

EXAMINATION OF SCALES IN RECREATION AREA USED IN TURKEY

ABSTRACT

Recently leisure and recreation became significant concepts in our country. Departments were established in various faculty and schools and academicians have made studies contributing to the field and literature. Taking into consideration these studies, the aim of this research is to analyze scales in recreation field developed in our country or adapted to our language according to content, method, year, authors, journals and institutions. This study is a descriptive study and data collection method is literature review. According to the results of the study 18 scales were detected among which 12 were adapted and the remaining 6 scales were developed in our country. The first adaptation study was conducted in 2004 and most adaptation and development studies were conducted in 2006. In reliability studies, test re-test analysis, internal consistency with Cronbach's alpha and item analysis were examined. In order to examine validity, explanatory and confirmatory factor analyses were evaluated. Predominantly studies were presented in international sport congresses, consisted of master and doctoral dissertations and published in national sport sciences journals. Culturally adapted scales contribute to literature by making cross-cultural comparisons and develop new scales specific to the culture. Development of new scales is expected to enrich recreation field academically.

Key Words: Leisure Time, Recreation, Validity and Reliability

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REKREASYON ALANINDA TÜRK YEDE KULLANILAN ÖLÇEKLERİN İNCELENMESİ

ÖZET

Ülkemizde son yıllarda serbest zaman ve rekreasyon kavramları önemli kavramlar haline gelmiştir. Üniversitelerde bu konuda deprem fakültesi ve yüksekokullarda bölümler açılmış ve bu paralelde yeterli olan ve yeterli akademisyenler alan ve literatüre yönelik yayınlar yaparak katkı sağlamışlardır. Bu çalışmaları göz önünde bulundurarak araştırmanın amacı; rekreasyon alanında ülkemizde kullanılan ölçek adaptasyonu yapılmış ya da geliştirilmiş ölçeklerin içerik, yöntem, yıl, yazarlar, dergiler ve kurumlar açısından incelenmesidir. Çalışma tanımlayıcı bir ara tırma olup, veri toplama yöntemi literatür taramasıdır. Ara tırma sonucunda toplam 18 adet ölçek çalışmasının olduğu belirlenmiştir, bunlardan 12 ölçek dil adaptasyonu yapılmış, kalan 6 ölçek ise ülkemizde geliştirilmiştir. İlk adaptasyon çalışması 2004 yılında yapılmış olup, en fazla adaptasyon ve geliştirme çalışmaları 2006 yılında görülmektedir. Adaptasyon ve ölçek geliştirme çalışmalarında güvenilirlik analizi olarak deprem mezli testi için test tekrar testi, ç Tutarlılık testi için Cronbach's Alpha ve Madde Analizi, geçerlik çalışmaları için de Açıklayıcı Faktör Analizi ve Doğrulayıcı Faktör Analizi kullanılmıştır. Çalışmalar ayrıntılı olarak uluslararası spor bilimleri kongrelerinde sunulmuş ve spor bilimleri alanında yüksek lisans ile doktora tezlerinde yer almış ve ulusal spor bilimleri dergilerinde yayınlanmıştır. Bir ülke kültürüne adapte edilmiş olan ölçekler, hem kültürler arası karşılaştırmalar yapmak, hem de söz konusu ülke kültüründe yeni ölçekler geliştirmek açısından literatüre katkı sağlayacak çalışmalardır. Yeni ölçeklerin geliştirilmesinin de rekreasyon alanını akademik açıdan zenginleştirileceği düşünülmektedir.

Anahtar sözcükler: Serbest Zaman, Rekreasyon, Geçerlik ve Güvenilirlik

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INTRODUCTION

It is observed that different scales were developed or adapted from other countries. In last years it is known that many scales were developed or adapted for leisure or recreation subjects because recently Recreation and Recreation Management Departments were opened in different faculties or schools and academics educated in this parallel contributed to literature by publishing. In order both to determine the state of literature in this area and to make guidance to following studies; scales adapted or developed for recreation area in our country were examined according to content, method, year, authors, journals and institutions.

The concept of measurement was defined by many different ways. One of these definitions was a traditional one made as “the comparison of any magnitude by a dimension unit selected from its own kind” (Karasar, 2003). According to another definition, measurement was “the detachment of objects and attributes to symbols or numbers according to various rules” (Erku, 2003).

What should be taken care is that, the attributes are expressed in numbers and the measurement tool (scale) fulfilling this function should be developed according to stated rules. When the attributes required for a scale is considered, it should be highlighted that a poor measurement could render all kinds of scientific effort worthless. “Measurement is realized for a certain aim. The aim is to make evaluation of individuals, events and objects and make certain decisions based on the results of evaluation. The accuracy and conformance of the decisions depend on the results of the evaluation, on account of the results of measurement used in evaluation and the correctness of the measure. Therefore the measurement tool is desired to be standardized (Ercan and Kan, 2004). Two of the most important basic attributes required for the scale to be standardized and produce

appropriate knowledge afterwards are reliability and validity.

Reliability: Reliability is defined as the repeatability of the measurement action or the consistency of repetitions and the stability of the independent measurements of an attribute during a measurement process (Alpar, 2010; Tekin, 1996). Therefore in order for a measurement tool to be reliable, the same or similar results should be obtained when this tool is applied once more under the same conditions.

Different methods are utilized for calculating reliability coefficient of a scale. In general these methods are collected under 3 headings. According to Gözüm and Aksayan (2003) these are; “Invariability”, “Accordance among and inside independent observers (Observer Reliability)” and “Internal Consistency”. In this study for Invariability, test re-test reliability and for Internal Consistency, Cronbach’s Alpha and Item Analysis Tests were considered for evaluation.

Test Re-test Reliability: This test is applied to the same individuals under same conditions repeated after a certain time period. After these two applications the correlation coefficients obtained from these two tests are calculated. The calculated correlation coefficient (r) is the reliability coefficient of the test. This coefficient is also named as determination coefficient. As r becomes closer to +1, the test is assumed to be that much reliable (Alpar, 2010).

Cronbach’s Alpha: This coefficient is a measurement of internal consistency (homogeneity) of items in the scale (Alpar, 2010). In other words; Cronbach’s Alpha Coefficient, is a weighted average of standard variance found by proportioning the total variance of k items in the scale to general variance (Özdamar, 2002). As the Alpha coefficient gets higher, it is assumed that the items in the scale are consistent with each other and constitute the items that predict the elements of the same attribute. As they are used in Likert type scales, the satisfactory Alpha coefficient should be close to 1 (Tezba aran, 1996).

Item Analysis: The procedure realized in order to examine the contribution of items to the scale after the formation of items constituting the scale, is called as item analysis (Alpar, 2011) or item reliability. Item analysis implies the relationship between the value of every item in the scale and the total obtained from the scale. Although the items of the scale have equal weight and are in the form of independent units, the correlation coefficient between each item and total values (correlation coefficient) are expected to be high (Karasar, 2003).

Validity: This concept is related with the measurement of a desired attribute by a test. If a test measures the desired attribute correctly and not confusing with other attributes, this test is stated as valid. Reliability affects the validity of a test. A valid test should be absolutely reliable. The first condition that a scale is counted as valid is its being reliable (Alpar, 2010).

The validity level of a scale is deduced by calculating its validity coefficient. Validity coefficient is the correlation between the values obtained from the scale and the criteria determined according to the intention of usage and it takes values between “-1.00 and +1.00”. As the correlation coefficient gets higher, it means that it serves this purpose more (Ercan and Kan, 2004).

Although there are many measures to test the validity of a scale, these are collected under three headings. According to Gözüm and Aksayan (2003); they are “Content Reliability”, “Criterion Reliability” ve “Structural Reliability”.

In this study Explanatory and Confirmatory Factor Analyses were evaluated under the scope of structural reliability.

Explanatory Factor Analysis: According to Alpar (2010); it is transforming data structures related with each other to independent, new data structures with less number. In other words it is a total of methods that is referred in order to reveal the variables explaining the reason of a formation (factors, dimensions or components) and if necessary their names.

Factor analysis is an important helper in determining if a structure has statistically one or more dimensions. Therefore it is used quite often in studies of scale development or adaptation and supports determining if the dimensions of the original scale exists for the adapted language/society/group.

Confirmatory Factor Analysis: It is a factor analysis used to test the appropriateness of the factors stated by explanatory factor analysis to factor structure determined by hypothesis (Özdemir, 2012). In other words, the factor structure of the applied scale is compared with that of the original scale, similarities and dissimilarities are observed. It is expected that the factor structure of a scale is not changed much when adapted to another language (Öner, 1987). Confirmatory factor analysis is an analysis where a structure defined and limited in advance is confirmed as a model or not and it is used for testing structural validity (Çokluk et al., 2010). In confirmatory factor analysis the contributions of both the relations predetermined by the researcher and all possible relations, to the model could be understood (İmrek, 2007).

MATERIAL and METHOD

This study is a descriptive research and the data collection method is literature review. A total of 18 scales were detected concerning recreation and leisure concepts. In 12 of these scales language adaptation was applied, and 6 of them were developed in our country. The selection criteria of the scales were covering the titles or subjects of recreation or leisure.

The scales were examined according to content, method, year, authors, and institutions. In methods analysis, sample, language adaptation, validity and reliability were handled.

RESULTS

Service Quality Assessment Scale (SQAS) developed by Lam (2000) was adapted to Turkish by Gürbüz et al. (2004). The study was published in a proceedings book of an international conference (19th Conference of North American Society for

Sport Management) and sample consisted of 636 health and wellness club members. Two-way translation and adaptation procedure was applied and composite reliability, explained variance was applied. In validity study confirmatory factor analysis was utilized.

“Constraints in Rural Recreational Activities” was developed by Müderriso lu et al. (2005) and was published in Journal of Agricultural Sciences. Sample consisted of 250 university students. Cronbach’s Alpha was used in reliability analysis while explanatory factor analysis was used for validity testing.

“Constraints on Recreational Sport Participation” scale was developed by Alexandris and Carrol (1997) and adapted to Turkish by Karaküçük et al. (2006). In this study which was presented in 9th International Sport Sciences Congress and published in proceedings book, a sample of 303 university students were included. Cronbach’s Alpha was used in reliability analysis while explanatory factor analysis was used for validity testing.

“Recreational Exercise Motivation Measure” was developed by Rogers and Morris (2003) and adapted to Turkish by Gürbüz et al. (2006). In the study which was presented in 9th International Sport Sciences Congress and published in the proceedings book, 349 exercise participants constituted the sample. In reliability analysis Cronbach’s Alpha, in validity analysis explanatory factor analysis was used.

“Customer Satisfaction Scale was developed by Alexandris and Palialia (1999) and adapted to Turkish by Kutlu (2006). The study was presented as a master’s thesis in Middle East Technical University School of Physical Education and Sport. The sample of the study consisted of 317 members of health and wellness clubs. In the study where two way translation and adaptation procedure was applied, Cronbach’s Alpha was used for reliability analysis and explanatory factor analysis was used for validity testing.

“Outdoor Sports Leadership Scale” was developed by Dinç (2006) and presented as a doctoral dissertation in Hacettepe Sport Sciences and Technology programme. The Sample consisted of 380 members of outdoor sport discussion groups Cronbach’s Alpha and test re-test methods were applied for reliability meanwhile, explanatory factor analysis was applied for testing validity.

“Meaning of Leisure Scale” was developed by Esteve et al. (1999) and adapted to Turkish by Gürbüz et al. (2007). The study which was presented in 4th. International Mediterranean Sport Sciences Congress and published in the proceedings book. The sample of the study consisted of 305 university students. In reliability analysis Cronbach’s Alpha was used meanwhile for testing the validity, explanatory factor analysis was conducted.

“Leisure Satisfaction Scale” was developed by Beard and Ragheb (1980) and its long version was adapted to Turkish by Karlı et al. (2008). The study was published in Hacettepe Sport Sciences Journal. The sample of the study consisted of 561 university students. Two-way translation and adaptation process was applied in the study. For testing reliability; Cronbach’s Alpha and Item Analysis, for testing validity, explanatory factor analysis was applied. After these analyses, the long version of the adapted scale consisted of 39 items.

The items of “Leisure Satisfaction Scale”, developed by Beard and Ragheb (1980) was reduced to 24 items by Idyll Arbor Inc. in 2002 and converted to a short version. Gökçe (2008) adapted this short version to Turkish with a sample of 454 individuals between 15-54 ages living in Denizli city center. After two way adaptation and translation procedure, reliability analysis was conducted with Cronbach’s Alpha, and validity test was applied by explanatory factor analysis and correlation analysis.

“Leisure Motivation Questionnaire” which was developed by Pelletier et al. (1991) was adapted to Turkish by Mutlu (2008) and presented as a master’s thesis in Nigde University Physical Education and Sport

Department. The sample consisted of 515 individuals participating in health and wellness programmes. Reliability analysis was conducted with Cronbach's Alpha and item analysis, and validity test was applied by explanatory factor analysis

"New Ecological Paradigm Scale" which was developed by Dunlap et al. (2000) was adapted to Turkish by Demirel et al. (2009). In the study which was published in *Sport Science Physical Education and Sport Journal*, the sample consisted of 222 university students. Reliability analysis was conducted with Cronbach's Alpha, and validity test was applied by explanatory factor analysis. The Ecological Paradigm Scale was handled in various validity and reliability studies other than Recreation area (Alniaçık and Koç, 2009; Sam et al., 2010).

"User Satisfaction in Rural Recreation Areas Scale", was developed by Uzun and Müderriso lu (2010) and published in *Suleyman Demirel University Journal of Forest Faculty*. The sample of the study consisted of 250 individuals who are refreshment area user. Reliability analysis was conducted with Cronbach's Alpha and validity test was applied by explanatory factor analysis

"Leisure Attitude Scale", developed by Ragheb and Beard (1982) was adapted to Turkish by Akgül and Gürbüz (2010). The study was published in the *Proceedings Book of 11th Sport Sciences Congress*. The sample consisted of 218 university students. Reliability analysis was conducted with Cronbach's Alpha and item analysis meanwhile validity test was applied by explanatory factor analysis.

"Service Quality of Recreative Organizations Scale" was developed by Ceylan et al. (2010) and the study was published in the *Sport Sciences Journal of*

Turkish Kick box Federation. The sample consisted of 285 individuals benefiting from animation services. Reliability analysis was conducted with Cronbach's Alpha and validity test was applied by explanatory factor analysis.

"Participation in Recreation Activities Scale" was developed by Tütüncü et al. (2011) and was published in *Hacettepe Sport Sciences Journal*. Sample consisted of 946 university students. Reliability analysis was conducted with Cronbach's Alpha and validity test was applied by explanatory factor analysis and correlation analysis.

"Perceived Freedom in Leisure Scale", developed by Witt and Ellis (1985) was adapted to Turkish by Yerlisu Lapa and A yar (2011). The study was published in *World Applied Sciences Journal*. The sample of the study consisted of 500 university students and two way translation and adaptation procedure was applied. Reliability analysis was conducted with Cronbach's Alpha, test re-test and item analyses and validity test was applied by explanatory factor analysis.

"Recreation Leadership Scale", developed by Huang (2004) was applied by Ba o lu (2011) to 187 individuals attending to sport centers in a doctoral thesis presented at *Marmara University, department of physical education and sport*. Reliability analysis was conducted with Cronbach's Alpha Cronbach's Alpha analysis, and validity test was applied by explanatory factor analysis.

"Outdoor Trekking Participation Motivation Scale" was developed by Ekinçi et al. (2012). The study was presented in 1st *Recreation Research Congress* and published in the *proceedings book*. The sample of the study consisted of 182 volunteers who had participated in outdoor trekking. Reliability analysis was conducted with Cronbach's Alpha Cronbach's Alpha analysis, and validity test was applied by explanatory factor analysis.

Table 1. Descriptive Information of Scaled in Recreation Area used in Turkey

Name of the Scale	Developed by	Year of Developing	Authors of the Study	Usage of the Scale	Institutions of the Authors	Year	Type of Publication	Sample	Language Adaptation and Validity	Reliability	Validity
Service Quality Assessment Scale	Lam E.T.C.	2000	Gürbüz B.	Adaptation	Baskent Üni. Sport Sciences Department	2004	19th Conference of North American Society for Sport Management, Abstract Book	636 Health and Wellness Club Members	Two way translation and adaptation procedure	Composite Reliability	Confirmatory Factor Analysis
			Koçak S.		METU Physical Education and Sport Department						
			Lam E.T.C		Cleveland State Univ. Department of HPERD						
Constraints in Rural Recreational Activities	Müdürriso lu, H.	2005	Müdürriso lu, H.	Scale Development	Abant zzet Baysal Üni. Landscape Architecture Department	2005	Agricultural Sciences Journal	250 University Students		Cronbach's Alpha	Explanatory Factor Analysis
	Kutay, E.L.		Kutay, E.L.								
	Örnekcı Esen, S.		Örnekcı Esen, S.								
Constraints on Recreational Sport Participation	Alexandris, K.	1997	Karaküçük, S.	Adaptation	Gazi Üni. School of Physical Education and Sport	2006	9th International Sport Sciences Congress Proceedings Book	303 University Students		Cronbach's Alpha	Explanatory Factor Analysis
	Carroll, B.		Gürbüz, B.		Baskent Üni. Sport Sciences Department						
Recreational Exercise Motivation Measure	Rogers T.	2003	Gürbüz, B.	Adaptation	Ba kent Üni. Sport Sciences Department	2006	9th International Sport Sciences Congress Proceedings Book	349 Exercise Participants		Cronbach's Alpha	Explanatory Factor Analysis
	Morris, T.		A çı, H.		Abant zzet Baysal Üni. School of Physical Education and Sport						
			Çelebi, M.								
Customer Satisfaction Scale	Alexandris, K.	1999	Kutlu, D.	Adaptation	METU Physical Education and Sport Department	2006	METU Physical Education and Sport Department Unpublished Master's Thesis	317 Health and Wellness Club Members	Two way translation and adaptation procedure	Cronbach's Alpha	Explanatory Factor Analysis
	Paliaia, E.										
Outdoor Sports Leadership Scale	Dinç, C.S.	2006	DinÇ, C.S.	Scale Development	Hacettepe Üni. Sport Sciences and Technology Programme	2006	Hacettepe Üni. Sport Sciences and Technology Programme Unpublished Doctoral Thesis	380 Members of Outdoor Sports Discussion Groups		Cronbach's Alpha	Explanatory Factor Analysis
Meaning of Leisure Scale	Esteve, R.	1999	Gürbüz, B.	Adaptation	Ba kent Üni. Sport Sciences Department	2007	4th International Sport Sciences Congress Proceedings Book	305 University Students		Cronbach's Alpha	Explanatory Factor Analysis
	San Martin, J.		A çı, H.		Gazi Üni. School of Physical Education and Sport						
			Lopez, E.		Çelebi, M.						

Leisure Satisfaction Scale-Long Version	Beard, J.G.	1980	Karlı, Ü.	Adaptation	Niğde Üni. School of Physical Education and Sport	2008	Hacettepe Sport Sciences Journal	561 University Students	Two way translation and adaptation procedure	Cronbach's Alpha	Explanatory Factor Analysis
			Polat, E.		Abant İzzet Baysal Üni. School of Physical Education and Sport					Madde Analizi	
	Ragheb, M.G.		Yılmaz, B.		Niğde Üni. School of Physical Education and Sport						
			Koçak, S.		METU Physical Education and Sport Department						
Leisure Satisfaction Scale -Short Version	Beard, J.G.	1980	Gökçe, H.	Adaptation	Pamukkale Üni. School of Sport Sciences and Technology	2008	Pamukkale Üni. Psycho-social Sciences Department Unpublished Master's Thesis	454 individuals between ages 15-54 Living in Denizli City Center	Two way translation and adaptation procedure	Cronbach's Alpha	Explanatory Factor Analysis
	Ragheb, M.G.										Correlation Analysis
Leisure Motivation Scale	Pelletier, L.G.	1991	Mutlu, .	Adaptation	Niğde Üni. School of Physical Education and Sport	2008	Niğde Üni. Physical Education and Sport Department Unpublished Master's Thesis	515 Participants of Health and Wellness Programmes		Cronbach's Alpha	Explanatory Factor Analysis
	Vallerand, R.J.									Item Analysis	
	Blais, M.R.										
	Briere, N.M.										
New Ecological Paradigm Scale	Dunlap, R.	2000	Demirel, M.	Adaptation	Gazi Üni. School of Physical Education and Sport	2009	Spormetre Physical Education and Sport Sciences Journal	222 University Students		Cronbach's Alpha	Explanatory Factor Analysis
	Van Liere, K.D.		Gürbüz, B.		Bağkent Üni. Sport Sciences Department						
	Mertig, A.G.		Karaküçük, S.		Gazi Üni. School of Physical Education and Sport						
	Jones R.E.										
User Satisfaction in Rural Recreational Areas	Uzun, S.	2010	Uzun, S.	Scale Development	Düzce Üni. Forest Faculty Department of Landscape Architecture	2010	Süleyman Demirel Üni. Journal of Forest Faculty	250 Refreshment Area Users		Cronbach's Alpha	Explanatory Factor Analysis
	Müdürriso lu, H.		Müdürriso lu, H.								
Leisure Attitude Scale	Ragheb, M.G.	1982	Akgül, B.M.	Adaptation	Gazi Üni. School of Physical Education and Sport	2010	11th International Sport Sciences Congress	218 University Students		Cronbach's Alpha	Explanatory Factor Analysis
	Beard, J.G.		Gürbüz, B.		Ahi Evran Üni. School of Physical Education and Sport					Item Analysis	
Service Quality of Recreative Organizations Scale	Ceylan, O.	2010	Ceylan, O.	Scale Development	Recreation Expert	2010	Sport Sciences Journal of Turkish Kickbox Federation	285 Users of Animation Services		Cronbach's Alpha	Explanatory Factor Analysis
	Yıldız, S.M.		Yıldız, S.M.		Balıkesir Üni. School of Physical Education and Sport.						

	Tekin, A.		Tekin, A.		Mu la Üni. School of Physical Education and Sport						
	Özda , S.		Özda , S.		Mu la Üni. School of Physical Education and Sport						
Participation in Recreation Activities Scale	Tütüncü, Ö.	2011	Tütüncü, Ö.	Scale Development	Dokuz Eylül Üni. School of Sport Sciences and Technology.	2011	Hacettepe Sport Sciences Journal	946 University Students		Cronbach's Alpha	Explanatory Factor Analysis Correlation Analysis
	Aydın, .		Aydın, .		Dokuz Eylül Üni. Social Sciences Institute Business Administration Department						
	Küçükusta, D.		Küçükusta, D.		Hong Kong Polytechnic University School of Hotel and Tourism Management						
	Avcı, N.		Avcı, N.		Ege Üni. Cesme Tourism School						
	Ta , .		Ta , .		Dokuz Eylül Üni. Reha Midilli Foca Tourism School						
Perceived Freedom in Leisure	Witt, P.A.	1985	Yerlisu Lapa, T.	Adaptation	Akdeniz Üni. School of Physical Education and Sport	2011	World Applied Sciences Journal	500 University Students	Two way translation and adaptation procedure	Cronbach's Alpha	Explanatory Factor Analysis
	Ellis, G.D.		A yar, E.								
Recreational Leadership Scale	Huang M.J.	2004	Ba o lu, U.D.	Adaptation	Army Ground Forces Command Headquarters	2011	Marmara Üni. Department of Physical Education and Sport	187 Individuals Attending to Sport Centers		Cronbach's Alpha	Explanatory Factor Analysis
Outdoor Trekking Participation Motivation Scale	Ekinci, E.	2012	Ekinci, E	Scale Development	Gazi Üni. Health Sciences Institute	2012	1st Recreation Research Congress Proceeding Book	182 Individuals Participating to Outdoor Trekking		Cronbach's Alpha	Explanatory Factor Analysis
	Yenel, F.		Yenel, F.		Gazi Üni. School of Physical Education and Sport						
	Sarol, H.		Sarol, H.		Gazi Üni. School of Physical Education and Sport						

DISCUSSION

The purpose of this study was to examine the scales in recreation area used in country according to content, method, year, authors, journals and institutions. In this study a total of 18 scales were evaluated and it was observed that most of them 66,67% consisted of adaptation studies. The papers of the scales were mostly with 3 authors 27,78%.

The sources publishing the papers were examined and most papers were found to be presented in International Sport Sciences Congresses (27,78%), used in graduate theses conducted in Sport Sciences related departments (27,78%). These categories were followed by National Refereed Sport Sciences Journals (22,22%). While evaluating the scales, it was observed that in international area, scale development in recreation began from 1980s, however both scale development and adaptation studies began only after 2000s. In this study it was found out that most studies concerning scale development and adaptation specific to the recreation are took place in 2006 (22,22%). In both scale development and adaptation studies the sample consisted of university students (44,44%) followed by health and wellness club members or exercise programme participants (22,22%).

In the papers Cronbach's Alpha, test re-test and item analyses were used for reliability analysis. For validity testing, in most studies Explanatory Factor Analysis (94,44%) and only in one study Confirmatory Factor Analysis were used. In some of the

adaptation studies (41,67%) the procedure of two-way translation and adaptation was mentioned.

CONCLUSION

Recently concepts of leisure and recreation gained importance in our country. Departments related with this subject were opened in various faculties and schools and in this parallel many academics were trained who contributed the literature by publishing. For the purpose of increasing international studies, developed or adapted scales could contribute positively.

While conducting adaptation studies, it is important to consider the procedure of two-way translation and adaptation. Additionally satisfactory level of reliability and validity should be obtained. If the scales developed or adapted for certain groups are applied in different groups, validity tests might be required again.

The academics working in this area could once again develop the scales according to special groups (elderly, disabled, children etc.) While developing scales the theories of recreation should be considered and both national and international literature should be examined in detail.

Scales adapted to another culture are contributory studies both for making cross cultural comparisons and develop new scales for a culture. The application of adapted scales to groups with different age, gender and attributes and associating them with other structures existing in recreation theories would contribute to recreation literature.

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