

# **Translation and Initial Validation of the Portuguese Version of the Sport Spectator Identification Scale**

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Team identification (the extent to which a fan feels psychologically connected to a team) plays a fundamental role in many fan behaviors. Consequently, the establishment of psychometrically sound instruments for assessing this variable is critical. One of the most successfully utilized measures of identification is the *Sport Spectator Identification Scale* (Wann & Branscombe, 1993). The current investigation was designed to expand potential use of the scale by translating the scale into Portuguese. Results indicated that the Portuguese version was a reliable and valid instrument for use by researchers in Portuguese-speaking countries attempting to assess sport team identification.

Sport scientists have shown an increased interest in the thoughts, feelings, and behaviors of sport fans in recent years (Wann, Melnick, Russell, & Pease, 2001). For instance, investigators have facilitated our understanding of attendance decisions (Williamson, Zhang, Pease, & Gaa, 2003; Zhang, Smith, Pease, & Lam, 1998), coping strategies (Wann & Grieve, 2008; Wann, Grieve, Waddill, & Martin, 2008), psychological well-being (Wann, 2006b), and motivation of sport fans (Funk, Mahony, & Ridinger, 2002; Wann, Grieve, Zapalac, & Pease, 2008; Wann, Schrader, & Wilson, 1999). However, perhaps the greatest advances have come in our understanding of the role of team identification in fan attitudes and behaviors.

Team identification concerns the extent to which a fan feels a psychological connection to a team (Wann & Branscombe, 1993), that is, the extent to which the fan believes that the role of team follower is a central component of his or her social identity. A number of researchers have examined the causes and consequences of sport team identification.

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In terms of antecedents of team identification, Wann's (2006a) review of the literature led him to conclude that there are three general categories of causes of identification: psychological, environmental, and team-related. Psychological consequences include the need for belonging and affiliation (Gwinner & Swanson, 2003; Sutton, McDonald, Milne, & Cimperman, 1997) and distinctiveness (Ashforth & Mael, 1989). In terms of environmental causes, research suggests that the socialization process (Crawford, 2003; James, 2001) and the salience of rival teams can impact team identification (Ashforth & Mael, Wann & Pool, 2007). Finally, team-related causes include organizational characteristics such as the image and tradition of the team (Sutton et al., 1997; Underwood, Bond, & Baer, 2001), team success (Fisher & Wakefield, 1998; Wann, Tucker, & Schrader, 1996), and player attributes such as attractiveness (Fisher & Wakefield, 1998).

Researchers have also identified a number of consequences that are impacted by the fan's level of team identification (Deitz-Uhler & Lanter, 2008). For instance, research indicates that team identification is a strong predictor of attendance (Fisher & Wakefield, 1998). Further, higher levels of aggression have been found among persons with high levels of team identification (Lanter, 2000; Wann, Carlson, & Schrader, 1999). And finally, research indicates that level of team identification is a significant predictor of positive and negative postgame affect (Madrigal, 2003; Wann, Dolan, McGeorge, & Allison, 1994).

Because of the importance of team identification to sport fandom, researchers have attempted to develop valid and reliable measures of assessing this variable. Although several different measures have been constructed (e.g., Dimmock, Grove, & Eklund, 2005; Mahony, Madrigal, & Howard, 2000; Trail & James, 2001), the most widely utilized instrument appears to be the *Sport Spectator Identification Scale* developed by Wann and Branscombe (1993). This seven-item Likert-scale has strong reliability and validity (see Wann & Branscombe, 1993), and has been used in dozens of studies (Wann et al., 2001). Recently, investigators have begun to expand the usability of the *Sport Spectator Identification Scale* by translating the original scale into different languages, including Greek (Theodorakis, Vlachopoulos, Wann, Afthinos, & Nassis, 2006), German (Straub, 1995), Japanese (Uemukai, Takenouchi, Okuda, Matsumoto, & Yamanaka, 1995), and Dutch (Melnick & Wann, 2004). There are a number of advantages to having multiple translations of a particular scale. For instance, this allows for greater generalizability of the instrument. Further, researchers can conduct cross-cultural research on team identification in different environments (Melnick & Wann, 2004; Theodorakis & Wann, 2008). And third, multiple versions of a team identification scale increase the

options available to sport management and marketing professionals. For example, until Theodorakis et al. (2006) developed a Greek version of the *Sport Spectator Identification Scale*, sport professionals in this country were without a valid instrument for assessing the construct.

The current investigation was designed to further expand the use of the *Sport Spectator Identification Scale* by translating the scale into Portuguese. The Portuguese language is one of the most spoken in the world and is the official language of several countries across five continents (currently, it is estimated that there are more than 223 million Portuguese speakers in over 12 countries). Portuguese is the official language of Brazil and Angola, emerging powers of continental dimensions, which together with all other Portuguese speaking countries hold a special commitment to sport in general, but particularly to soccer (in particular, Brazil is considered one the greatest world powers of this sport). Portugal has a strong tradition not only in competitive soccer (e.g., successful national team and clubs) but also as an organizer of major international competitions such as the European Football Championship 2004, successful in promoting the image of the Portuguese culture to the world. Brazil will be organizing the next World Cup in 2012 and Angola will be the venue of the next African Cup of nations. Portugal will submit to host the 2016 World Cup. The size and importance of the soccer spectacle in the Portuguese speaking countries, and its society, is recognized by all. Therefore, studies on their consumers are required in an increasingly numerous way and certified by the principles of academic research.

## METHOD

### Participants and Data Collection

Participants in this study were 161 spectators who attended a soccer game between two teams from the top professional league in Portugal. They were 113 (70.2%) males and 48 (29.8%) females. Their age ranged from 18 to 70 years, with a mean age of 34.04 years ( $SD = 13.2$ ). The vast majority were employees from the private and state sectors (60.9%), followed by students (18.5%) and self-employed professionals (10.6%). Five percent of the participants reported to be unemployed, and 5% were retired individuals. Participants had been attending games for periods of time ranging from 5 to 63 years. On average, they had attended 5.92 games the previous soccer season. The 161 individuals described above participated solely during the reliability and validity steps of the methodology.

After receiving permission from the soccer club's manager, six trained research assistants distributed and collected the questionnaires to

participants. Participants filled out the forms in designated areas before taking their seats at the beginning of the soccer game.

### Measures

**Team Identification.** A Portuguese version (see translation information below) of the *Sport Spectator Identification Scale* (*SSIS*, Wann & Branscombe, 1993) was used to assess levels of team identification among Portuguese soccer fans. The *SSIS* is a unidimensional seven-item Likert scale with response options ranging from 1 (*low identification*) to 8 (*high identification*). In this study, participants expressed their identification with a targeted professional soccer team. The *SSIS*'s seven items were: "How strongly do you see yourself as a fan of [named team]?", "How strongly do your friends see you as a fan of [named team]?", "During the season, how closely do you follow [named team] via *any* of the following: in person, by television, by radio, by televised news, or by newspaper?", "How important is being a fan of [named team]?", "How much do you dislike the greatest rivals of [named team]?", "How often do you display [named team's] name or insignia at your place of work, where you live, or on your clothing?"

A number of studies have provided evidence regarding the *SSIS*'s factor structure, internal consistency, test-retest reliability, and construct validity (Wann & Branscombe, 1993; Wann et al., 2001).

**Place attachment.** The *Place Attachment Scale* developed by Kyle, Graefe, Manning, and Bacon (2004a) was also used. For the purpose of this study, all items were adapted into the context of professional soccer so to measure the allegiance between a fan and the team's soccer stadium. Place attachment refers to the instrumental and emotional/symbolic attachments that bond individuals to places. The *Place Attachment Scale* contains 18 items that reflect four dimensions: Place Dependence (four items, e.g., "this soccer stadium is the best place to watch X play"); Social Bonding (four items, e.g., "the time spent here allows me to bond with my family and friends"); Place Identity (five items, e.g., "this stadium means a lot to me"); and Affective Attachment (five items, e.g., "I really enjoy this place"). Internal consistency reliabilities for all *PAS*'s subscales were satisfactory: Place Dependence .72, Social Bonding .87, Place Identity .81, and Affective Attachment .86. There is evidence that place attachment is a key variable in predicting attitudinal aspects of consumers' behavior in sport and leisure settings (Bricker & Kerstetter, 2000; Kyle et al., 2004a; Kyle, Graefe, Manning, & Bacon, 2004b; Moore & Graefe, 1994; Williams, Patterson, Roggenbuck, & Watson, 1992). Recently, Theodorakis, Tsigilis, and Alexandris (in press) suggested that sport managers should make efforts to develop skiers' emotional and symbolic bonds with the place (skiing

resort) to increase customers' identification with the sport service provider. In addition, Alexandris, Kouthouris, and Meligdis (2006) found that two place attachment dimensions (place identity and place dependence) influenced the development of skiers' loyalty with the sport agency.

## RESULTS

To translate and validate the *SSIS* in Portuguese a seven-step methodology was used. This methodology was developed originally by Vallerand (1989) in the psychological field, and described in the physical activity domain by Banville, Desrosiers, and Genet-Volet (2000). This cross-cultural technique ensures that the instrument will provide data that are valid and reliable in the target population. The first three steps of the methodology refer to the translation of the scale, the next three refer to the validation of the translated version. The seventh step – establishing norms, was not presently elaborated since it was out of the scope of this study.

### Translation of the Sport Spectator Identification Scale

Step one is called *preparation of the preliminary versions* and it uses the back translation technique (Vallerand, 1989). This technique requires the contribution of a committee of four bilingual translators. Translators A and B were two Portuguese sport scientists, with Ph.D.s in sport sciences, who independently translated the *SSIS* from English to Portuguese; a comparison of the two translated versions (translator A and B) revealed differences in two of the seven items of the *SSIS*. Following Banville et al. (2000), the non-similar items were compared and the two translators agreed which translated items to keep, giving a bigger importance to the meaning of the sentences into the targeted language, instead to the word-for-word translation. Then, two other sport researchers with similar academic backgrounds (translators C and D) retranslated back all seven Portuguese items into English. In spite of the fact that almost none of the re-translated items were identical to the original ones, the translators decided to retain all seven items since their meaning was judged to be similar to the meaning of the original *SSIS* items.

The goal of step two, called *the evaluation of the preliminary versions*, was to compare the re-translated and the original items of *SSIS*, and to prepare a satisfactory final experimental version. To avoid single-person bias, a committee-technique comprised by four bilingual translators was employed (Banville et al. 2000). A final experimental version was accomplished.

In step three, *the pretest of the experimental version*, the final draft of the Portuguese version of *SSIS* was distributed to a sample of 20 individuals ( $M_{age}= 30$ ,  $SD= 4.3$ ), with characteristics similar to those of

the target population, as suggested by Banville et al. (2000). These individuals were asked to provide feedback on the translated scale. First, they were instructed to provide their responses on the Portuguese version of the scale, and second to indicate any words or sentences that they did not understand or they thought that required adjustment. They were also asked to provide their own suggestions. The committee members then reviewed the respondents' comments and made minor modifications to the experimental version. In the end, a qualified Portuguese-language teacher reviewed the translated version to ensure the appropriate language and comprehensiveness, and to avoid any grammar or syntax mistakes.

#### **Reliability and Validity of the Portuguese Version of the *Sport Spectator Identification Scale***

The purpose of the fourth step was to evaluate the *content and concurrent validity of the translated scale*. All four committee members analyzed the original and the translated scales at the same time, examining whether each translated item and its corresponding original one were identical in meaning. They concluded that the content validity of the translated version was protected.

To examine the concurrent validity of the translated version Pearson's correlations between the original and the translated scales were computed. The two versions were given to 36 Portuguese bilingual university students ( $M_{age} = 22.6$ ,  $SD = 2.9$ ). Before answering both versions of the scale, the participants' ability to understand, read, write and speak English was assessed using a four-item scale developed by Vallerand and Halliwell (1983). All participants, except two (who scored eight), scored higher than 12 in this scale (maximum 20), which shows ability in the English language. These two individuals were excluded. The remaining 34 participants answered both versions of the SSIS in a classroom setting. Half of the sample completed the Portuguese version first, and the other half, the English version first, to avoid order bias. One month later they repeated the process by answering both versions in opposite order. Pearson's product moment correlation was computed to observe the relation between the original and the translated version, revealing a high coefficient ( $r = .86$ ), indicating high concurrent validity of the translated SSIS.

In the next step the *reliability of the translated version* of the SSIS was evaluated using four types of reliability: internal consistency, composite reliability, average variance extracted (AVE), and test-retest reliability. The Cronbach's alpha value for the translated scale was .76, the composite reliability value was .80 ( $>.60$ ), and the AVE was .60 ( $>.50$ ) indicating acceptable internal reliability. As mentioned above, the 34 students completed both scales in reverse order over a one month

interval. The intra-class correlation was .86, indicating satisfactory test-retest reliability.

The sixth step pertained to the *evaluation of the construct validity* of the Portuguese version of the SSIS (*SSIS-P*). The factorial validity of the *SSIS-P* was employed using confirmatory factor analysis (Ullman, 1996) with the EQS 6.1 software (Bentler, 1995). A single factor model was tested, the factor loadings were fixed to unity, and the item residual covariances were fixed to zero. To determine if all variables were normally distributed, an exploratory data analysis based on the inspection of skewness values and kurtosis values was assessed. Skewness values ranged from -2.73 to -.59, and kurtosis values from -.68 to 9.73. The Mardia's coefficient (Mardia, 1970) of multivariate kurtosis was 41.26 and the normalized estimate was 22.95, suggesting that the assumption of multivariate normality was not tenable. Byrne (2006) proposed that normalized estimate values greater than five indicate a departure from normality. Hu and Bentler (1999) suggested that confirmatory factor analysis could be also used even if data departs from normality, employing the Sattora-Bentler scaled  $\chi^2$  statistic.

TABLE 1 Goodness of Fit Indexes of the SSIS-P

	S-B $\chi^2$	df	S-B $\chi^2$ / df	NNFI	CFI	RMSEA
S-F Model	15.87	13	1.22	.958	.974	.038

Note: S-F = Single Factor

To assess the fit of CFA models researchers have developed and presented a great number of fit indices. Since the data of this study were not normally distributed, the fit indices used for model evaluation were: the Sattora-Bentler scaled  $\chi^2$  statistic ( $\chi^2$ ), the Non-Normed Fit Index (NNFI), the robust Comparative Fit Index (CFI), and the Root Mean Square Error of Approximation (RMSEA). Generally, NNFI and CFI values greater than .90 indicate an acceptable fit between the observed data and the hypothesized model (Hu & Bentler, 1995), while values greater than .95 an excellent fit (Hu & Bentler, 1999). RMSEA values ranging from .06 to .08 declare an adequate fit with .10 to be considered as the upper limit (Byrne, 2000). For the *SSIS-P*, results indicated a very good fit of the model to the data: S-B  $\chi^2$  = 15.87, df = 13,  $p$  < .001, S-B  $\chi^2$  / df = 1.22, NNFI = .958, CFI = .974, RMSEA = .038, 90% RMSEA CI = .000 - .092 (Table 1). The factor loadings ranged from .32 to .89. All were significant at the  $p$ <.05. CFA item statistics of the translated *SSIS* are presented in Table 2.

To further assess its construct validity, the translated version was correlated to four *Place Attachment* subscales. According to theory

(Kyle et al., 2004b), positive correlations were expected. Results showed that all correlations were significant at  $p < .05$  (Place Dependence = .29; Social Bonding = .39; Place Identity = .40; Affective Attachment = .54). Descriptive statistics of the *SSIS-P* are also presented in Table 3.

TABLE 2 Confirmatory Factor Analysis Results of the Translated *SSIS*

Scale Item	t - values	IS	IK	Item loading	IU	SMC's*
Item 1	7.39	-2.73	9.73	.56	.82	.32
Item 2	13.38	-2.04	4.87	.89	.45	.79
Item 3	9.95	-1.63	3.23	.71	.69	.51
Item 4	7.85	-1.25	1.61	.59	.80	.35
Item 5	11.24	-2.57	7.76	.78	.62	.61
Item 6	3.92	-.78	-.60	.32	.94	.10
Item 7	5.34	-.52	-.68	.43	.90	.18

Note:  $N = 161$ . \* SMC's = Squared Multiple Correlations, IU = Item Uniqueness, IS = Item Skewness, IK = Item Kurtosis

TABLE 3 Descriptive Statistics for the *SSIS-P*.

Scale Item	<i>M</i>	<i>SD</i>	<i>R</i>					
Item 1	7.49	.94						
Item 2	7.07	1.37	.49					
Item 3	6.80	1.45	.30	.64				
Item 4	6.84	1.36	.41	.49	.45			
Item 5	7.37	1.19	.51	.70	.52	.46		
Item 6	5.97	2.23	.12	.27	.23	.30	.20	
Item 7	5.30	2.19	.20	.38	.34	.25	.28	.29

## DISCUSSION

Research on sport fan behavior has been accelerated the last decade because of the tremendous economic, social, and psychological impact of professional sports in people's lives worldwide. In this research stream, the construct of team identification possesses a central role in many published sport fan behavior models (e.g., Funk & James, 2006; Robinson, Trail, Dick, & Gillentine, 2005). With very few exceptions, what we know about the behavior of the sport fan results from studies that comprise fans from only a few, typically English-speaking countries (e.g., United States, England). However, this approach limits our understanding of sport fandom worldwide, and impedes further cross-cultural comparisons. The development of scales in other cultures and languages will assist sport researchers in overcoming this obstacle, generalizing results and understanding the global sport fan. In line with this argument, the aim of the present study was to translate and validate the *Sport Spectator Identification Scale* (Wann & Branscombe, 1993) into Portuguese.



A thorough methodology suggested by Vallerand (1989) and further elaborated by Banville et al. (2000) was used to translate and validate the original *SSIS* into the new language. The first three steps of this process secured the proper translation of the seven scale items into Portuguese. The remaining three steps pertained to the reliability and validity of the *SSIS-P*. Results indicated that the Portuguese version of the *SSIS* (*SSIS-P*) had a good item structure as suggested by three reliability estimates: internal consistency, composite reliability and AVE. The intra-class correlation coefficient that was used to examine test-retest reliability over a period of one-month revealed acceptable levels of stability for the *SSIS-P*. Also, the *SSIS-P* indicated strong concurrent validity, as revealed by the high correlation between the translated and the original version of the *SSIS*. Confirmatory factor analysis results supported the uni-dimensional structure of the scale in the new language, and the seven scale items indicated an acceptable factor structure. In addition, the direction and magnitude of the correlations between the translated version and the four subscales of the *Place Attachment Scale* supported theoretical expectations (Kyle et al., 2004b) and provided initial evidence regarding the construct validity of the *SSIS-P*.

Based on the results of the present study, sport marketing practitioners in Portuguese-speaking countries worldwide could use *SSIS-P* to assess the psychological attachment among fans and the sport team. Similar to the original version, *SSIS-P* is a short and easy to complete questionnaire that could be conveniently distributed inside an arena, thus leading to ease of use in field settings. Sport marketers could use the *SSIS-P* to segment fans using their levels of attachment with the sport team as the segmentation variable. By applying such a segmentation strategy, sport marketers will create a better understanding of their customers' needs and wants, and subsequently will influence their future behaviors. A recent study among professional basketball fans in Greece revealed that the influence of perceived service quality on spectators' decisions to attend games in the future was not the same for all customer segments, categorised on their levels of identification with a particular sports team (Theodorakis, Koustelios, Robinson, & Barlas, in press). Greenwell, Fink and Pastore (2002) also found that highly identified spectators of minor hockey league games in the U.S were less critical on both the core (i.e. the game) and the peripheral (i.e. services) sport product, than customers with low identification.

It is to be noted that Portuguese is the official language of more than 223 million people around the world, thus sport researchers could use the *SSIS-P* so as to advance our understanding of the sport fans in the Portuguese-speaking countries. *SSIS-P* could be used to conduct cross-cultural studies in order to reveal differences and similarities of the

global sport fan. As professional sport teams attempt to augment their fan bases by attracting fans from all over the globe, multiple language instruments will assist in our understanding of this globalization process.

However, this was a first attempt to translate and validate the *SSIS* into Portuguese. Additional research is needed to further establish the construct validity of the scale into the new language. It should be noted we used the *Place Attachment Scale* to document initial support for the construct validity of *SSIS-P*. However, future researchers might also use behavioral indices to further explore the construct validity of the translated scale. In addition more stringent tests might be used by researchers in the future so to disentangle the relationships between team identification and related constructs. To add another version of *SSIS* is not enough, researchers should focus on cross-cultural generalizability of the scale by using stringent tests such as multi-group CFA analyses with samples from different countries. By doing so, they will not only secure the cross-cultural validity of their scale, but will also enhance our understanding about sport fandom worldwide.

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