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Adaptation of compulsive sport consumption scale into Turkish culture: CSCS-T

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Abstract: Consuming sports products and services incessantly without being able to restrain oneself is characterized as compulsive sports consumption. The aim of this study is to adapt the Compulsive Sport Consumption Scale (CSCS) developed in English by Aiken et al. (2018) into Turkish utilizing a scientific scale adaptation process. The CSCS consists of six items and is graded on a seven-point Likert scale ranging from strongly disagree to strongly agree. Higher CSCS levels are affiliated with psychological and behavioral constructs related to the effects of sports consumption, such as time, money, coping, and psychological and behavioral neglect. The scale has been tailored via a group of English and Turkish linguists, sports scientist, and psychometrist. Parallel analysis has been performed on account of inspecting the dimensionality of the scale, and many statistics such as unidimensional congruence, explained common variance, mean of item residual absolute loadings, and robust fit statistics have been used. In accordance with parallel analysis, the scale was unidimensional, and all other statistics supported that as well. The unidimensional adapted scale (CSCS-T) explained approximately 83% of the total variance. Additionally, internal consistency, composite reliability, and test-retest reliability have been examined to determine the measurement's reliability. Cronbach's Alpha was .958, McDonald's Omega was .958, and Pearson's product-moment correlation coefficient was .923 in the wake of the test-retest application. All of the findings propound that when investigating compulsive over-participation in sports consumption in Turkish-speaking populations, the CSCS-T can be used to acquire valid and reliable measures.

1. INTRODUCTION

It is known that contemporary western societies use sports and various social resources for individuals' lifestyles and identity achievement (Wheaton, 2000). In the historical process, sports were regarded as worthless in terms of economy until the 1970s. Nonetheless, investments by dint of economic support led to an increase in the value of sports after the 1970s (Lera-Lopez & Rapun-Garate, 2007). In the 21st century, the fact that sports are one of the most substantial economic resources in the world has induced societies to benefit from sports predominately. The proliferation of technology and the escalating competition have led to an

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increase and diversification in consumption elements. This has culminated individuals into engage with sports consumption, which is covered the consumption phenomenon.

Numerous studies on sports consumption have been found in the literature. The first studies examined socio-demographic variables such as gender, age, and income status in relation to sports consumption in the 1970s and 1980s (Lera-Lopez & Rapun-Garate, 2007; Armstrong & Peretto Stratta, 2004), as well as the factors influencing sports participation (Hansen & Gauthier, 1989). Studies mainly included (a) relational structures including concepts such as trust, commitment and closeness, (b) interaction and media involved in providing communication, (c) demographic factors including variables such as age and gender among sports consumption and sports organization (Kim & Trail, 2011). These variables and structural differences are beneficial in understanding the individual's participation in sports and interpreting the relationship.

In addition to the factors affecting participation, this phenomenon is a form of hedonic consumption (Hopkinson & Pujari, 1999). Consumption is a substantial part of sports, which can be motivated by hedonic pleasure, supports emotional and cognitive states (Kempf, 1999) and provides sports consumers a wide perspective thanks to the moral excellence of sports (Jang et al., 2020). The ascending focus on fans, social media tools, sponsorship revenues, and advertisements have increased the economic viability of sports and ensured its presence in the sports market owing to the development of sports.

A significant issue of sports marketing is the content and necessity of sports consumption. The fact that sports products embody both physical and non-monetary services causes sports consumption behavior directly or indirectly (Yoshida & Nakazawa, 2016). Sports consumption impresses emotions, behavioral outcomes and motivation (Jang et al., 2021). Nevertheless, autonomous or controlled motivation is thought to be a factor in identifying the requirements in sports consumption (Kim & Mao, 2021). Consequently, sports consumption encapsulates all activities that individuals do with active or passive participation (Koning, 2009) in order to consume sports products and services immediately or later. Aside from the requirements that arise for the occurrence of sports consumption or the other factors that influence it, the economy plays an important role in sports consumption.

Low costs have come under the reasons for preferring sports consumption (Kim and Mao, 2021). The dramatic upswing in sports consumption in recent years has brought competition (Trail et al., 2003). The economic sustainability of sports and the increase in consumption have triggered more effective use of social media tools this is why the consumption of sports products and services is directly related to individuals who have easy access to media tools.

The internet is particularly used as a notable market and marketing tool in the realization of sports consumption. Therefore, it is a worthy part of sports consumption (Hur et al., 2007; Seo & Green, 2008; Kim & Trail, 2011). Smartphones (Chan-Olmsted & Xiao, 2019; Ha et al., 2017), participation in sports and culture (Mehus, 2005), income status (Thibaut et al., 2014), media (Koronios et al., 2020; Chan-Olmsted & Kwak, 2020) and environmental factors (Fink et al., 2002) seem to be outstanding components in determining the level of sports consumption with developing technology. Being a technology-enabled society today has made it easier for us to provide immediate and continuous access to sports. This has led individuals to be unable to stop themselves and to have an active role in sports consumption (Aiken et al., 2018). Factors such as inability to stop oneself, physical and psychological dependence, loss of control cause compulsive behavior (Ronald et al., 1987). Individuals who exhibit this behavior place a high value on the appearance of products (Trautmann-Attmann & Johnson, 2009). Factors influencing consumption, such as the convenience of online shopping and the ease of access to products, may also contribute to an increase in compulsive behaviors (Huang et al., 2022).

Different products or consumption requirements will help temporarily alleviate mental problems such as stress, apprehension, anxiety and depression.

The inability of individuals to prevent or stop them or to engage in uncontrolled sports consumption is called "compulsive sports consumption". It is critical to make compulsive sports consumption measurable for researchers studying the sports industry and human behaviors interested in sports. The literature review revealed that some researchers attempted to measure sports consumption motivation (Cottingham et al., 2014; Seo & Green, 2008; Trail & James, 2001) whereas only Aiken et al. (2018) addressed compulsive sports consumption.

1.1. The Present Study

This is a scale adaptation study that arose from the need to investigate the compulsiveness of sport consumption, which affects a large number of people, including Turkish-speaking populations.

It is possible to use a measurement tool developed in one language in another, but translation alone is insufficient, and even considering it sufficient leads to serious scientific errors. To accomplish this, it is necessary to culturally adapt the scale and obtain evidence for the scale's validity and reliability through studies conducted with target culture samples. Furthermore, scale adaptation is a collaborative effort that necessitates the collaboration of experts in the field, psychometrists, and linguists.

There are some well-known sources in the literature that describe the scale adaptation processes (Hambleton & Patsula, 1999; Hambleton, Meranda & Spielberger, 2005). Taking these contexts into account, we followed the scale adaptation steps outlined below in our study.

- Deciding whether it is more useful to develop a new scale or adapt an existing scale.
- Requesting Permission for Adaptation.
- Choosing highly qualified translators.
- Translation and adaptation of the scale into the target language.
- Feedback application of the adapted version of the scale on a small group.
- Analyzing linguistic equivalence.
- Applying the scale to a larger group that can represent the target group and obtaining evidence of the scale's validity and reliability.
- Examining test-retest reliability.

The Compulsive Sport Consumption Scale (CSCS), developed in English by Aiken et al. (2018), was aimed to be adapted into Turkish with scientific accuracy by following the predetermined steps in this study.

2. METHOD

During the adaptation process, both theoretical and field studies were conducted with 12 experts and 521 participants. The participants were distributed as follows: nine in the small group application, 66 in the linguistic equivalence application, 409 in the large group application, and 37 in the test-retest reliability application.

2.1. Description of CSC Scale Original Form

The CSCS consists of six items and uses a 7-point Likert scale from *strongly disagree* to *strongly agree*. Higher levels of CSCS were linked to psychological and behavioral constructs such as past and current sport participation, as well as the consequences of sport consumption (i.e., time, money, coping, and psychological and behavioral neglect). CSCS is capable of classifying and distinguishing compulsive sport consumers from less compulsive sport consumers. The studies demonstrated that CSCS-identified compulsive sport consumers spent a disproportionate amount of time and money on sport and experienced more negative

consequences as a result of their participation. Confirmatory factor analysis (CFA) was used to evaluate the six-item CSCS's unidimensionality. Results of the CFA indicated a good fit of the model to the data ($\mathcal{X}^2$/df = 2.71, CFI = .99, TLI = .99, SRMR = .04, RMSEA = .064). The results of the scale development study demonstrated that the one-dimensional CSCS has adequate reliability and internal consistency. Cronbach's alpha (= .94) was greater than .70 (Nunnally, 1978), the average variance extracted (AVE = .72) was greater than .50, and composite reliability (CR = .84) was greater than .60. (Fornell & Larcker, 1981). In terms of criterion validity, positive correlations were found between sport fan related construct dimensions and the CSCS, as expected. Higher levels of CSCS correspond to higher levels of identification, sporting event orientation, and obsessive and harmonious passion. The majority of correlations were moderately significant (Aiken et al., 2018).

CSCS contains the following items: (1) Much of my life centers around the consumption of sport., (2) I think about sport all the time., (3) I find it difficult to stop watching, reading, or talking about sport., (4) The urge to consume sport is strong. I can't help myself from doing this activity., (5) Consuming sport is something I cannot live without., (6) I am completely taken with sport consumption.

2.2. Deciding on the Adaptability of the Scale

After recognizing the need for a Turkish scale to measure compulsive sports consumption, we had to decide whether it would be more appropriate to develop a new scale or adapt an existing one. During our literature review, we came across a scale called CSCS, which was developed in English to measure this construct. The adaption of the English scale was accompanied by undeniable benefits, given our easy access to English linguists and our capacity to assess linguistic equivalence with individuals fluent in both languages. Furthermore, the aforementioned scale was developed accurately and in accordance with scientific processes. The scale has sufficient evidence of validity and reliability. Additionally, its small number of items makes it simple to use and apply. All these arguments were persuasive in favor of adapting this scale instead of developing a new one.

Some measurement tools may be inappropriate for cultural adaptation as the expressions in the scale items are not fully understood or perceived differently by respondents from the target culture. Before beginning the scale adaptation study, we conducted a process that included theoretical discussions on the adaptability of the scale into Turkish with a team of one psychometrist, one English and one Turkish linguist, and one sport scientist in order to avoid problems such as difficulty in understanding and structural differentiation caused by intercultural differences. At length of the process, it was agreed that the expressions in the scale items are not foreign to Turkish culture and that the scale will be comprehensible if the concept of sports consumption is explained in the scale instructions. The measured structure was expected to be validated in the Turkish sample, and it was decided that it could be adapted.

2.3. Requesting Permission for Adaptation

To avoid breaking any ethical rules, each of the three researchers who developed the scale was contacted via e-mail, and permission to adapt the scale was obtained.

2.4. Translation of Scale

A team of twelve experts was assembled to translate the scale, including eight English and two Turkish linguists, a sports scientist, and a psychometrist. Eight English linguists were divided into four two-person groups. In each group, one linguist translated the scale's original English form into Turkish (forward translation), and the other linguist translated the Turkish form back into English (back translation). Each group discussed the differences between the back-translated and original forms before finalizing the translation. As a result, four different Turkish

forms were obtained from four different groups. Twelve experts then gathered to compare these four forms and reconcile some of their differences. At the end of the process, the translation was finalized, reaching a final form with unanimous agreement among all experts involved.

2.5. Small Group Application

The Turkish Form of the Compulsive Sport Consumption Scale (CSCS-T) was carried out face to face to 9 people aged 25-35. Participants were asked if they clearly understood the scale's items and instructions. All participants concur that all of the scale's expressions are comprehensible and that no correction is required.

2.6. Linguistic Equivalence Application

We administered the English and Turkish versions of the scale to 66 university students who were fluent in both languages, with a two-week interval between the two paper-pencil applications. The paired samples t-test was utilized to compare the means of total scores, and the Wilcoxon signed-rank test was utilized to compare the medians of item scores between the applications.

2.7. Large Group Application

Data were collected from 409 participants, 248 (60.6%) male and 161 (39.4%) female, ranging in age from 13 to 59 years. Additionally, 202 (49.4%) were university students studying at the faculty of sports sciences, 33 (8.1%) were university students studying in other departments, 132 (32.2%) individuals were from various professions, the majority of whom were teachers, and 42 (10.3%) were K-12 students. Furthermore, 235 (57.5%) of them declared that they actively participate in sports, while 174 (42.5%) did not. The scale was administered face-to-face to 118 university students and online to the remaining participants. The potential problems such as failure to complete the test were not encountered during the online application due to the fact that the scale consists of six items and can be completed in a matter of minutes

2.8. Analyzing Data from Large Group Application

A parallel analysis was performed to observe if it was also achieved in the target culture because of the fact that the scale's unidimensionality was established in the original culture. Parallel analysis method is utilized in exploratory factor analysis to determine the number of factors. Many researchers propose the parallel analysis since it provides more accurate results in many conditions than other methods, and it is also thought to be the best method for identfying the number of factors (Silverstein, 1987; Williams et al., 2010; Zwick & Velicer, 1986; Hayton et al., 2004). Polychoric correlation matrix was used for parallel analysis, and the optimal implementation procedure was used to determine the number of dimensions, with robust unweighted least squares (RULS) factor extraction method. The number of bootstrap samples was set at 500, the maximum number of iterations at 1000, and the convergence value was set at 0.00001. When the factorability of the items was examined, it was discovered that Bartlett's statistic = 2669.6 (df = 15; p = .000000) and the Kaiser-Meyer-Olkin (KMO) value was .924. The results indicate that the correlation matrix factorability was very good. In this regard, we continued the factor analysis and reported all of the other findings in the study's following sections. Additional evidences for unidimensionality were also investigated, including unidimensional congruence, explained common variance, mean of item residual absolute loadings, and robust fit statistics. Furthermore, Cronbach's Alpha coefficient for internal consistency and McDonald's Omega coefficient for composite reliability were calculated to demonstrate the reliability of the measurements taken with the adapted scale. And at last, the graded response model, one of the polythomous item response theory models, was used to estimate the discrimination and category difficulties parameters of the items, which were then reported along with the test information function. Exploratory factor analysis and parallel

analysis were conducted using the FACTOR software (Version 12.04.02), while analyses based on item response theory were performed using the R ltm package (Rizopoulos, 2006).

2.9. Additional Application for Reliability

To obtain evidence for the stability of the scale scores, we applied the scale to 37 university students (Male=21, Female=16) with an interval of two weeks. The Pearson's product-moment correlation coefficient was employed to calculate the correlation between the scores obtained from the test-retest, and the paired samples *t*-test was utilized to ascertain the existence of statistically significant difference in the means of the total scores. Furthermore, the Wilcoxon signed-rank test was applied to compare the medians of item scores across the test-retest applications.

3. RESULTS

3.1. Linguistic Equivalence

The comparison of the means of total scores derived from the two applications, which aimed to examine linguistic equivalence, is presented in Table 1.

Table 1. *Results of the paired samples t-test for comparison of total scores (linguistic equivalence).*

Form	M	SD	*t*	*df*	*p*
English	18.33	8.611	-.960	65	.343
Turkish	19.77	9.600			

Upon examination of Table 1, it is evident that there exists no statistically significant difference between the means of total scores obtained from the applications of the English and Turkish versions of the scale. Additionally, the medians of item scores between the applications were compared, and the significance of the differences are provided in Table 2.

Table 2. *Results of the wilcoxon signed-rank test for comparison of item scores (linguistic equivalence).*

Item	Test Statistic	*SE*	*p*
1	770.000	109.007	.457
2	602.500	105.985	.568
3	542.500	90.892	.982
4	653.500	102.579	.876
5	834.500	121.008	.763
6	636.500	108.446	.628

As observed in Table 2, there is no statistically significant differentiation among the item scores of the two different language versions. Consequently, the accumulated evidence lends support to the successful establishment of linguistic equivalence.

3.2. Construct Validity

Table 3 shows the polychoric correlation matrix upon which the parallel analysis is based. All of the inter-item correlation coefficients were found to be positive and high.

Table 3. *Polychoric correlation matrix.*

	1	2	3	4	5	6
1	1					
2	.848	1				
3	.784	.850	1			
4	.739	.782	.801	1		
5	.782	.865	.837	.814	1	
6	.703	.768	.719	.763	.798	1

The original unidimensional structure of the scale was investigated to determine whether it was preserved in the target culture. The eigenvalues of the factors and their explained variances were shown in Table 4.

Table 4. *Explained variance based on eigenvalues.*

Factor	Eigenvalue	Proportion of Variance
1	4.955	.826
2	.334	.056
3	.253	.042
4	.200	.034
5	.147	.024
6	.112	.019

As demonstrated in the table, the eigenvalues of the first factor was 4.955, which accounts for approximately 83% of the variance. There was no other component with an eigenvalue greater than one, indicating that structure was unidimensional in the target culture. The number of dimensions advised by parallel analysis was one as well.

In addition, more evidence for the existence of a unidimensional structure was obtained and presented in Table 5.

Table 5. *Additional evidences for unidimensionality.*

	Value	95% Confidence Intervals	
		Lower Bound	Upper Bound
UniCo	.995	.989	.998
ECV	.937	.922	.960
MIREAL	.203	.161	.238

A UniCo (Unidimensional Congruence) value greater than .95 indicates that the data can be treated as essentially unidimensional. A value of ECV (Explained Common Variance) greater than .85 indicates that the data is essentially unidimensional. A MIREAL (Mean of Item Residual Absolute Loadings) value less than .30 suggests that the data can be treated as essentially unidimensional (Ferrando & Lorenzo-Seva, 2018). When the values and confidence intervals in Table 5 are compared to the criteria mentioned above, it is clear that strong evidence exists for the existence of unidimensional structure.

Furthermore, we examined robust fit statistics utilized in the exploratory factor analysis to assess the fit of the unidimensional structure with the data, and these findings have been recorded in Table 6.

Table 6. *Robust fit statistics.*

Index	RMSEA	NNFI	CFI	GFI	AGFI
Statistic	.042	.997	.998	.999	.999

RMSEA values of .05 or less are commonly considered to be indicative of good fit. Greater CFI values indicate that the target model fits the data better than the baseline, with values of .95 or higher typically used to identify models that fit the data well. Similarly, the closer the NNFI, CFI, and AGFI statistics are to 1.00, the better the fit (Hu & Bentler, 1999; Schermelleh-Engel et al., 2003; Finch, 2020). In this study, the unidimensional structure was found to fit the data well, as shown in Table 5. Besides, this one dimension's (factor) generalized H-Index was 0.963. The H index assesses how well a set of items represents a factor. H values greater than .80 indicate a well-defined latent variable that is more likely to be stable across studies (Hancock & Mueller, 2000). Furthermore, Table 7 shows the item-level assessments.

Table 7. *Item-level assessments.*

Item	Mean	MSA	Factor Loading
1	4.858	.940	.863
2	4.631	.936	.935
3	4.778	.919	.900
4	4.381	.893	.873
5	4.560	.929	.930
6	3.824	.931	.833

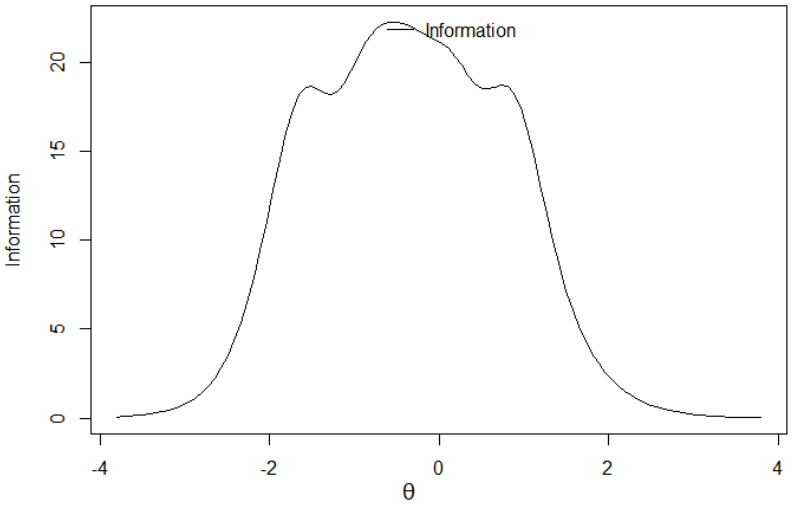
If the Measure of Sampling Adequacy (MSA) value is less than .50, it indicates that the item does not measure the same domain as the remaining items in the pool and should be removed (Lorenzo-Seva & Ferrando, 2021). Table 7 shows that all MSA values are greater than the criterion. Furthermore, factor loadings for all items were high. These were enthusiastic findings for item-level assessments. Table 8 also includes *a* and *b* parameters derived from item response theory parameterizations of the items.

Table 8. *Item response theory parameters.*

Item	*a*	*b1*	*b2*	*b3*	*b4*	*b5*	*b6*
1	2.864	-5.179	-2.896	-2.268	-1.336	-0.399	2.115
2	4.210	-6.893	-3.641	-2.800	-1.592	0.610	3.691
3	3.367	-5.995	-3.188	-2.450	-1.269	0.185	2.413
4	3.224	-5.270	-2.652	-1.636	-0.467	0.778	3.561
5	4.118	-6.333	-3.445	-2.268	-1.015	0.626	3.586
6	2.477	-3.618	-1.439	-0.606	0.410	1.733	3.859

The *a* parameters in Table 8 indicate item discrimination and the *b* parameters indicate category difficulties. According to the findings, all items had very high discrimination (Baker, 2001). Considering category difficulties, it is necessary to have a much higher level of compulsive sport consumption in order to agree and strongly agree with the sixth item. Figure 1 depicts the test information function, which displays how much information the scale explains at θ level.

Figure 1. *Test information function.*



In the test information function (Figure 1), the levels of individuals in the compulsive sport consumption trait (θ) range between -4 and 4. We discovered that obtaining CSCS-T measurements on people with θ levels between approximately -1.5 and 1 yields the most accurate results.

3.3. The Power of CSCS-T to Distinguish Between Groups

As another evidence of construct validity, we examined how effectively the CSCS-T distinguishes individuals with different levels of the compulsive sport consumption. We divided the participants into two groups: those who participate in active sports and those who do not, based on the assumption that those who participate in active sports consume more sports-related things. The mean scores of these two groups from the CSCS-T were compared using the independent samples *t*-test, and the results showed that the difference was statistically significant, as demonstrated in Table 9.

Table 9. *Results of the independent samples t-test for comparison of total scores.*

Group	M	*SD*	*t*	*df*	*p*
Active	30.09	10.307	-6.752	361.242	.000
Passive	22.90	10.885			

The *a* parameters in Table 8 indicate item discrimination and the *b* parameters indicate category difficulties. According to the findings, all items had very high discrimination (Baker, 2001). Considering category difficulties, it is necessary to have a much higher level of compulsive sport consumption in order to agree and strongly agree with the sixth item. Figure 1 depicts the test information function, which displays how much information the scale explains at which θ level.

3.4. Reliability

Cronbach's alpha was 0.958, which was used to determine the internal consistency of CSCS-T. Likewise, McDonald's Omega coefficient for composite reliability (CR) was calculated as 0.958. As a result of the test-retest application to determine the stability of the measurements, Pearson's product-moment correlation coefficient was calculated as .923, indicating a strong positive correlation supporting the test-retest reliability. Besides this, the paired samples *t*-test found no statistically significant difference between test and retest mean scores (t=-1.205, p>0.05).

Additionally, the medians of item scores from both the test and retest applications were compared, and the significances of the differences are provided in Table 10.

Table 10. *Results of the wilcoxon signed-rank test for comparison of item scores (test-retest).*

Item	Test Statistic	*SE*	*p*
1	188.000	43.540	.730
2	193.500	45.999	.602
3	186.500	48.317	.341
4	194.500	48.399	.432
5	148.500	41.322	.327
6	190.500	50.773	.257

As depicted in Table 10, there exists no statistically significant differentiation among item scores obtained from the test and retest applications. As a result, the gathered body of evidence supports the establishment of reliability in terms of stability.

4. DISCUSSION and CONCLUSION

The purpose of the study is to adapt the Compulsive Sport Consumption Scale developed by Aiken et al. (2018) to Turkish culture. We began the process by discussing whether the structure measured by the CSC scale and the expressions used in the scale exist in Turkish culture, and thus, whether it is appropriate to adapt the scale to the target culture. After deciding to adapt the scale, we got permission from the scale's developers, and then, completed the translation process with a team of English and Turkish linguists, sports scientist, and psychometrist.

Given the unidimensional nature of the original scale version, our prediction was that the same unidimensionality would also hold true for the target culture. Nonetheless, as the structure doesn't strictly adhere to a rigid psychological theory even within its original cultural context, initiation was carried out through the utilization of exploratory factor analysis to unveil the representation of the structure within the target culture. Upon analysis, it was concluded that the scale had a unidimensional structure in the target culture as well, based on the eigenvalues. Confirmatory factor analysis was not pursued in this context, as the nonexistence of a complicated structure that included relations between scale items and multiple factors rendered such investigation unnecessary. The important issue, in this case, was the gathering of new evidence supporting the structure's unidimensionality. From this perspective, we performed parallel analysis and used many statistics such as unidimensional congruence, explained common variance, mean of item residual absolute loadings, and robust fit statistics. The scale was unidimensional, according to parallel analysis, and all other statistics supported the scale's unidimensionality. Moreover, regarding fit statistics, the scale’s unidimensional structure fits the study data well. Aiken et al. (2018) discovered that the six-item single-factor structure in the original form of scale explained 69% of the total variance. Unidimensional CSCS-T, on the other hand, explained approximately 83% of the total variance. All the item factor loadings in the adapted scale are greater than those in the original structure. On a side note, the generalized H-Index of this single factor was .963. The H index measures how well a set of items represents a factor, and this value indicated that CSCS-T would be highly stable across different studies.

To assess the reliability of the CSCS-T measurements, internal consistency, composite reliability, and test-retest reliability were examined. Cronbach's alpha and McDonald's Omega coefficients were both calculated as .958. Aiken et al. (2018) reported Cronbach's alpha coefficient as .94 and McDonald's Omega coefficient as .84. The measurements are reliable because these values are greater than .70 (Nunnally, 1978) for both the original and adapted

forms. Additionally, the results of the test-retest applications indicated the stability of both the total and item scores across time.

All of the results prove that the CSCS-T (Appendix) can be used to obtain valid and reliable measurements when compulsively over-involvement in people's sports consumption is being investigated. It should be noted, however, that the study's inability to reach a larger sample size can be considered a limitation. The study's inability to reach a larger sample size can be counted as a limitation. This scale's target group is not restricted to a specific age or occupational group. It was not possible to reach all population subgroups in a single study. Further research can be conducted in this area, with additional studies to be conducted with groups of varying characteristics. It can be also suggested that a criterion validity study be conducted using scales measuring similar or distinct structures in Turkish.

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Declaration of Conflicting Interests and Ethics

The authors declare no conflict of interest. This research study complies with research publishing ethics. The scientific and legal responsibility for manuscripts published in IJATE belongs to the authors. **Ethics Committee Number**: Ardahan University, 16.02.2023, E-67796128-000-2300006274.

Authorship Contribution Statement

Murat Aygün: Investigation, Data Collection, Methodology, Visualization, and Writing the Introduction of the Manuscript. **Sait Çüm**: Methodology, Visualization, Data Analysis, Validation, and Discussion of the Results. All authors reviewed the results and approved the final version of the manuscript.

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APPENDIX: Compulsive Sport Consumption Scale – Turkish version

Kompulsif Spor Tüketimi Ölçeği

Sayın Yanıtlayıcı,

Ölçeği yanıtlamadan önce lütfen bu yönergeyi dikkatle okuyunuz.

Bu ölçek spor tüketimi ile ilgili davranışlarınızı belirlemek amacıyla hazırlanmıştır. Spor ürünlerini satın almak, kiralamak, spor faaliyetlerini izlemek, dinlemek ve spor gıdalarının tüketimini de kapsayan spor ile ilgili birçok davranış **spor tüketimi** olarak ifade edilmektedir.

Ölçekte yanıtlaması yaklaşık beş dakika sürecek altı madde bulunmaktadır. Adınızı yazmanıza veya kimliğinizi belirtecek herhangi bir ifade eklemenize gerek yoktur. Yanıtlarınız hiçbir kişi veya kurumla paylaşılmayacak yalnızca bilimsel araştırma amacıyla kullanılacaktır. Maddeleri okuduktan sonra içtenlikle aklınıza ilk gelen seçeneği işaretleyiniz ve lütfen yanıtsız madde bırakmayınız.

Katkılarınız için teşekkür ederiz.

Aşağıdaki ifadelere ne derece katılıp/katılmadığınızı belirtiniz.	Kesinlikle Katılmıyorum	Katılmıyorum	Zannederim Katılmıyorum	Kararsızım	Zannederim Katılıyorum	Katılıyorum	Kesinlikle Katılıyorum
1. Spor tüketimi hayatımda çok önemli bir yer tutar.							
2. Spor aklımdan hiç çıkmaz.							
3. Sporla ilgili bir şeyler izlemekten, okumaktan veya konuşmaktan kendimi alıkoyamıyorum.							
4. İçimde spora dair şeyler tüketmeye yönelik çok güçlü bir istek var ve buna engel olamıyorum.							
5. Hayatımda spor ve spora dair şeyler olmadan yaşayamam.							
6. Kendimi tamamen spor tüketimine kaptırmış durumdayım.							