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Investigation of University Students' Awareness of Recreational Activities

Research Article

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ARTICLE INFO	ABSTRACT
Article History: Received: 09.05.2018 Available online: 30.04.2019	This study was conducted to develop a valid and reliable data collection tool to determine to what extent university students have an awareness of the gains of the recreational activities they engage in. In the study, following the literature review, a questionnaire of 55 items was devised. Following expert opinions, it was decided for the data collection tool to have 45 items. As a result of the pilot study that was carried out, the implicit structure of the data collection tool which was reduced to 44 items following the exclusion of a question with low-factor load (.288) was made by explanatory factor analysis (EFA). According to the result of the analysis, a structure with 41 items and 3 factors was shaped which explains 43.327% of the total variance. Related literature was examined and the sub-dimensions that were found were named as follows: first dimension, Pleasure/Fun 1─10 (α=.885), second dimension, Social/Success 11─28 (α=.905), third dimension, Self-improvement 29─41 (α=.884). The verification of the implicit structure that was shaped was tested through confirmatory factor analysis (CFA). Analysis results have shown that the fit indices of the structure of 41 items and 3 factors are good. The reliability of the data collection tool was tested by internal consistency (α=.948) and the split-half reliability analyses. The results demonstrate a valid and reliable instrument.
	Keywords: Scale development, free time, recreation, recreational awareness

Introduction

In recent years, as a result of industrialisation and computerisation, people have become wealthier and freer to participate in leisure activities, increasing the importance of the leisure domain (Tsaur et al., 2012). Metcalfe (2006) notes that one of the conditions required for the recreation to be realised is time. Expectations from life, giving meaning to it, and efforts to perceive and understand it indicate the need to make use of time efficiently (Lapa et al., 2012). Discommodities that result from the inefficient and improper use of time primarily affect the individual and, then, the whole society. In this respect, good assessment of time is of great

importance on both social and individual levels. The major factor that will enable us to assess the present time in a good and productive way is conscious recreational training. Yankholmes & Lin (2012) defined leisure education as "a lifelong learning process that helps people achieve through socially acceptable leisure activities their fullest leisure potential and desirable quality of life. Therefore, leisure is also an important element of a person's life" (Tsaur et al., 2012).

Özbey & Çelebi (2011) define recreation as a collection of activities that people from all age groups can participate passively or actively in accordance with their interest and creativity. Stebbins (2012) describes recreation as activities which provide personal satisfaction and in which one can use her/his own skills and abilities, and participate in her/his free time, willingly, with no obligation. Another factor which makes recreation significant is that it provides individuals with various satisfactions. Individuals improve themselves physically, socially, and emotionally by participating in recreational activities (Tekin et al., 2009). Especially a young person who rests and has fun establishes stronger bonds with life and develops a healthier character spiritually. Taking into consideration the fact that it is especially the university students who we accept as the young people, the idea of the necessity for recreation at universities makes more sense (Ekinci et al., 2014; Yankholme & Lin, 2012).

Literature suggests that university students' participation in free-time activities impacts upon their adult lifestyles (Sivan, 2003). For this reason, it is of utmost social importance that university students who set a turning point for the growth of healthy generations use their recreational activities adequately. In this context, when the relevant literature is examined, it is possible to find scales developed in different times by different researchers about recreation. Some of these scales are *Leisure Attitude Scale*, *Leisure Motivation Scale*, *Leisure satisfaction Scale Short and Long Version*, *Meaning of Leisure Scale*, *Participation in Recreation Activities Scale*. However, no study has been encountered about what recreational activities exactly mean for the individual and what the individual gains from them. In this study, it was deemed significant that "Recreational Awareness Scale (RAS)" should be developed in order for the studies towards the target group to be carried out in a more healthy way and in order to determine to what extent the individuals who participate in recreational activities have awareness for these activities.

The Theories

In the process of naming the factors obtained in this study, from Dumazedier's three basic functions of leisure time: entertainment and self-improvement functions were used as a source for our sub-dimensions of "pleasure entertainment" and "self-improvement," and Bammel and Bammel's personal community theory sub-dimensions were used to name "social success" sub-dimensions (Karaküçük, 2005).

Moreover, Mannell and Kleiber (1997) put forward these theories about recreational awareness:

(1) Keeping Idle Hands Busy Theory: individuals are happy when they are busy with a job.
(2) Psychological Hedonism Theory: individuals' fulfilling their wish to be happy, to rest, and to have fun by using their spare time.
(3) Personal Growth Theory: individuals reach their true potential by improving themselves.
(4) Buffer and Coping Theory: the ability of an individual to fight against (endure) difficult situations that may be encountered in everyday life, and to become socially successful.

The above-mentioned studies and theories have been guiding in the realisation and the formation of this study.

Method

Design of the Study

One of the quantitative research techniques, survey research design (or cross-sectional design), which is considered to be appropriate for the purpose, was issued as the design of the study. This method is used extensively in the social and sports sciences; and usually the data obtained from the environment is used in the analysis of various relationships and can be used for prediction (Gratton & Jones, 2010). Scale development studies are usually carried out through experimental or theoretical processes. In the experimental process, the candidate scale form is obtained from literature or expert approaches, and the final form is obtained from the ideal materials by determining the psychometric properties of the scale items by performing a trial application in a sample group, sharing similar characteristics with the target group (Yurdagül, 2005).

Study Group

The study consists of two stages. In the first stage, 140 university students who were selected with the method of simple random sampling volunteered. However, 8 invalid questionnaires were excluded, they were left out of assessment. According to the simple random sampling method, each sampling unit in the environment is equally likely to be selected (Büyüköztürk et al., 2012; Reed & Wilson, 2006; Ural & Kılıç, 2011; Coleman & Iso-Aloha, 1993). The pilot study was carried out at this stage.

In the second stage, 980 university students who were selected on the basis of the simple random sampling method took place, as in the first stage. However, according to outliers test results, the second stage has been performed on the data of 941 (360 female, 581 male) students, excluding 39 data collection tools. Validity and reliability studies of the data collection tool were carried out at this stage. Accordingly, explanatory and confirmatory factor analyses, as well as the hypotheses, that were determined in line with the study have been tested. Comrey & Lee (1992) state that 50 is very poor, 100 is poor, 200 is fair, 300 is good, 500 is very good, and 1000 is excellent for sample size adequacy in factor analysis. It is also put forward as a general rule that the appropriate and minimum sample number in factor analysis is 300.

Data Collection Tool

A personal information form of 3 questions organised by the researcher for the pilot study was used as a data collection tool in the study, as well as a 45-item questionnaire which was finalised on the basis of the expert opinions. In the validity and reliability phase, a personal questionnaire with 10 questions and a questionnaire form reduced to 44 items with the exclusion of a question with a low factor load (.288) after the pilot study were used. In the answers to the questionnaire, Likert scale questionnaire (1 - I strongly disagree 5 - I strongly agree 5) was used as the evaluation method. The creation process of the data collection tool is described in detail below.

Creation of the Data Collection Tool

During the development of the scale, the stages of the preparation of the scale mentioned in literature were investigated (Büyüköztürk et al., 2012), and, in this study, the following three steps in consistency with the recommendations of these researchers were pursued: 1) Identification of the problem, 2) Creation of scale items and getting expert opinion, 3) Preliminary application of the scale and giving the final form to the scale.

In the course of the development of the data collection tool, relevant literature was examined, and a measurement tool directly for recreational awareness was encountered neither in the literature of our country nor in the foreign literature. However, after the inspection of some studies on similar topics stylistically and contentwise (Reed & Wilson, 2006; Katner et al., 2011; Reed, 2007; Gürbüz et al., 2007; Bona, 2000; Lee & Lin, 2011; Mannel & Kleiber, 1997), a questionnaire consisting of 55 items produced by the researcher was created. This form was then distributed to 20 university students within the scope of the focus group interviews, and

their opinions were taken. When we look at the studies carried out on the size of the focus group, it is important that the focus group of the factor is not too large, and another factor that is significant in the focus group work is that the self-recurring focus groups set the ideal number (Akyıldız, 2013). The focus group interviews were repeated until the satiation was reached in the answers given to the questions, and it was observed that it was reached in the 4th repetition. Lawshe content validity rates, which transform qualitative results based on expert opinions into statistical quantitative results, have been calculated to determine the content validity of the questionnaire. In this technique, expert opinions on the items of the questionnaire are collected and calculated, and at least 5 and maximum 40 expert opinions are required. The experts were asked to rank the items in the evaluation as "the item measures the target structure," "the item is related to the structure, yet unnecessary," or "the item does not measure the target structure" (Yurdagül, 2005). After having the opinions of the recreation field experts (concerning fluency, clarity, diction, and comprehensibility) and of the Turkish language experts (concerning proper use of language) about the questions, the items with semantic complexities were omitted. The obtained results of the expert opinions were analysed item by item, and Lawshe content validity rate (CVR) was calculated using the following formula:

CVR=(NO÷N/2)-1

NO : total number of the experts who expressed opinion on the item,

N : total number of the experts involved in the evaluation,

According to the formula, the items with a value of 0 or minus (half or more than half of the experts opine that such items are "unnecessary") should be omitted from the questionnaire (Akyıldız, 2013). Depending on the experts' opinions, 10 questions which remained below the determined minimum value were omitted from the 55-item questionnaire, and the data was collected with the final 45-item form.

In this study, subject-centred application method was used. Torgerson (1958) grouped the scales in two according to their mode of application: (a) subject-centred, and (b) stimulus-centred scales. Assessment instruments such as multiple-choice tests, attitude scales, and questionnaires are among the subject-centred scales (Yurdagül, 2005). When the obtained data was evaluated after the pilot study, item number 5 was omitted from the scale as its total correlation coefficient was below 30. Büyüköztürk (2002) defines the load value between .30 and .50 as a moderate size, and states that these values should be taken into consideration while omitting variables. It was observed in the assessment of the explanatory factor analysis carried out in the 2. Stage that the scale was gathered under 3 factors. However, it was also seen that item 6 was not gathered under any factors, and item 16 and item 33 could be gathered under two factors. Therefore, these items were omitted, too, and a 41-item and 3-factor scale was obtained consequently.

Findings

Table 1. Findings of the pilot study

Item no	Total Item Correlation	Cronbach's Alpha when the item is omitted
s1	.414	.963
s2	.611	.963
s3	.402	.963
s4	.429	.963
s5	*.288*	*.964*
s6	.488	.963
s7	.517	.963
s8	.434	.963
s9	.703	.962

s10	.621	.963
s11	.710	.962
s12	.660	.962
s13	.657	.962
s14	.472	.963
s15	.575	.963
s16	.683	.962
s17	.596	.963
s18	.646	.962
s19	.715	.962
s20	.658	.962
s21	.638	.963
s22	.653	.962
s23	.758	.962
s24	.536	.963
s25	.709	.962
s26	.552	.963
s27	.713	.962
s28	.690	.962
s29	.633	.963
s30	.708	.962
s31	.674	.962
s32	.726	.962
s33	.715	.962
s34	.699	.962
s35	.386	.963
s36	.642	.962
s37	.649	.962
s38	.584	.963
s39	.703	.962
s40	.345	.964
s41	.594	.963
s42	.688	.962
s43	.711	.962
s44	.639	.962
s45	.627	.962
Total Scale Cronbach' s Alpha		**.963**
Total Item Number		**45**

In the pilot study which was carried out with 140 participants, the total correlation values of the 45 questions and their internal consistency coefficient were calculated. For the total coefficient of correlation, .30 was taken as threshold (Büyüköztürk et al., 2012). In accordance with the result of the analysis, item 5 was excluded both because its total correlation coefficient was below 30 and because it was observed that when the mentioned item was excluded, there was an increase in the internal consistency coefficient calculated for the total number of items.

Table 2. Explanatory Factor Analysis Results of Recreational Awareness Scale

Rotated Component Matrix[a]

	Component		
	1	**2**	**3**
S(26)	,680		
S(25)	,669		
S(24)	,656		
S(27)	,639		
S(23)	,621		
S(18)	,609		
S(28)	,582		
S(17)	,581		
S(15)	,553		
S(29)	,542		
S(14)	,530		
S(19)	,508		
S(22)	,468		
S(13)	,451		
S(30)	,449		
S(20)	,442		
S(21)	,404		
S(2)		,738	
S(10)		,703	
S(3)		,685	
S(1)		,669	
S(7)		,634	
S(4)		,626	
S(8)		,608	
S(9)		,607	
S(11)		,589	
S(5)		,549	
S(12)		,531	
S(41)			,698
S(36)			,645
S(42)			,631
S(40)			,614
S(43)			,608
S(37)			,597
S(35)			,585
S(38)			,575
S(49)			,557
S(44)			,508
S(34)			,487
S(32)			,432
S(31)			,404

Total variance explained %43.327

As a result of the explanatory factor analysis, it was seen that the scale was gathered under 3 factors. When analysis results were taken into consideration, it was concluded that item 6 was not gathered under any

factor and that item 16 and item 33 were gathered under two factors simultaneously. For this reason, the mentioned items were excluded from the scale. 41-Item data collection tool explains the 43 % of the total variance. As for the item factor load, it is observed that the factor load of each item in the factors is above 40. CFA was applied on the 3-factor structure put forth after the EFA. The CFA results regarding the scale are illustrated in Path graphic in figure 1.
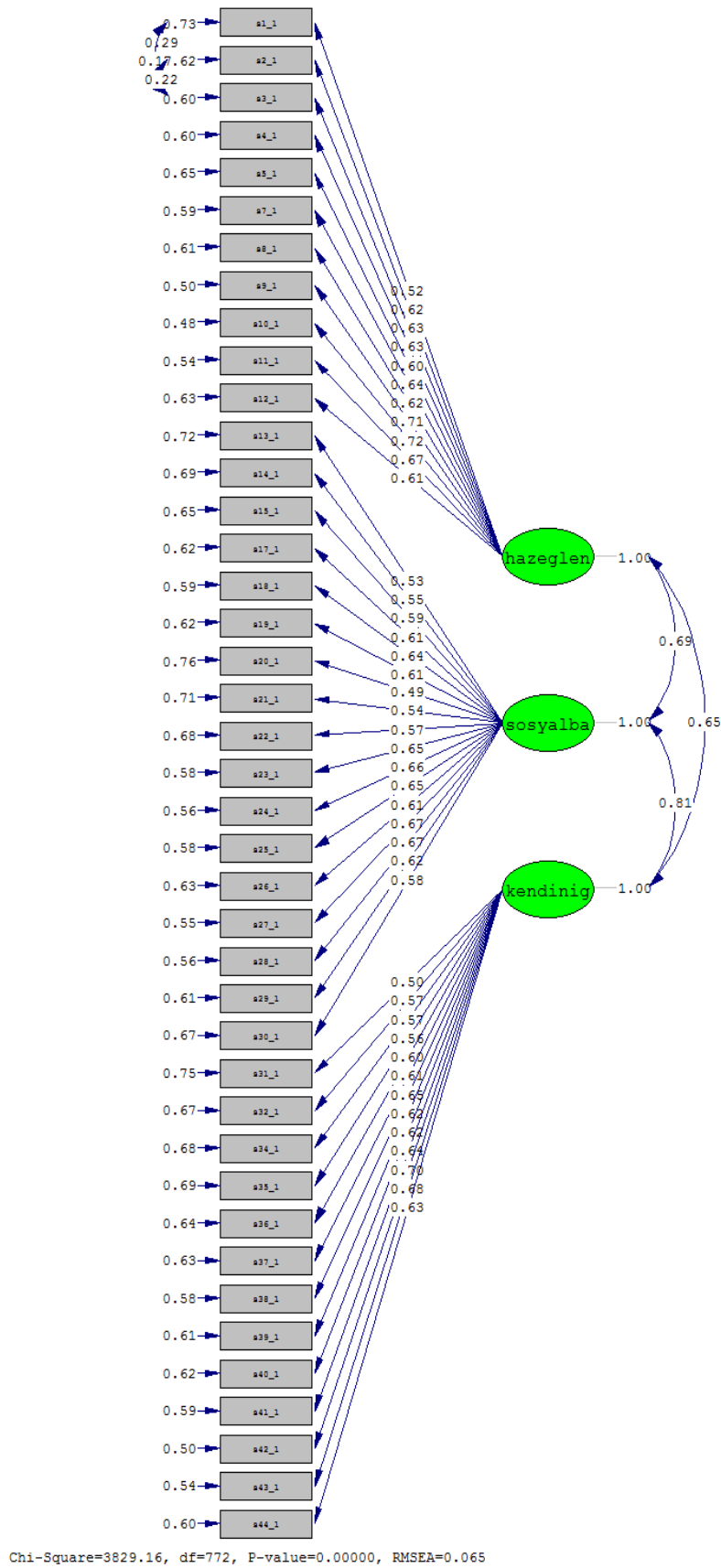
Figure 1. Path graphic of the recreational awareness scale

Table 3. Recreational Awareness Scale (Original Version)

REKREATİF ETKİNLİKLERE KATILMAK	Tamamen Katılmıyorum	Katılmıyorum	Kararsızım	Katılıyorum	Tamamen Katılıyorum
HAZ – EĞLENCE					
1- Fiziksel tatmin sağlar.	1	2	3	4	5
2- Zindelik kazandırır.	1	2	3	4	5
3- Ruhu dinlendirir.	1	2	3	4	5
4- Günlük sıkıntılardan uzaklaşmamızı sağlar.	1	2	3	4	5
5- Boş zaman tatmini sağlar.	1	2	3	4	5
6- Heyecan verici deneyimler yaşatır	1	2	3	4	5
7- Eğlendiricidir,	1	2	3	4	5
8- Yaşam kalitesini arttırır.	1	2	3	4	5
9- Yenilenmeye yardımcı olur.	1	2	3	4	5
10- Olumsuz düşüncelerden arındırır.	1	2	3	4	5
SOSYAL - BAŞARI					
11- Zamanı iyi planlamamıza yardımcı olur.	1	2	3	4	5
12- Suç oranını azaltır	1	2	3	4	5
13- Çalışma kapasitesini arttırır.	1	2	3	4	5
14- Yeni yetenek ve bilgilerin kazanımı için fırsatlar sağlar	1	2	3	4	5
15- Başarı duygusu kazandırır.	1	2	3	4	5
16- Toplumsal fayda sağlar.	1	2	3	4	5
17- Kültürel çeşitliliği ve bütünlüğü sağlar	1	2	3	4	5
18- Aidiyet duygusu kazandırır	1	2	3	4	5
19- Yeni arkadaşlıklar kurmamıza yardımcı olur.	1	2	3	4	5
20- Sosyal tatmin sağlar.	1	2	3	4	5
21- Eğitimde başarıyı arttırır.	1	2	3	4	5
22- İyi bir gelecek kurmamıza yardımcı olur.	1	2	3	4	5
23- Statü kazandırır.	1	2	3	4	5
24- Boş zamanın verimli kullanımına yardımcı olur.	1	2	3	4	5
25- Yaratıcılık becerisi kazandırır.	1	2	3	4	5
26- Sosyal davranışlarımızı kontrol etmemize yardımcı olur.	1	2	3	4	5
27- Sosyalleştirir	1	2	3	4	5
28- Toplumsal kurallara uygun yaşamamızı sağlar	1	2	3	4	5
KENDİNİ GELİŞTİRME					
29- Zamanı iyi kullanmamıza yardımcı olur.	1	2	3	4	5
30- Düşünme, öğrenme, hafıza ve konsantrasyonu geliştirir	1	2	3	4	5
31- Yeniliklere açık olma hissi kazandırır.	1	2	3	4	5
32- Doğa bilincini geliştirir	1	2	3	4	5
33- Sağlıklı iletişim kurmamıza yardımcı olur.	1	2	3	4	5
34- Bireyin çevresini tanımasına yardımcı olur.	1	2	3	4	5
35- Özgüveni arttırır.	1	2	3	4	5
36- Doğa ile olan bağlarımızı güçlendirir.	1	2	3	4	5
37- Stres ve kaygıyı azaltır.	1	2	3	4	5
38- Bireyin kendisini tanımasına yardımcı olur.	1	2	3	4	5
39- Öz saygıyı artırır	1	2	3	4	5
40- Kendini değerli görmesine katkı sağlar.	1	2	3	4	5
41- Bağımsız hareket edebilmesini sağlar.	1	2	3	4	5

Table 4. Fit indices values for the data collection tool

Fit Indice	Absolute Fit Standard	Acceptable Fit Standard	Research Finding	Result
X^2/df	≤3	4-5	3829.16	Acceptable fit
RMSEA	≤ .05	.05-.10	0.065	Acceptable fit
CFI	≥ .95	≥ .90	0.96	Absolute fit
NNFI	≥ .95	≥ .90	0.96	Absolute fit
NFI	≥ .95	≥ .90	0.95	Absolute fit
IFI	≥ .95	≥ .90	0.96	Absolute fit
RFI	≥ .95	≥ .90	0.95	Absolute fit
GFI	≥ .90	≥ .85	0.85	Acceptable fit
AGFI	≥ .90	≥ .85	0.85	Acceptable fit

Source: (Seçer, 2015, p. 122; 114, 74).

According to the results of the first level confirmatory factor analysis for the 41-item scale, the fit values of X2/df, RMSEA, GFI, and AGFI values are found to be in line with the level of acceptable fit with respect to the absolute fit value level of NNFI, CFI, NFI, IFI and RFI values. The reliability analysis results of the data collection tool are provided in table 4.

Table 5. The reliability results of the data collection tool

	Internal Consistency	Split-half Reliability
Total Scale	.948	.967
Pleasure/Fun	.885	.839
Social/Success	.905	.862
Self-improvement	.884	.860

According to analysis results, total scale results, and both internal consistency and split-half reliability results are high.

Discussion

The aim of this study is to develop a data collection tool to investigate the awareness of university students about the benefits of recreational activities. Recreational awareness is a concept related to the awareness of the advantages that recreational activities provide to individuals. When the literature is reviewed, Mannell & Stynes (1991: 461) are the ones who examined the benefits of participation in recreation in 21 categories. These categories include those such as psychological, physiological, environmental, social, and economic. Driver (1990) similarly mentions the physical, psychological, and social gains of participation in recreation. Individuals' awareness of these gains can play an active role in their recreational participation and activity selection (Dustin & Goodale, 1997).

While Paluska & Schwenk (2000) point out that regular activities provide the individual with mental strength, Sawyers (1994) and Chodzko-Zajko (1998) state that the individual will socialize as a result of his being actively involved in social status, and thus, he will get rid of loneliness and of becoming isolated, and also will experience a healthy development, Hemingway (1996) mentioned that the quality of life of individuals increases with the free time activities provided in the community. These studies reveal the

importance of the need for recreation. Recreational activities should be carried out consciously in order for this need to be completely met. Recreational activities that are carried out deliberately will offer great gains both to the individual and to the society.

When the study findings are examined, it is considered that the internal consistency coefficient and the total item correlation scores obtained in the pilot study results are sufficient. As a matter of fact, Büyüköztürk (2012) argues that, in general, total item correlation should be .30 and higher, while he also states that the total item correlation score explains the relation between the scores obtained from the test items and the total score of the test. Moreover, the total internal consistency coefficient is considered to be sufficient (George & Mellory, 2003). An Explanatory Factor Analysis was conducted to determine the implicit structure of the data collection tool which was wanted to be developed in the study. Varimax rotation which is commonly available orthogonal methods of rotation is the most common choice (Costello & Osborne, 2005). Therefore, principal components analysis with a Varimax rotation was chosen to conduct the exploratory factor analysis in this study. The results of the Varimax rotation showed that the data collection tool supports a structure which comprises of 41 data items collected in 3 factors, explaining 43.371% of the total variance. As for the fit of the implicit structure, it was tested by confirmatory factor analysis. According to the results of the analysis, it was determined that the fit indice values of 41 items and 3 factor structures are at acceptable levels (Erkorkmaz et al., 2013; Seçer, 2015; Kılbaş, 2001; Schumacker & Lomaks, 2010; Reed & Wilson, 2006). After making sure that the data collection tool was valid, the scale was tested with the methods of reliability, internal consistency, and split-half reliability. According to the analysis, the results of internal consistency and split-half reliability that were calculated for total scale and sub-dimensions were found to be high (George & Mellory, 2003). While there is no total score calculated for the scale, the responses to the scale are evaluated by means of a 5-option Likert scale questionnaire, the choices of which range from 1 - I strongly disagree to 5 - I strongly agree. Therefore, it can be said that as the score obtained from the related sub-dimension increases, the awareness about that sub-dimension increases as well.

Conclusion

The outcomes of this study indicate the results that Recreational Awareness Scale (RAS) consisting of 41 items and 3 dimensions is a tool that can measure the recreational awareness of university students. According to the EFA and CFA findings, the factor design and the model structure of Recreational Awareness Scale consisting of 41 items were verified and it was proven to be a valid and reliable assessment instrument for the university students in Turkey. The scale's total internal consistency reliability was found to be .94, and the consistency reliabilities of the sub-dimensions were found to be as follows: pleasure/fun .88, social/success .90 and self-improvement .88. Recreational awareness scale (Mannell & Kleiber, 1997) retains its theoretical validity and is supported by theories such as *Keeping Idle Hands Busy Theory*: individuals are happy when they are busy, *Psychological Hedonism Theory*: individuals' fulfilling their wish to be happy, to rest, and to have fun by using their spare time, *Personal Growth Theory*: individuals realising themselves and reaching their true potential, and *Buffer and Coping Theory*: an individual who is capable of overcoming (enduring) the difficult situations that one can encounter in daily life.

Research Limitations and Suggestions

This study was subject to some limitations. First, it was limited to the culture context of Turkish university students. Future research on this issue could compare several cultural contexts to determine the differences between university students. Second, other personal factors such as economic welfare and their life style may affect their awaireness level. For future studies, it will help to get better information about students growing conditions, parents attitudes and their knowledge about the positive effect of the recreation.

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