

2023

Adaptation of the Love–Hate Scale for Sports Fans into Turkish: A validity and reliability study

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Recommended Citation

Kural S, Ozbek O, Gurbuz B. Adaptation of the Love–Hate Scale for Sports Fans into Turkish: A validity and reliability stud. *Balt J Health Phys Act.* 2023;15(1):Article7. <https://doi.org/10.29359/BJHPA.15.1.07>

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Abstract

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Keywords

fanaticism, football, football fans, aggression, love, hate

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Article

Adaptation of the Love–Hate Scale for Sports Fans into Turkish: A validity and reliability study

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Academic Editor:

Agnieszka Maciejewska-Skrendo

Received: January 2022

Accepted: December 2022

Published: March 2023

Publisher's Note: BJHPA stays neutral with regard to jurisdictional claims in published maps and institutional affiliations.



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1. Introduction

Today, sports, which are supposed to ensure peace among people and to function as a necessary and significant instrument for games, entertainment, competition, and passing leisure time, entails concepts such as health, beauty, and success within its context [2, 3]. Additionally, winning and losing are among the natural consequences of sports [4]. Winning and being successful is what everyone involved in sports wants. However, besides winning, failing and losing are also part of sports. According to Berument et al. [5], the success or failure of sports teams is of great importance for many countries all over the world. Fans are naturally happy when their team wins and unhappy when they lose. The happiness can naturally cause a feeling of love toward their team and a feeling of hatred toward the opposing team and their supporters. The Turkish Language Association (TDK) [6] defines love as the feeling that leads people to show close interest and devotion toward something or someone. Shuv-Ami et al. [7] argue that love arises from a combination of emotions that represent intimacy, joy, and longing for a favorite team. According to the definition by TDK [6], hatred is the feeling of having ill wishes for someone and wishing unhappiness upon them. “Fan hatred” can be defined as negative behaviors toward an opposing team, players, or fans. “Fan love and hatred” can be defined as

fans' love for their team and mixed feelings against the opposing team and their supporters [1]. The fans, the team and the relations between them can be unique, both because of the passion, strong loyalty, and love that fans feel for their team and the feeling of hatred toward opposing teams' fans, which can result in violence and aggression [1, 8]. These fans' feelings are natural in sport.

Winning and losing in sports seriously affect the fans' feelings [4, 9]. These feelings and this rivalry in sports emerge in different ways among the fans. Hunt et al. [10] examined supporters in five classes. These are the supporters who are dysfunctional, temporary, local, loyal and fanatical. Temporary fans are fans who follow the team for a certain period of time based on the team's performance. Local fans are fans who associate with the region in which they live. Loyal fans, however, have stronger bonds and continue to support their team in good times as well as bad ones. Fanatical supporters, on the contrary, are more destructive and violent groups of fans who are even more radical than loyal fans [10, 35]. The word "fanatic" is derived from the English word "fan," which means "supporter." These supporters behave differently from loyal fans by painting their bodies and clothes. This type of supporters, who appear on screens from time to time with different clothes, masks, and paints, reveal the difference between loyal fans and fanatical fans. In this regard, fanatical supporters exhibit intense supportive behavior compared to other fans [11]. As a group, people do what they cannot do alone; this is also true for fan groups. Love for a team is actually a form of social love. It has a kind of contagiousness where people become fans; learn to love their team; nurture, reinforce, and sustain love; and become more intense and driven to extremes [12, 13, 35].

All of these prove that the fans identify with their team. Fans are heavily involved in the sport and associate themselves with their team [14, 15]. According to Wann and Branscombe [17], identification with the team is the fan forming a psychological bond with their favorite team. The social identity theory (SIT) underlies team (identity) identification. The SIT indicates that individuals have both personal and social identities [36]. While personal identity comprises distinctive features, such as abilities and interests, social identity comprises significant group categories based on demographic classifications (gender and race) or organizational memberships (religious, educational, and social institutions) [36 cited by Turner 1982]. A person forms a social identity by identifying with a group, developing an emotional bond with the group, and perceiving themselves as having the same (or very similar) characteristics, interests, or connections with other group members [18]. In line with the SIT [19], fans may threaten their rivals' positive emotions or have negative emotions toward them [1]. The SIT assumes that in-group love and out-group hate (hatred toward the rival) are mutually related [20]. Emotions like love and hate are opposite and mixed emotions. Mixed emotions are generally defined as the co-occurrence of positive and negative effects [21]. They occur due to the emergence of two opposite emotions, such as being happy or sad or having fun or being bored [22, 23, 38]. This research is based on the SIT [19] and mixed emotions theory [1, 24]. In the literature, there are different scales, adapted to or developed for the Turkish culture, used to determine the level of fans' fanaticism and aggression [25, 34]. There was no measurement tool related to fans' feelings of love and hate. When the literature is examined, it was determined that Taşmektepligil et al. [34] developed the "Fanaticism Scale for Football Fans." This scale measures fan fanaticism with items comprising the sub-dimensions of thought and action tendencies toward violence and corporate belonging. The scale that this study aims to adapt into Turkish measures fanaticism based on two opposite emotions of love and hatred. In this respect, it is believed that this scale will fill the gap of determining the feelings of love and hatred that directly foster fanaticism. This study aims to eliminate this deficiency in the literature by adapting the "Love-Hate Scale for Sports Fans" (LHSSF), which was developed to examine the love and hate feelings of the fans, to the Turkish culture.

2. Materials and Methods

2.1. Participants

The research used a quantitative method. The study used the survey model which is frequently used in the field of social sciences and tries to describe the characteristics of a particular group and their views and attitudes about a phenomenon [26]. The data used within the scope of the research were obtained using a form created in an online environment. In the research study group, there were a total of 205 fans – 160 male and 45 female fans – who were selected through convenience sampling, a non-random sampling method. The participants' ages ranged between 18 and 59 (mean age = 30.11). It was determined that the majority of the participants (85%) were college graduates. The LHSSF used in the study was developed by Shuv-Ami et al. [1]. The original form of the scale consists of seven items in total, with the sub-dimensions of "love" (three items) and "hate" (four items). The researchers obtained permission from the authors via e-mail before administering the scale. For the ethical compliance of the scale, the approval of Bartın University's Social and Human Sciences Ethics Committee (2021-SBB-0005) was obtained.

Participants marked each statement in the scale on a 10-point Likert type rating scale, ranging from Strongly Disagree (1) to Strongly Agree (10). The intercultural scale adaptation steps, which were recommended by Hambleton and Patsula [27] and are frequently used in the literature, were taken into account to adapt the LHSSF to the Turkish culture.

2.2. Procedure

To adapt the scale to the Turkish culture, the researchers obtained the necessary permissions from the authors of the original study via e-mail. The translation-back translation method was used to create the Turkish form of the items in the scale. After the scale was translated from English to Turkish, expert opinions of three sports sciences specialists, who were fluent in English, were obtained. After making adjustments based on the experts' opinions, the scale was translated back into English by experts in the field of English. The back-translated scale items were compared with the original items, and the closest translations were selected. After the measurement tool was finalized, pilot procedures were conducted by administering the trial form of the scale to 10 football fans.

2.3. Data Analysis

The analysis of the obtained data was calculated in SPSS 23.0 and AMOS 18.0 programs. The researchers determined whether the data obtained within the scope of the research showed a normal distribution by examining the results of the skewness and kurtosis (normal distribution of the data) values [28] and Levene (equality of variances) test [26]. To determine the factor structure of the measurement tool, first, exploratory factor analysis (EFA) was performed. To test the accuracy of the factor structure obtained as a result of the EFA, confirmatory factor analysis (CFA) was performed. Fit indices (GFI, CFI, IFI, RMSEA, and SRMR) were used to determine the fit of the model created in the CFA. To test the reliability of the Turkish version of the scale, the Omega internal consistency coefficient, developed after "Cronbach's Alpha" by McDonald, was calculated for each sub-dimension. The Omega coefficient developed by McDonald is designed especially for congeneric measurements and expressed through non-standardized factor analysis terms [31,37]. "To put it more clearly, in the factor analysis used in the analysis of the measurement results, if the factor loads of the items are equal, such items are called parallel, equivalent, and/or isomorphic items. The α reliability coefficient obtained from these items presents the true reliability. However, if the factor loadings of the items are not equal, such items are called congeneric items, and in these cases, the α reliability coefficient produces values below the true reliability" [31, 32].

3. Results

According to the analyses performed to determine the suitability of the data for factor analysis, the KMO measure of sample adequacy was .80, and the result of the “Bartlett Test of Sphericity” was found to be significant ($p < .000$). Table 1 presents the EFA results for determining the factor structure of the LHSSF.

Table 1. Love–Hate Scale items and factor loads for sports fans.

Items		Factor loads	
Sub-dimension	Items	Factor 1	Factor 2
Hate	1	.88	
	2	.88	
	3	.81	
	4	.82	
Love	5		.85
	6		.87
	7		.83

In Table 1, it is understood that the first four items (Items 1–4) constitute the sub-dimension of hate, and the last three items (Items 5–7) are in the sub-dimension of love. The factor load values of the scale items vary between .81 and .88 as a result of the analysis. CFA was performed to determine whether the construct that emerged after EFA was valid (Table 2).

Table 2. CFA Results of the Love–Hate Scale for Sports Fans.

Sub-dimensions	Items	Mean	Sd.	Factor Load	<i>t</i>
Hate	1	6.15	3.52	.87	6.25**
	2	5.35	3.75	.88	6.08**
	3	5.59	3.49	.74	8.69**
	4	5.00	3.48	.75	8.61**
Love	5	9.40	1.62	.74	7.71**
	6	8.72	2.25	.83	5.35**
	7	8.94	2.30	.80	6.20**

As a result of the CFA performed to determine the goodness of fit of the LHSSF model consisting of two factors and a total of seven items, it was determined that the *t* values were greater than 1.96, i.e., they were significant at the level of .01 [29]. Table 3 presents the fit index values obtained from the CFA analysis performed for the two-factor and seven-item model that emerged as a result of the EFA performed with the data obtained from this study and specified in the original form of the LHSSF. Scale items are given in Appendix 1.

Table 3. Fit index values obtained from the first-level and second-level CFA

	χ^2	Sd	χ^2/sd	RMSEA	SRMR	CFI	AGFI	IFI
First Order	18	13	1.38	.043	.03	.99	.94	.99
Second Order	18	13	1.38	.043	.03	.99	.94	.99

When the results regarding the construct validity are examined, $\chi^2/df = 1.38$, and this ratio being less than 3 is accepted as a perfect fit [28]. The fact that the GFI = .97, CFI = .99, AGFI = .94, and IFI = .99 values are less than .95, and RMSEA = .05, indicates that these values are good fit values [30]. In addition, Figure 1 presents the factor structures of the LHSSF.

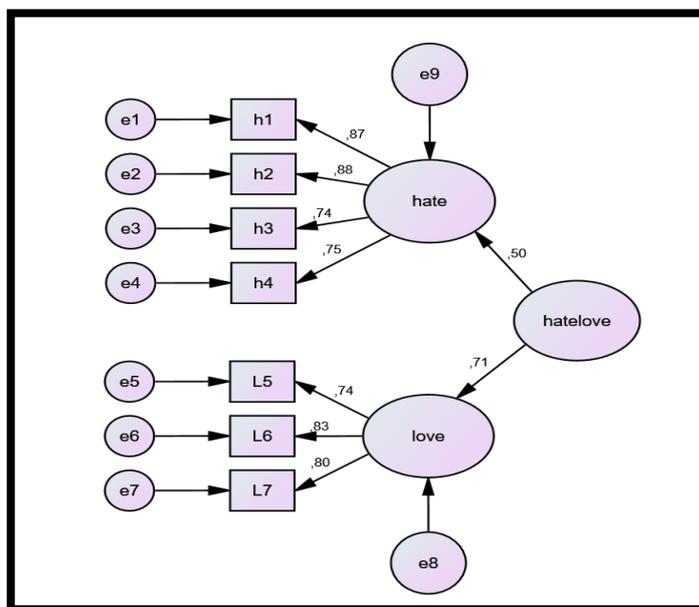


Fig. 1. Fit index values for the Love–Hate Scale for Sports Fans model (Second Level).

For the correlation of the scale structure with the sub-dimensions, a second-level DFA model was constructed (data-model fit RMSEA = .04; GFI = .97; CFI = 0.99; AGFI = .94; SRMR = .03; and IFI = .99). Figure 1 presents its path analysis.

Table 4. Factor correlation relationship, squared correlation values between factors, and AVE and CR values according to the CFA results of the “Love–Hate Scale for Sports Fans”.

Dimensions	r	r ²	Average Variance Extracted	Construct Reliability	Alpha	Omega
Love	.30	.09	.62	.83	.82	.83
Hate	.30	.09	.64	.87	.88	.88
Total		.82	.86			

First, the average variance extracted (AVE) and construct reliability (CR) values were calculated for the convergent validity of the model that emerged as a result of the analysis. According to the data in Table 4, the AVE values of the two-factor structure of the scale tested are .63 (love) and .58 (hate), and the CR values are .83 (love) and .84 (hate). With these values, it can be said that the measurement model tested has an acceptable level of convergent validity. The correlation value calculated for the tested two-factor structure is .309 and the squared correlation value is .09. In order to talk about discriminant validity, AVE (.63–.58) values should be greater than the square of the calculated correlation value (.08). With these findings, it can be said that the tested measurement model’s discriminant validity is ensured. The Cronbach’s alpha coefficients calculated for the reliability of the sub-dimensions were .88 for the hate sub-dimension, .81 for the love sub-dimension, and .82 for the whole scale. Additionally, the Omega test developed by McDonald was used to measure the internal consistency coefficient of the scale.

As a result of the analysis, the Omega coefficients were calculated as .88 for the hate sub-dimension, .83 for the love sub-dimension, and .86 for the total of the scale. There was no significant

difference between the Cronbach's alpha coefficients and the Omega coefficients. Both coefficient values proved that the reliability was high.

The correlation value calculated for the two-factor structure tested is .30, and the square of the correlation values is .09. In order to discuss discriminant validity, AVE (.63–.58) values should be greater than the square of the calculated correlation value. With these findings, it can be said that the tested measurement model's discriminant validity is ensured. According to Table 4, the square root of the AVE values calculated for each sub-dimension is greater than the correlation values with the other sub-dimensions.

4. Discussion

This study tested the validity and reliability of the LHSSF, developed by Shuv-Ami et al. [1], as adapted for the Turkish culture. According to the analyses performed to determine the suitability of the data for factor analysis, the KMO measure of sample adequacy was .80, and the result of the Bartlett Test of Sphericity was found to be significant ($p < .000$).

Upon examining the findings regarding the construct validity of the scale, it was determined that the two-factor and seven-item structure obtained as a result of the EFA was confirmed. When the results regarding the construct validity are examined, $\chi^2/df = 1.38$, and this ratio being less than 3 is accepted as a perfect fit (Kline, 2005). When the fit indices used in CFA are examined, GFI = .97, CFI = .99, AGFI = .94, and IFI = .99 values are less than .95, and RMSEA = .043 values are less than .05; these values indicate good fit values [30].

Upon examining the findings obtained within the scope of the convergent and discriminant validity of the LHSSF, a moderate, positive, and significant relationship was found between the sub-dimensions. As part of the convergent validity, the AVE value was found to be .62 for the love sub-dimension and .64 for the hate sub-dimension. In the literature, it is stated that the AVE value is generally accepted as .50 [33, 39]. To determine the reliability level of the two-factor and seven-item structure of the scale, it is observed that the internal consistency coefficient is .87 for the love sub-dimension, .79 for the hate sub-dimension, and .81 for the total of the scale. The analyses carried out to determine the reliability level of the two-factor and seven-item structure of the LHSSF indicate that the scale is a measurement tool with a high level of reliability. It is stated that an internal consistency coefficient of 0.70 or higher will be sufficient for the reliability of test scores in general [26]. When the original scale developed by Shuv-Ami et al. [1] is examined, it is understood that the goodness of fit indices are within acceptable limits. It was determined that the sub-dimensions of the original scale were love = .88, hate = .95, and they were similar to the current study. In the study by Shuv-Ami et al. [1], the factor loadings ranged from .79 to .92, while it was found to vary between .74 and .88 in the current study.

5. Conclusions

Upon examining the literature, there was no measurement tool for the fanaticism levels of fans in the context of love and hate, and it is believed that this scale will fill the gap in the field. When the findings for the adaptation of the LHSSF to Turkish are examined, it can be stated that the two-factor and seven-item structure in the original form of the scale was confirmed. In other words, it is understood that the LHSSF is a valid and reliable measurement tool in determining feelings of love toward their team and hatred toward the rival team and its fans. The fact that the procedure of this study was conducted only for football fans can be considered a limitation. The study can be repeated for different fan groups or different sports disciplines. In addition, female fans were fewer in number in this study. If future studies reach more female fans, the difference between the love–hate levels between female fans and male fans can be examined.

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Appendix 1.

English Item	Turkish Item
1. "I hate the team that is the main rival of my team"	1. Takımımın ezeli rakibinden nefret ediyorum
2. "I hate the dominant colors/symbols of the team that is the main rival of my team"	2. Takımımın ezeli rakibinin baskın renklerinden/sembollerinden nefret ediyorum.
3. "I hate when the team that is the main rival of my team win against other teams (including international games)"	3. Takımımın ezeli rakibinin, diğer takımlara karşı kazanmasından nefret ediyorum (uluslararası maçlar dahil).
4. "I hate the fans of the team that is the main rival of my team"	4. Takımımın ezeli rakibinin taraftarlarından nefret ediyorum.
5. "I love my sports team"	5. Takımımı seviyorum.
6. "I enjoy watching the games of my sports team"	6. Takımımın maçlarını izlemekten zevk alıyorum.
7. "I would miss my sports team very much if it ceased to exist"	7. Takımım kapansaydı onu çok özlerdim.

Author Contributions: Study Design, SK, OO, BG; Data Collection, SK, OO, BG; Statistical Analysis, SK, OO, BG; Data Interpretation, SK, OO, BG; Manuscript Preparation, SK, OO, BG; Literature Search, SK, OO, BG. All authors have read and agreed to the published version of the manuscript.

Acknowledgements: Not applicable.

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

Institutional Review Board Statement: An institutional approval was received to conduct the study.

Informed Consent Statement: All participants gave written informed consent to join this study.

Data Availability Statement: Data available from the corresponding author on request.

Conflicts of Interest: The authors declare no conflict of interest.