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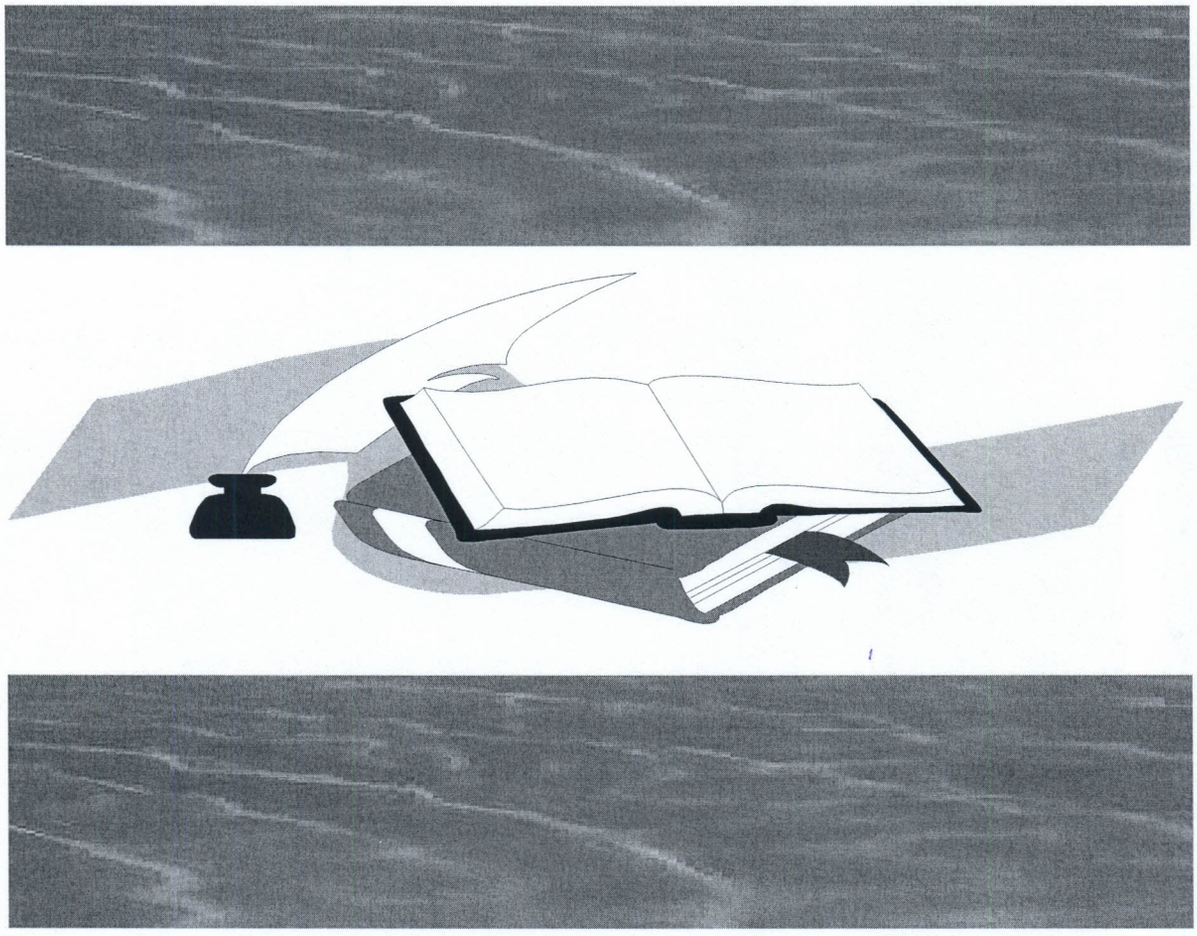

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The study of validity and reliability of Turkish version of leisure motivation scale

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Abstract

The aim of this study is to test the validity and reliability of "Leisure Motivation Scale" (LMS) for Turkish participants, which is used in detecting motivational factors being effective on individuals' participation in recreational activities. 322 volunteers (215 men ($\overline{X}$age = 30.45± 2.23) and 107 women ($\overline{X}$ age = 23.76± 1.19) have been participated in this study. Leisure Motivation Scale consists of 28 items and 7 sub–scales as follow: (1) to know, (2) to accomplish, (3) to experience stimulation, (4) identified, (5) introjected, (6) external regulation and (7) amotivation. The results of varimax rotation of Principle Component Analysis made for determining the factor structure of LMS, support 7 factor model for Turkish version and 28 items stated in the scale explain 56.98% of the scale for 322 participants. Cronbach's alpha coefficient of internal consistency calculated for testing the reliability of the Turkish scale is found between $\alpha = 0.70$ (amotivation) and $\alpha = 0.83$ (external regulation). Total coefficient of internal consistency of scale is calculated as 0.80. In the light of these obtained data, it could be said that LMS is a valid and reliable assessment tool to evaluate the motivation rates of participation in recreational activities of Turkish participants.

Keywords: Leisure; Recreation; Motivation; Validity; Reliability

1. Introduction

Humans are generally defined as active organisms. Even if that definition seems true, in fact it doesn't because in today's world many people spend their time watching TV, playing games on computer or surfing on internet instead of moving or being active [1]. Contrary to these passive lifestyles of individuals, many researchers [2–4] indicate that the leisure individual has is so valuable and it should be spent effectively and efficiently. The researches [5, 6] show that the recreational activities done in the leisure have an important place on anindividual's life. For example, it is determined in the researches that participation in recreational activities has positive contributions for stress management, mental healthiness,

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and reduction of drug and alcohol abuse, socialization and improvement of physical skills [7–10].

Although it is determined that participating in recreational activities have an important place on human's life, it is revealed that nowadays many individuals never participate or sometimes participate in the physical activities for recreational purposes [11]. For example, according to a research recently made by Ogden, Carrol, and Flegal in America, it is stated that 30% of children are overweight and even 50% of children in this group are obese [12]. According to statistical information published by World Health Organization, it is understood that minimum 60% of world population even do not participate in moderate–intensity exercise recommended as thirty minutes per day [13]. Besides, a research made in Canada shows that only 21% of individuals in 12–14 age range participate in the necessary exercise for growth and development of that age group. [14].

The importance of identified of motivational factors, affecting the participation of individuals in recreational activities, emerges as a result of lack of expected level of participation in recreational activities or decline in participation in physical activities. For a long time, many researchers have developed many theoretical and methodological approaches to understand the reason why individuals act in that way about terms of leisure activities [15]. Deci and Ryan have developed a model to explain the motivation of participation. According to that model which is so popular in the litterateur [16], there are many possible reasons which could affect the participation of individuals in the exercise in their leisure. For example, the individual could participate in these activities to meet his/her parents' expectations or prove or reveal himself/herself to his/her friends. For this kind of model, it is stated that the individual prefers participating in the activity because of some basic "external regulations". Another factor causing the participation of individual in the activity is referred as "internal motivation". For example, the individual could prefer this kind of activities for his/her own interest, satisfaction or pleasure [1, 17]. If the individual participates in this kind of activities without any specific reason or interest, this is referred as "amotivation" [17].

Theory and model development work asserts the necessity of detecting the factors affecting the individuals' participation in leisure activities or determining according to what these factors change. Thus, some researchers [18, 19] have focused on scale development work. For example, Beard and Ragheb have developed a scale consisting of 4 sub–scales like mental, social, competency–proficiency and stimulus–avoidance to determine motivational factors affecting the participation in recreational activities. This developed scale has been used by many researchers [20, 21]. Another important scale development work has been achieved by Pelletier and his friends [22]. The sub–scales in this scale named as "Leisure Motivation Scale" are referred as internal motivation, external motivation and amotivation. Except for amotivation, the other two sub–scales include three more sub–factors. It is seen that that scale has been used in many studies in the literature and its validity and reliability have been tested again for different groups [23].

The positive contributions of the participation in recreational activities on an individual's life, become enormously effective in increase of the studies about motivation in literature and scale development work. That situation is partially same for Turkey. Even there is visible increase for studies about motivating participation in sport [24, 25], it is understood that that situation is not valid for motivating participation in recreational activities. In other words, it is seen that there is still few studies about individuals' motivation for participation in recreational activities in Turkey. It is stated that there two main reasons for that situation. First one is that recreation and leisure concepts are new for Turkey being in the category of developing countries. The second reason is that Turkey does not have an assessment tool

whose validity and reliability are tested for detecting individuals' motivation of participation in recreational activities. From this viewpoint, the aim of this study is to test the validity and reliability of "Leisure Motivation Scale" (LMS) for the individuals in Turkish society.

2. Methods

2. 1. Participants

This study, made according to screening model, has been held with the participation of students studying in different departments and administrative and academic staff of Agri Ibrahim Cecen University. 215 men ($\overline{X}$age = 30.45± 2.23) and 107 women ($\overline{X}$age = 22.76± 1.19) have been participated in this study.

32% (103) of the participants for the study consist of academic and administrative staff and 68% (219) consist of students.

2. 2. Data Collection Tool

Leisure Motivation Scale (LMS) consists of 28 items and 7 sub–scales as follows: (1) to know, (2) to accomplish, (3) to experience stimulation, (4) identified, (5) introjected, (6) external regulation and (7) amotivation [22]. Besides, the sub–scales in the scale are divided into three main groups as internal motivation (to know, to accomplish, to experience stimulation), external motivation (identified, introjected, external regulating) and amotivation. It is wanted from the participants to evaluate the statements on the scale on 7 point Likert scale as "I strongly disagree" (1) and "I totally agree" (7).

While the scale is translated from English into Turkish, firstly two researchers working independently from each other in the field of Physical Education and Sports have translated "Leisure Motivation Scale" (LMS) from English into Turkish. At the same time, the scale has been translated into Turkish by a researcher. The items of these translations have been compared and the same translated items have been detected. Then, this Turkish draft of the scale has been translated into English by an English philologist. The researchers compared this English draft with the original English version to test the difference between these two forms and the last version of the scale has been generated using the best translation for each item according to these similarities.

2. 3. Data collection and analysis

The data used in the study are collected by the researchers by using pencil and paper method. The necessary permissions are taken from the university management in order to apply the scale to the university staff and students. While the scales are filled by the students after their lectures, they are filled by the staff on their workspaces. These obtained data are analyzed by using statistics program for social scientists (SPSS). Principal Component Analysis Method which is used very often in the social sciences [26, 27] and applied according to Varimax Spinning method, is preferred to test the validity level of the scale. Kaiser–Meyer–Olkin (KMO) and Barlett Sphericity tests are used to determine the availability of the data which will be used, for the factor analysis. Cronbach's alpha coefficient of internal consistency is calculated for each sub–scale to test the reliability level of the scale.

3. Results

Before Principal component analysis, sampling adequacy and Barlett Sphericity tests are applied. According to the results of the analysis for the chosen study group, Kaiser–Mayer Olkin (KMO) value is .81. X^2 value of Barlet Sphericity test is found as 3741.124 ($p < 0.001$).

According to varimax spinning, Principal Component analysis is applied to the parcipants' leisure motivation points in order to test the factor structure of the scale for Turkish recreational activities participants in terms of the structural validity and suitability. As a result of the analysis, the total variation of the scale's Turkish version is found as 57%. Besides, according to the results of the analysis, an assessment tool is obtained, which consists of 28 items and 7 sub–scales and it is determined that the scale items being in the sub–scales completely correspond to the results of the researchers [22] who developed the original version of the scale. The sub–scales obtained as a result of the analysis are named as follows; *external regulation* "to avoid doing other tasks", *to accomplish* "for the satisfaction I get while trying to master complex activities", *to know* "Because I experience a lot of pleasure and satisfaction inlearning new things.", *to experience stimulation* "for the sense of freedom that I experience while doing the activity", *identified* "because it's one of the ways that I have chosen to make improvements on a personal level", *introjected* "because in life you absolutely need leisure activities to be happy" and *amotivation* "I can't come to see why I do leisure activities, and frankly I don't really care". Load factor is accepted as 0.40 in the exploratory factor analysis. According to that, load factors change between 0.476 and. 814. Load Factors and variation rates values of the scale are showed in Table 1.

Table 1. Load factors and variance ratio of the items in the "LMS"

Factors	1	2	3	4	5	6	7
external regulation							
22	0.814						
8	0.807						
15	0.803						
1	0.769						
to accomplish							
13		0.799					
27		0.727					
6		0.691					
20		0.608					
to know							
9			0.710				
2			0.671				
16			0.602				
23			0.476				
to experience stimulation							
4				0.734			
18				0.684			
11				0.680			
25				0.618			
amotivation							
26					0.807		
5					0.772		
19					0.631		
12					0.559		
identified							
24						0.710	
17						0.687	
10						0.544	
3						0.448	
introjected							
7							0.735
21							0.679
14							0.603
28							0.528
%56.98	%10.02	%8.43	%8.34	%8.22	%7.87	%7.32	%6.81

Reliability implies how accurate a scale measures a feature, which aims to measure [28]. In this study, Cronbach's alpha values of both total scale and 7 sub–scales in the scale are calculated within the scope of internal consistency. It is indicated that coefficient of internal consistency of LMS changes between $\alpha = 0.70$ (amotivation) and $\alpha = 0.83$ (external regulation). Total coefficient of internal consistency of the scale is calculated as $\alpha = 0.80$. In the Table 2, seven sub–scales of "LMS" and Cronbach's alpha coefficient of internal consistency calculated for total scale are presented.

Table 2. LMS' Coefficients of internal consistency

sub–scale	Alpha
external regulation	0.83
to know	0.76
to accomplish	0.74
identified	0.73
to experience stimulation	0.72
introjected	0.71
amotivation	0.70
total scale	0.80

4. Discussion and conclusion

In this study, it is aimed to create the Turkish version of "Leisure Motivation Scale" (LMS) to determine the factors motivating university staff and student to participate in the leisure activities.

To achieve this objective, firstly Kaiser–Meyer–Olkin (KMO) and Barlet Sphrecity tests are applied to test the suitability of data set planned to be used in the study. The results of the analysis show that value of KMO is 0.81 and value of Barlet Sphericity is 3741.124. As stated by many researchers [26, 29], and some other studies [30, 31] in social sciences because the value of KMO is more than .60 and Barlet Sphericity test is found as significant, it becomes obvious that the data are suitable for factor analysis. In other words, obtained KMO value is well above from the minimum value (0.50) even that value is accepted as "very good" (0.80) [32]. In a word, that shows that the suitability of the obtained data for validity and reliability of Turkish version of "LMS".

Principle Component factor analysis method is used in order to determine factor structure of Turkish version of the scale. Factor analysis method is a one of the multivariate statistical techniques which is often used in the social sciences. The main aim of following that method is to convert numerous variants related to each other in a scale to significant and independent factors and present the correlation between variants [32]. When the results of the analysis are examined, it is understood that a structure totally corresponding to the original scale has emerged. As stated in the original version of the scale, there is also seven factor structure in the Turkish version. Furthermore, it is seen that these seven factors in the scale also consist of three main components as internal motivation (3 sub–scales), external motivation (3 sub–scales) and amotivation (1 sub–scale). As a result of the analysis, it is understood that the load factors of 28 items in the scale are 0.40 and more than that so there is no need for item disposal or reduction. From this point, it could be stated that the original version and Turkish version of the scales have the same structure. Moreover, 28 items in the scale explain 56.98% of the scale for 322 participants.

Cronbach's alpha analysis method is used to test the reliability of the scale. Cronbach's alpha Coefficient is important to estimate the internal consistency of the materials in the scale so to determine if the scale has a homogenous structure. As a result of the analysis, the total reliability coefficient is calculated as 0.80. Besides, it is understood that coefficients of

internal consistency related to seven sub–scales in the scale change between 0.70 (amotivation) and 0.83 (external regulation). Many researchers having studies about statistical research methods indicate that it is enough for test points if coefficient of internal consistency is calculated as 0.70 and more higher than that for a test [33–35]. In that sense, changing of factor obtained as a result of analysis between 0.70 and 0.80 shows that the scale is moderately reliable. That value shows also resemblance with the results of Pelletier and his friends who developed the original version of the scale [22].

As a result of these processes, it could be stated that Turkish version of "LMS" could be used as valid and reliable to evaluate individuals' motivation levels of participation in leisure activities. In the new studies that will be made in the future, testing the validity and reliability of the scale on different sample groups and determination of individuals' motivation levels of participation in recreational activities would be helpful to enrich literature in this field. In parallel with all developments in the world, by starting from the possibility of change in Turkey's social, cultural and economical structure in the process of time, it is thought that while using the scale with a group having different features, repetition of the study of basic validity and reliability is important in terms of evaluating the obtained data scientifically [36-43].

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