feature (49). Therefore, previous research characterize 'boredom' as an incoherent concept with low comparability, a term that lacks a common definition, and as an ambiguous concept of which generalization efforts often cause loss of meaning (49, 4). These studies (44, 46), instead, focus on why individuals get bored and which factors influence boredom, and this focus necessitated the determination of these factors. In the literature, there have been several studies on developing scales to measure these factors such as 'The Boredom Sensitivity Scale (55)' and 'The Leisure Time Boredom Scale (43)'. Nonetheless, part of the interest in the literature has been paid by the researchers of leisure time and these researchers also have been trying to get attention to the concept of boredom.

The concept of 'leisure time', which is defined as spare time out of obligations, chosen freely and including desired activities (26), has been considered as a topic by the researchers where individual perception of boredom often creates problems and lowers the level of participation in and continuation of the activities. In this respect, Iso-Ahola and Weissinger (21) defined perceived boredom in leisure time as "the subjective perception of low or inadequate stimulation or motivation towards present leisure time experiences". In other words, 'perceived leisure time boredom' is the state of dissatisfaction the individual experiences when he/she cannot find anything to do alone or that would attract his/her interest (47). This state is also described by different researchers as a result of an individual's perception of time as having very little or excess time and participation in directed activities as unnerving or monotonous (44, 46). Likewise, Vodanovich and Watt (48) tried to explain the causes of boredom in leisure time with problems individuals experience in utilizing their time. In this respect, they argued that boredom is usually related to the concept of time when individuals complain about not having meaningful leisure time activities to participate in or having too much leisure time and having very few activities that can fill up this free time (20, 44, 46).

The scale most frequently used measurement tool in the studies that are designed to determine the perception of boredom in leisure time is the 'Leisure Boredom Scale-LBS) developed by Iso-Ahola and Weissinger (21). This scale was developed by comparing the findings of different measurement tools and using three different sample groups in order to evaluate the perceptions of boredom in leisure time. It has a one-dimensional structure and consists of sixteen items. The survey of the literature shows that Leisure Boredom Scale has been used in studies that analyze the relationship between perceived boredom in leisure time and personality (3), self-esteem (54), stress (46), narcissism (41), psychological and social control issues (7), depression and suicidal issues (53), alcohol use and addiction (40, 53), school drop-out (51), internet addiction (28), start of drug abuse (19) and physical activity (29). Also in the literature on the perceived boredom in leisure time, many studies focus attention on young individuals (53).

The subject of perceived boredom in leisure time appears as a topic of debate in the context of leisure time literature also in the perspective of leisure time activities that individuals actively or passively participate. Additionally, related studies are also seen about the relation between leisure time and the perception of participation (43), leisure time satisfaction (42), leisure time behavior (20), intrinsic leisure time motivation (22, 42), leisure time attitudes (16) and leisure time constraints (37). The survey of the studies in Turkey, however, revealed that there are no scales developed to measure individuals' level of perceived boredom in leisure time. Therefore, the main purpose of this study is to test the validity and consistency of the Turkish version of the Leisure Boredom Scale that was developed by Iso-Ahola and Weissinger (1990). The secondary purpose of the study is to investigate the differences in the individual perceptions of boredom in leisure time according to some demographic variables such as gender, marital status and workplace.

MATERIAL & METHOD

In this study, survey method and questionnaire technique were used as tools of the descriptive research model. The survey method is widely applied on larger sample groups in descriptive studies (14) with the objective of describing the opinions and views of members of certain groups as they are, in the natural settings of events and situations by taking their attitudes into consideration (24). The questionnaire technique, one of the frequently applied data collection techniques in the survey method, was utilized as the major tool of gathering information (35).

Participants

The participants of the study were selected amongst individuals from different working sectors residing in Ankara in 2014. The sample group consisted of 312 working adults, of which 167 were female and 145 were male. The ages of the participants ranged between 22 and 64 and their mean age was 35.97±9.55.

Data Collection Tools

'The Personal Information Form' and 'the Leisure Boredom Scale' were used as data collection tools.

The Personal Information Form

This form was developed by the conductor of the study in order to gather information about the participants subjected to research by asking questions on independent variables such as gender, age, educational and marital status and the working sector.

The Leisure Boredom Scale

The original scale was developed by Iso-Ahola and Weissinger (21) in order to examine the boredom perceptions of the university students in their leisure time. It was figured in one-dimensional structure and it consisted of 16 items. The responses were rated from one to five in 5-Point Likert type ranging from (1) 'absolutely disagree' to (5) 'absolutely agree' with (3) 'neither agree nor disagree'. In the study, the original scale was applied on the university students and improved. The Cronbach Alpha reliability coefficient of the scale was measured as 0.85, 0.88 and 0.86 for three different sample groups. The researchers tested the validity of the scale by examining its correlation with some psychological measurement tools. To this end, the Intrinsic Leisure Motivation Scale and the Leisure Satisfaction Scale were applied, and their correlation with the Leisure Boredom Scale was measured as -0.67 and -0.22, respectively. The lowest score that a participant could get from the scale was 16 whereas the highest score possible was 80.

The Translation-Adaptation Procedure

The permission of the original developers of the scale (21) was obtained before the Turkish adaptation procedure was augmented. In the adaptation process, translation-back translation and reverse translation methods were used. The scale was first translated into Turkish by three academic referees who have well command of English, each doing the translation separately. The output was submitted to the review of three academicians whom we named as the 'jury'. The 'jury' was asked to select the best translations among the three versions of translations that fit the most to the statements in the original scale. Based on the feedback from the 'jury' necessary changes were made on the scale items and the Turkish form was prepared. This form was reverse translated into English by an English instructor in order to minimize the loss of meaning during the translation process. This step also served to provide consistency of meaning for each scale item with those of the original scale. The Turkish form obtained was then submitted to the scholars of scale development and the clarity of the items were tested by applying on a test group of twenty. After all these procedure, the adapted Leisure Boredom Scale was made ready for reliability and validity test.

Procedure

The application of the data collection tools used in the research was executed in the leisure time of the participants with respecting the principle of voluntary participation. Before the application of the questionnaire, necessary explanations about the purpose of the study and the application of the questionnaire form were made. The participants filled out the forms in five minutes in average. After the application of the forms the ones that were not completely filled out or that were filled wrong were reviewed and out of all forms 312 questionnaire forms were coded and transferred to digital environment for evaluation.

Data Analysis

The data were analyzed with the statistical package programs of SPSS 20.0 and AMOS 18. KMO and Bartlett's Test of Sphericity (6) were used to determine the data compatibility with factor analysis; exploratory factor analysis (EFA) was made to determine the factor structure and confirmatory factor analysis (CFA) was applied in order to provide proof to the factor structure (31). On the first level CFA … fit indices were examined. If the ratio of … is below 3 and if the RMSEA, RMR and SRMR values are lower than 0.05 it is considered as good fit (5, 18, 23). On the other hand, when the fitness values of CFI, GFI and NFI are higher than 0.90 it is considered as acceptable, and the values higher than 0.95 are accepted as good fit (18). In order to provide proof for the validity of the scale, the correlation between the factors and the Pearson Correlation Analysis was examined. When the correlation coefficient values are between 0.70 and 1.00, it is an indicator of high correlation between the factors (6). In this respect, correlation coefficient values between 0.30 and 0.70 indicate medium level correlation, whereas the values between 0.00 and 0.30 point to low level correlation. In order to examine the reliability of the total scale and the subscales in the model established, the Cronbach alpha internal consistency coefficients were calculated. As Büyüköztürk also stated (6) if the reliability coefficient is equal to or above 0.70, it is an adequate condition for the scale can be considered reliable. The study also used the independent samples t-test among the parametric tests in order to determine whether there was significant difference between the scores acquired from the scale according to some independent variables or not. The values' suitability for the preconditions of the parametric tests was checked

after analyzing the Skewness and Kurtosis values and Leven's test results (6).

RESULTS

According to the results of the analysis that was made in order to determine the fitness of the data obtained from the sample group included in the study for the factor analysis, KMO was found 0.83 and Barlett's test of sphericity result yielded meaningful (χ^2=1074.00, df=120, p=0.000). First, confirmatory factor analysis was applied in order to verify the factor structure of the one-dimensional structure that was made of 16 items. The fit indices obtained after CFA showed that one-dimensional structure of the scale could not be verified (χ^2/df=4.13, RMSEA=0.10, SRMR=0.10, CFI=0.67, GFI=0.81, NFI=0.61). Based on this result, exploratory factor analysis regarding the 16 items was made using the Varimax rotation method. As a result of this analysis, three factors with eigenvalues higher than 1 were acquired of which figures are 4.09, 2.12 and 1.23, respectively. These three factors counted for %46.53 of the total variance and the variance explanation ratios were %25.59, %13.23 and %7.72, respectively. In determining the number of factors Scree Plot (Figure 1) was examined and the graphic showed strong proof for the two-dimensional evaluation of the scale.

The exploratory factor analysis was then repeated and according to the new results six items, which did not have high communality values or which could give loading to more than one factor, were omitted; the number of factors were lowered to two and the number of items were decreased to 10. The items that made up the scale had communalities ranging between 0.36 and 0.58 and the factor loadings were valued between 0.59 and 0.76. The table below represents the item and test statistics of the renewed form of the scale.

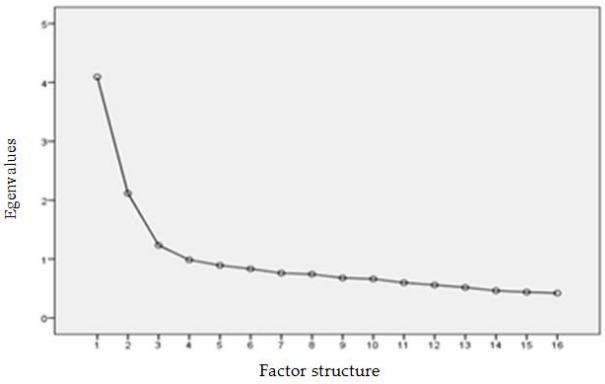

Figure 1. Scree Plot

The one-dimensional structure established after the exploratory factor analysis was re-tested by using confirmatory factor analysis. The fit indices obtained after CFA demonstrated that the factor structure of the scale was confirmed (χ^2/df=1.83, RMSEA=0.05, SRMR=0.05, CFI=0.95, GFI=0.96, NFI=0.90). The correlation coefficients were calculated between the factors in order to provide proof for the factor structure of the scale whereas the calculation of the Cronbach Alpha internal consistency coefficients of the factors and the total scale provided for proving the reliability of the scale. The Cronbach Alpha internal consistency coefficients that were calculated for the subscales and the total scale and the correlation between the factors were given in Table 2. The correlations calculated for the scale scores changed between 0.38 and 0.83. For the total scale and the subscales, the Cronbach Alpha reliability coefficients were measured as 0.72, 0.72 and 0.77, respectively.

Table 1. The results of the EFA

Number	Items	Communalities	Boredom	Satisfaction
3	Leisure time is boring	0.36	**0.59**	0.10
6	In my leisure, I usually don't like what I'm doing, but I don't know what else to do	0.58	**0.76**	0.11
10	In my leisure time, I want to do something, but I don't know what I want to do	0.53	**0.71**	0.12
11	I waste too much of my leisure time sleeping	0.47	**0.67**	0.13
15	I do not have many leisure skills.	0.41	**0.62**	0.16
7	Leisure time gets me aroused and going	0.55	0.01	**0.74**
8	Leisure experiences are an important part of my quality of life	0.46	0.32	**0.60**
9	I am excited about leisure time.	0.49	0.24	**0.66**
12	I like to try new leisure activities that I have never tried before.	0.53	0.00	**0.73**
13	I am very active during my leisure time.	0.42	0.19	**0.62**
	Eigenvalue		3.29	1.51
	Total Variance Explained (%)			47.96

Table 2. The correlation and reliability coefficients regarding the subscales of the LBS.

	Boredom	Satisfaction	Total Scale	Alpha
Boredom	1.00			0.72
Satisfaction	0.38*	1.00		0.72
Total Scale	0.83*	0.83*	1.00	0.77

*p<0.01

Table 3. The distribution of the scale scores.

	Item Number	n	M	SD	Skewness	Kurtosis	Min	Max
Boredom	5	312	2.38	0.82	0.37	-0.32	1.00	4.60
Satisfaction	5	312	2.57	0.82	0.32	-0.43	1.00	4.80
Total Scale	10	312	2.47	0.68	0.03	-0.46	1.00	4.40

The mean scores of the participants scored in the Leisure Boredom Scale were 2.47 whereas the standard deviation was 0.68. An analysis of the Leisure Boredom Scale scores on the factor basis showed that the highest average was on the 'satisfaction' subscale (2.57) and the lowest average was on the 'boredom' subscale (2.38). Also, the Skewness and Kurtois coefficients demonstrated that the data met the hypothetical normalcy pre-condition of the parametric tests (Table 3).

Table 4 presents the distribution of the scale scores according to the independent variables of gender, marital status and working sector. Whereas the results of t-test show that the satisfaction subscale scores of the participants differed significantly based on the gender variable (t=0.99; p=0.32), there is no significant difference between the scores the participants obtained from the total scale (t=1.97; p=0.05). In the satisfaction subscale the mean score of the male participants (2.68) was higher than that of the females (2.47).

There was no significant difference recorded between the scores of the participants in the boredom subscale (t=0.59; p=0.55) and the total scale scores (t=0.80; p=0.42) when their marital status are concerned. t-test results demonstrated that whereas the boredom subscale (t=3.28; p=0.00) and the total scale (t=2.49; p=0.01) scores of the participants yielded significant difference concerning their working sectors, no significant difference was noted in their satisfaction subscale scores (t=0.87; p=0.38) regarding the same variable. In the boredom subscale and on the total scale the scores of the participants working in the public sector were higher than of those working in the private sector.

DISCUSSION

The purpose of this study was to test the reliability and validity of the Turkish version of the Leisure Boredom Scale which was originally developed by Iso-Ahola and Weissinger (1990). In addition to this, the second purposed included examining the differences between the Turkish adults in their perception of boredom in leisure time based on the demographic variables of gender, marital status and working sector. The findings gathered to this end are discussed and interpreted in this section.

Table 4. The distribution of the scale scores based on gender, marital status and working sector.

	Female *(n=167)*		Male *(n=145)*		Married *(n=151)*		Single *(n=161)*		Public *(n=133)*		Private *(n=179)*	
	M	SD	M	SD	M	SD	M	SD	M	SD	M	SD
Boredom	2.34	0.84	2.43	0.79	2.35	0.79	2.41	0.85	2.55	0.86	2.25	0.77
Satisfaction	2.47	0.85	2.68	0.78	2.53	0.79	2.60	0.85	2.62	0.80	2.53	0.84
Total	2.40	0.72	2.56	0.63	2.44	0.65	2.50	0.71	2.59	0.63	2.39	0.71

The adapted version of the Leisure Boredom Scale was applied on the individuals of different professions residing in Ankara. In its original version the Leisure Boredom Scale had one factor structure and 16 items but this one factor structure could not be verified according to the confirmatory factor analysis made in order to confirm the one-factor structure of the scale. In this respect, our study revealed that the original one-factor structure of the scale did not fit to the factor structure of the adapted Turkish version. Therefore, exploratory factor analysis was then made in order to determine the factor structure of the scale, and the two-factor structure obtained was confirmed with CFA. At this point, an interesting fact recorded was that our findings differed with those of the other studies where the LBS were applied in different cultures and the factor structure was examined (5, 28). The cause of this disparity is thought to be the cultural differences and the meanings that the individuals in different cultures attributed to boredom. The correlation values between the structures that made up the LBS ranged between 0.38 and 0.83, and there is positive correlation between each structure. As a result of the analyses made to find proof for the validity of the scale it was noted that the LBS was consisted of two subscales each having five items. The fact that factor structure formulated after the factor analysis was not in par with the factor structure of the original scale led the researchers to re-label the subscales of the scale that was adapted into the Turkish culture. At this point, it was agreed that the first factor could be labeled as 'boredom' and the second one as 'satisfaction'.

In order to test the reliability of the scores derived from the scale the internal consistency coefficients were analyzed. In this respect, it was observed that the internal consistency coefficients changed between 0.72 and 0.77 on the subscales and the internal consistency coefficient for the total scale was calculated as 0.72. This finding demonstrated that the reliability of the scale was at an adequate level.

The second purpose of this study was to examine the leisure time boredom perceptions of the participants based on the independent variables of gender, marital status and working sectors. In the scores of 'boredom' subscale based on the gender of the participants no significant difference was recorded but the scores of the 'satisfaction' subscale showed significant differences. The mean score of the male participants was higher than that of the females. On this result, several factors could be influential causing motivational differences between the sexes. Of these many alienation and essentialization factors noted in the social gender roles and leisure time research, gender bias, leisure time opportunities and patriarchal social structure can be counted (17, 12). This social phenomenon of differences in the perceptions of leisure time boredom is also valid in numerous studies examining the younger individuals (33, 46, 8, 25). Nevertheless, there was no significant difference between the scores of married and single participants. It is possible to argue that the differences in the marital status did not have direct influence on the participants' excitement towards leisure time activities, need for trying new activities and active involvement in the activities they participated.

The findings obtained as a result of the analysis further demonstrated that on the 'boredom' subscale and in total scale scores, the mean scores of the participants working in the public sector were higher than those of the individuals working in the private sector. On the 'satisfaction' subscale scores, however, there was no significant difference between the scores of the sectors. One conclusion that could be achieved was that participants working in the public sector had more negative perception towards leisure time activities than the ones working in the private sector and they had more difficulty than the private sector professionals in finding an activity that they could get involved in. Notwithstanding, there was no difference between the professionals of public and private sectors in respect to the perception of time and activities that were thought to be rejuvenating the individual such as desire to participate in new activities and feel excitement towards these activities, and fulfillment of leisure time activities as a part of life quality.

The survey of the literature shows that the previous studies usually took younger individuals as the sample group of their research (51). Therefore, it is not often possible to discuss the phenomenon of leisure boredom in the context of marital status and working sectors or compare the findings of leisure boredom studies with different studies. The careful observer can witness that the participation into leisure time activities and the continuity of participation in such activities is a serious problem. Therefore, in understanding the causes of this social issue in clearer ways and measuring the variables that have role in this problem 'the Turkish Version of the Leisure Boredom Scale' can be utilized as a reliable and valid measurement tool. Also, it is

recommended that further research on this issue should be devised with broader and more diverse sample groups.

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