"No" is not "Low": Improving the Assessment of Sport Team Identification

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Abstract

Scholars have studied sport team identification for decades, advancing our understanding of the influence of a psychological connection to a sport team on attitudinal and behavioral outcomes. Despite the contribution of the study of team identification to the sport fan psychology and sport consumer behavior literatures, a critical issue is apparent. A review of the methods used by scholars to assess and study team identification uncovered a misinterpretation of participant responses to team identification scale items. In previous research, not-identified individuals have been examined as individuals with low team identification. We illustrate the problem with scales used to measure team identification, then propose one approach to resolving the problem with the most frequently used scale, the Sport Spectator Identification Scale. We report on the testing of a modified scale, the Sport Spectator Identification Scale–Revised (SSIS-R), to detect not-identified individuals. We conclude with suggestions moving forward the study of team identification in general.

Keywords: team identification, consumer behavior, psychological connection

Team identification has been a popular topic of study among sport management, sport marketing, and sport psychology scholars since the 1990s. A high level of identification with a

team often results in consistent and enduring behaviors and attitudes toward a team (James, Kolbe, & Trail, 2002), such as purchasing event tickets (Wann, Bayens, & Driver, 2004) and merchandise (Lee & Ferreira, 2011), positive word of mouth (Swanson, Gwinner, Larson, & Janda, 2003), and attitudes toward sponsors (Chien, Kelly, & Weeks, 2016). The range of scholarly activity regarding team identification in the past three decades is indicative of its appeal to those who study sport consumer behavior.

Upon a critical review of the team identification research, a significant issue is apparent. Since their inception, scholars (the authors included) often have misinterpreted participant responses to team identification scale items by classifying "not identified" individuals as those with "low" identification. The problem occurs because various scales (e.g., Dimmock, Grove, & Eklund, 2005; Heere & James, 2007; Trail & James, 2001; Wann & Branscombe, 1993) include positive anchors on one end and, most critically, negative anchors on the other. Individuals who report they disagree with the team identification items are reporting they *do not identify* with the focal team. Yet, scholars have consistently characterized these participants as having a low level of identification, which we illustrate in this article.

We believe the misinterpretation has led to a problem with the comparison of low and high team identification groups. When scholars use team identification scores to categorize fans into high and low identification groups, the potential exists for the low identification group to also include not identified individuals because of the way the scales are anchored. Scholars that have purportedly tested for differences between high and low identification groups have actually often been comparing highly identified individuals to a group comprised of some mixture of low and not identified individuals. There has also been a problem with comparisons when team identification has been tested as a continuous variable. Scholars have reported team identification as a range from low to high, without acknowledging the not identified participants. The problem is more than a labeling issue—not identified is substantively different than low identification. Indeed, team identification is grounded in social identity theory (Tajfel & Turner, 1979), which posits that individuals define themselves based on the social groups they are members of, and

those that they are not. Thus, mistakenly considering not identified individuals as identified runs counter to how an individual defines his/herself. Some not identified individuals may even be dis-identified with the focal team as a result of general opposition to the focal team or even support of a rival team, further exacerbating the problem (Lock & Filo, 2012).

Regardless of the particular scale used, scholars have failed to address that their sample almost certainly includes not identified individuals (e.g., Gwinner & Swanson, 2003; Madrigal & Chen, 2008; Parker & Fink, 2010; Wann et al., 2004; Wann & Schrader, 1997). Even when surveying attendees at a sporting event or ticket purchasers for a particular team, it is reasonable to expect that not identified individuals are in the sample. Accordingly, our purpose in this article is to empirically illustrate the problem of misinterpretation and to test an alternative assessment of team identification that allows for detection of those not identified with a team.

Literature Review

The assessment of team identification started in earnest with, and has been subsequently influenced by, Wann and Branscombe's (1993) publication of the Sport Spectator Identification Scale (SSIS). Since the emergence of that work, other scales have been developed to assess team identification (e.g., Dimmock, Grove, & Eklund, 2005; Heere & James, 2007; Trail & James, 2001). Most scholars agree that team identification is a social identity concept (Tajfel & Turner, 1979), explaining group-based fandom (Lock & Heere, 2017). We emphasize here that although discussion of the theoretical underpinning of team identification is important (see Lock & Heere, 2017), our focus is on the measurement of team identification. Specifically, our purpose is to illustrate that scholars have and continue to misinterpret some individuals as having low identification when really they are not identified.

The focal issue is how we have been interpreting and continue to interpret responses to scale items. The problem of misinterpretation is not limited to a particular scale; it is applicable to any team identification measure given the choice of scale anchors. Any scale utilizing negative and positive anchors such as "Strongly Disagree" and "Strongly Agree" has the potential for

misinterpretation. With such anchors, those aligning themselves with the negative or "Strongly Disagree" anchor make the issue of not identified a concern. Accordingly, the focus of this work is on improving our measurement and interpretation of team identification.

Study of Team Identification

One might ask, "Why have scholars been particularly interested in high and low identification?" Quite simply, they have been interested in testing group differences. When comparing groups characterized by a high or low condition, it is likely that a significant difference exists between the two groups. Although it is reasonable and useful to compare individuals characterized by low versus high team identification, we must make sure those classified in such categories truly belong in their respective groups, or the measurement process will suffer from a lack of validity. Over time, scholars have grouped individuals with no identification along with those characterized by low identification.

Looking at the measurement of team identification, it appears the interpretation of the anchors based on the scaling is likely the core of the problem. For example, consider the SSIS item 2 which is worded, "How strongly do you see yourself as a fan of the [team]?" The anchors for the item are "Not at all a fan" and "Very much a fan." The scaling for this item is typically 1 to 8, respectively (though other "high" end points have been used). The problem is that individuals who read the anchors and choose "Not at all a fan" have been classified as having low identification, even after reporting they are, "Not at all a fan."

Trail and James (2001) used the item, "I already consider myself a fan of the [team name]," anchored by "strongly disagree" and "strongly agree." Individuals that strongly disagree with considering themselves a fan of the team are classified has having low team identification, even though they disagreed with the statement. A similar example is found in the work of Parker and Fink (2010), "I consider myself to be a real fan of the [team]." The anchors for the item are "Strongly disagree" and "Strongly agree." Individuals disagreeing with the item are positioning

themselves as not identified, yet Parker and Fink assessed respondents as having high or low identification.

There is a fundamental problem when we use anchors that purport a "not," "never," or "strongly disagree" condition, yet we subsequently interpret these responses as "low" identification. In an applied setting the problem is exacerbated when recommendations are made to sport marketers on how to promote to, or reach out to, individuals characterized as having a low level of identification. It is possible there are individuals in a particular setting that are fans of a rival team, dislike the focal team, or may even be dis-identified (c.f., Lock & Filo, 2012). Referring to such individuals as fans, for example, and/or sending promotional materials intended to further develop their connection would be incorrect because such individuals have indicated they are not identified with the focal team.

Instances of Misinterpretation

Team identification as a categorical variable. The inclusion of not identified individuals in low identification groups is apparent in the team identification literature. In some instances, the range of team identification scores is evidence that not identified individuals (i.e., those with a mean score of 1.0) are included with the low identification group. For example, investigating causal attributions of game outcome, Madrigal and Chen (2008, p. 725) noted:

> As expected, those in the high-identification group scored significantly higher on team
> identification ($n = 61$; $M = 5.00$, $SD = 1.12$, range = 3.4–6.80) than did those in the low
> identification group ($n = 60$; $M = 2.08$, $SD = .67$, range = 1.0–3.20), $t(119) = -17.33$, $p <$
> .001.

Even when scholars do not disclose score ranges, inclusion of not identified individuals is often evident. In studying the role of team identification in the relationship between cause-related marketing and team merchandise purchasing, Lee and Ferreira (2011, p. 165-166) wrote:

> We examined probabilities for individuals classified into three groups based on the
> identification with Astros: high ID (individuals that averaged 6 or 7 in the identification

scale with Astros), medium ID (individuals that averaged 3 to 5 in the identification scale with Astros), and low ID (individuals that averaged 1 or 2 in the identification scale with Astros).

Finally, consider the work of Jang, Ko, Wann, and Kim (2017). Jang et al. studied the effect of team identification on energy level and happiness. They reported a mean score of 3.15 for team identification, with a standard deviation of 1.52 (on a 7-point scale). With a mean score just above 3.0, it is very realistic to expect there were participants who were not identified. Yet, the authors write about individuals characterized by high and low identification.

The preceding examples involve studies using the SSIS to assess level of team identification; there are similar examples with other scales. Using Trail and James' (2001) team identification index, Parker and Fink (2010) explained, "Results were used to group the participants into high (top 33%) (n = 107, M = 7.49) and low (bottom 33%) (n = 112, M = 1.00) identification groups" (p. 204). They eliminated respondents whose scores fell in the middle 33%, allowing them to study differences between fans and non-fans. However, in discussing the two groups, they refer to high and low identification groups, even though individuals in the lower third disagreed with the team identification items, reporting they were not identified with the focal team. This is more than just a labeling issue; if individuals disagree with the measurement items, they are reporting they are not fans of the focal team. To refer to them as a low identification group implies some level of fandom, which is not accurate.

Team identification as a continuous variable. The issue of misinterpretation can also be found in instances where team identification is utilized as a continuous variable. For example, in their research on the relationship between National Association for Stock Car Auto Racing identification and sponsor product purchase intention, Levin, Beasley, and Gilson (2008) wrote, "Total scores ranged from a low of 6 to a high of 42, with a mean of 32.4" (p. 199). The authors used a modified 6-item SSIS with scale range 1 to 7, thus the reported range of scores indicates participants' identification varied from "none at all" to "extremely high." The authors, however,

do not acknowledge the presence of not identified individuals. In studying the impact of college football team identification on sponsor product purchase intention, Madrigal (2000) used a modified 5-item SSIS (scale ranging from 1 to 5). Identification scores ranged from 5 to 25, though Madrigal did not acknowledge the inclusion of respondents that were not identified.

Larkin, Fink, and Trail (2015) used a three-item team identification scale (Robinson & Trail, 2005) in a study of sport media consumption. Larkin et al. reported:

> Participants who rated their Team Identification at the mid-point and below were placed in the low group ($N = 98$; $M = 2.15$) and participants who assessed Team Identification above the mid-point were placed in the high group ($N = 146$; $M = 6.35$). Results from a t-test indicated that the means of these two groups were significantly different ($t = -34.063$, $p < .001$). (pp. 192-193)

With a mean score of 2.15 (no standard deviation reported for the subgroup), it is reasonable to expect some respondents disagreed with the scale items, reporting they were not identified with the focal team. There were likely individuals included in the analysis that were not identified, yet the discussion is about those that are in the low group and the high group respectively. The comparison is about identified and not identified, which would impact the implications. Larkin et al., however, do not address the notion of not identified respondents.

Testing team identification as a continuous variable is not a problem in and of itself, and, actually is preferable to creating categorical groups. Having not identified respondents in the analysis does not negatively impact the testing of a structural model or computing some type of regression analysis. The problem lies in the reporting of low to high identification without acknowledging the presence of not identified participants. The problem may be exacerbated when researchers offer implications about those characterized by low identification that may in fact be not identified. Let us reiterate, even when using a continuous variable, reporting on and offering implications regarding individuals presumed to have low identification, who in fact may not be identified with a focal team, is misinterpreting findings and presenting incorrect

implications. A step should be taken when testing team identification as a continuous variable-which we found no instance of in any work-to report the range of responses for the team identification items. If there are individuals that have disagreed with all the items, reporting they are not identified with a focal team, such respondents should not be characterized or referred to as having low identification. Scholars have repeatedly written about low to high identification, they have not addressed the topic of not identified as part of the respondent group.

The point to be emphasized here is that across all approaches to studying and measuring team identification, individuals who do not identify with a team have often been classified (or at the least written about) as if they do have some (albeit low) degree of team identification. Recognizing this misinterpretation, it is reasonable to ask, how can we accurately assess and work with the not identified and/or low individuals in our study of team identification?

How Do We Deal With "Not Identified" Individuals?

Given the issue of misinterpretation in the measurement of team identification, we tested a revised scale. Because of its widespread use and evidence of reliability and validity, we revised the SSIS. As of 2017, Wann and Branscombe's (1993) article introducing the SSIS had been cited more than 1,200 times (Google Scholar, 2017), and the SSIS was used in over half of the articles that had utilized team identification as a focal variable; other scales were used far less frequently. In addition, scholars have also reported evidence of reliability and validity for the SSIS (see Wann, Melnick, Russell, & Pease, 2001). For those who use other team identification measures, we re-emphasize that the problem of misinterpretation is relevant to all other scales.

Study 1

In Study 1 we tested two approaches for determining which individuals had no team identification. The first approach involved using the original SSIS and parceling out participants that selected "1" for all scale items, reporting they were "not identified." A second approach involved including a "Not applicable" option with revised anchors for each scale item.

Method

Participants (N = 228) were recruited at three United States universities: one in the Northeast and two in the South. At the respective universities, institutional approval was secured prior to data collection. At each university, instructors of undergraduate courses were asked if one of the respective researchers could visit a class and administer a paper questionnaire. In the respective classes the purpose of the project was explained and questionnaires distributed to the students during single class periods. Across the three universities, participants were students enrolled in Management, Sport Management, and Psychology courses. Participants completed a questionnaire that included the original Sport Spectator Identification Scale (SSIS; Wann & Branscombe, 1993), and a revised version of the SSIS (i.e., the SSIS-R). Participants were asked to think about the Boston Red Sox as they completed each identification scale. Based on the locations where data would be collected, the Boston Red Sox were selected as the focal team to ensure a range of team identification levels. The revised scale included the same seven items as the original SSIS but a "Not applicable" option was included to the right side of the numeric scale, and some anchors were altered (the "right end" anchors in the revised scale were retained from the original versions; only the low end, "left" anchors were revised). Additionally, the questionnaire included filler items to separate the original and revised versions of the SSIS. A single item was also included to which participants responded, "Do you identify yourself as a fan of the Boston Red Sox?" Participants circled "Yes" or "No."

Results

We investigated those individuals who answered "No" to the item asking if they identified as a fan of the Boston Red Sox (n = 159). Of these participants, 69 had a team identification score of "1.0" on the original SSIS (43.4%), that is, recorded a "1" as their response to each of the SSIS items. On the revised version (SSIS-R), 89 (56.0%) reported a score of "0.0", that is, answered "N/A" to each item. Thus, adding "N/A" as a response option to the SSIS items appeared to improve the identification of not identified individuals. In fact, among those who reported that they did not identify as a fan of the team, a significantly greater proportion of persons scored a

0.0 on the revised version than scored 1.0 on the original version, $z = 2.77$, $p < .01$ (test of proportions). However, two concerns were evident.

First, a large number of participants reported they did not identify as a fan of the team, yet failed to score either a mean of 1.0 on the original version and/or a mean of 0.0 on the revised version. Second, persons with a mean score of 1.0 on the original scale and a 0.0 on the revised scale were not always the same individuals. We considered that in the majority of cases, it seemed possible that only one or two items (per participant) had responses above either 1 for the original version or "N/A" for the revised version. To investigate this possibility, we further examined responses for each participant on an item-by-item basis. This investigation confirmed our expectation. For example, there were 14 persons who reported an original version score of 1.0 but a revised version score greater than 0.0. Four of these participants (28.6%) selected "N/A" for all but one item. Two individuals gave a non "N/A" answer to the item assessing how closely they followed the Red Sox via the media and two gave a non "N/A" response to the item assessing degree of dislike for the Red Sox rivals. The pattern noted above was repeated for the 34 persons reporting a revised scale score of 0.0 but an original scale score above 1.0. We found that 22 (64.7%) of these individuals answered 1 to all but one of the items on the original SSIS. Similar to the previous findings, most of these persons gave a response greater than 1 to either the media question ($n = 8$, 23.5%) or the rivals question ($n = 12$, 35.3%).

We believe these patterns provide evidence that some persons may not have self-identified as a fan of the target team but, *appropriately*, answered the items in a manner suggesting that they did identify with some team. The identification with another team impacted the results. For example, consider the "dislike rivals" item and the manner in which a fan of the Baltimore Orioles may have responded. With this item, respondents indicated the extent to which they disliked the greatest rivals of the Boston Red Sox. For most persons, this would likely be the New York Yankees, a rival team for both the Boston Red Sox and Baltimore Orioles. As a result, the hypothetical Baltimore Orioles fan could report an answer at the high end of the scale

(e.g., 5 to 8) because he/she dislikes the Yankees, even though he/she is not a fan of the Red Sox. The dislike is a consequence of identifying with the Orioles, not the Red Sox. However, his or her responses would make it appear (numerically) as though he or she did (minimally) identify with the Red Sox. This form of logic applies to several of the SSIS items. For example, someone not identifying as a Red Sox fan may report following this team in the media because they intensely dislike this team, or just because they follow Major League Baseball in general.

Summary

There are potential explanations for the findings that A) several persons reported they did not identify as a fan of the target team answered the individual SSIS items (on both versions) in manner suggesting at least a low level of identification with the team, and B) there was not a one-to-one correspondence between persons scoring at the low point on the two forms of the SSIS. First, some may not have self-identified as a fan of the team but still answered the individual items in a manner suggesting that they identify with some other team (e.g., they were a fan of a different team sharing the target team's rivals). This issue is most relevant to persons answering above a 1 (old form) or "N/A" (revised form) on only one or two items. Second, placement of the "N/A" option may have been problematic, leading some to fail to notice this as an option. This applies to those persons who answered 1 to the revised SSIS items. Third, some may have misinterpreted the wording of the "Yes or No" item, a problem most relevant to persons scoring as weak to moderate on the two versions of the SSIS.

We believed these problems could likely be resolved by making two modifications to the revised SSIS. First, rather than using a "N/A" response to each item, a screening question should be more effective in detecting those persons who do not identify as a fan of the target team. Our aim was to utilize a screening item similar to the "Yes or No" item utilized in Study 1, but to be more elaborative in the new item to better indicate that persons with any sense of connection to the team should answer "Yes" to this question. This would eliminate the problematic placing of the "N/A" response and ensure that all persons identifying with the team, even if only minimally,

would be classified as identified. In addition, by instructing only those persons declaring at least a minimal identification with the target team to complete the individual SSIS items, concern over not-identified persons answering individual items in a manner suggesting that they did identify with the team (e.g., they were a fan of a different team sharing the target team's rivals) would no longer be an issue. Second, the inclusion of a screening item informing participants they should not answer the SSIS items if they answered "No" (i.e., they do not identify as a fan of the team) necessitated further changes to the anchors of the SSIS. Rather than starting with anchors indicating no identification with the team as is found on the original SSIS (e.g., "not at all a fan"), the anchors to the left (i.e., low) end of the Likert continuum needed to reflect a weak level of identification with the team. In Study 1, the revised anchors did not account for a weak level of identification. By modifying the revised SSIS in these ways, we believed that the problems noted above would be greatly reduced.

Study 2

Study 2 was a test of the revised version of the SSIS, the SSIS-R. A self-report screening question was used to capture individuals who did not identify as fans of the team, and scale anchors were modified to allow for measurement of within group differences.

Method

Participants and procedure. For Study 2, participants were recruited from the same three universities mentioned in Study 1. Data for Study 2 were collected in Management, Sport Management, and Psychology classes as in Study 1. The same class offerings were used, but in different semesters in order to avoid having the same respondents participate in Study 1 and Study 2. In total 492 questionnaires were distributed and returned (northeastern university n = 207; southern university 1 n = 81; southern university 2 n = 204). Twenty-seven questionnaires had missing data, and were therefore excluded from the data analysis. The final usable sample included 465 questionnaires.

Materials. The questionnaire included the original SSIS (Wann & Branscombe, 1993), and the SSIS-R, with the Boston Red Sox as the focal team (see Table 1 and Table 2). The questionnaire also included demographic questions and behavioral intention items pertaining to the Red Sox. Participants were asked to rate on a scale with 1 = "Not at all likely" and 8 = "Very likely" how likely they were to attend a home game, an away game, watch a game on television, listen to a game on the radio, and purchase merchandise.

Table 1. Original Sport Spectator Identification Scale (SSIS)

Please think about the *Boston Red Sox* as you answer questions A - G. Please circle the appropriate number on the scale next to each question.

	Not							Very	
A. How important to you is it that the **Boston Red Sox**	Important							Important	
win?	1	2	3	4	5	6	7	8	
	Not at all							Very much	
B. How strongly do you see yourself as a fan of the	a fan							a fan	
Boston Red Sox?	1	2	3	4	5	6	7	8	
	Not at all							Very much	
C. How strongly do your friends see you as a fan of the	a fan							a fan	
Boston Red Sox?	1	2	3	4	5	6	7	8	
D. During the season, how closely do you follow the									
Boston Red Sox via any of the following: in person								Almost	
or on television, on the radio, on television news or a	Never							every day	
newspaper, or the Internet?	1	2	3	4	5	6	7	8	
	Not							Very	
E. How important is being a fan of the **Boston Red Sox**	Important							Important	
to you?	1	2	3	4	5	6	7	8	

	Do Not								Dislike		
F. How much do you dislike the **Boston Red Sox**	Dislike								Very Much		
greatest rivals?		1	2	3	4	5	6	7	8		
G. How often do you display the **Boston Red Sox** name											
or insignia at your place of work, where you live, or	Never								Always		
on your clothing?		1	2	3	4	5	6	7	8		

Table 2. Sport Spectator Identification Scale – Revised (SSIS-R)

Do you identify yourself as a fan of the Boston Red Sox, even if just a little bit? Please circle the appropriate letter.

A. Yes   B. No*

Please think about the *Boston Red Sox* as you answer questions A – G. Please circle the appropriate number on the scale next to each question.

	A Little								Very		
A. How important to you is it that the **Boston**	Important								Important		
Red Sox win?		1	2	3	4	5	6	7	8		
	Slightly								Very Much		
B. How strongly do you see yourself as a fan of	A Fan								A Fan		
the **Boston Red Sox**?		1	2	3	4	5	6	7	8		
	Slightly								Very Much		
C. How strongly do your friends see you as a fan	A Fan								A Fan		
of the **Boston Red Sox**?		1	2	3	4	5	6	7	8		
D. During the season, how closely do you follow									Very		
the **Boston Red Sox** via any of the following:	A Little								Frequently		
in person or on television, on the radio, on		1	2	3	4	5	6	7	8		

television news or a newspaper, or the Internet?									
E. How important is being a fan of the **Boston Red Sox** to you?	A Little Important							Very Important	
	1	2	3	4	5	6	7	8	
F. How much do you dislike the **Boston Red Sox** greatest rivals?	Dislike A Little							Dislike Very Much	
	1	2	3	4	5	6	7	8	
G. How often do you display the **Boston Red Sox** name or insignia at your place of work, where you live, or on your clothing?	Occasionally							Always	
	1	2	3	4	5	6	7	8	

Note. * An individual answering "No" would be directed to "skip" the scale questions.

The anchors for the SSIS-R included "A little important-Very Important," "Slightly a fan-Very much a fan," "A little-Very frequently," "Dislike a little-Dislike very much," and "Occasionally-Always." Each of the "left" (i.e., low end) scale anchors were revised, relative to the SSIS. Only one anchor on the "right" (i.e., high end) was revised; the high end anchor of the item reading, "During the season, how closely do you follow the Boston Red Sox via any of the following: in person or on television, on the radio, or television news or a newspaper, or the Internet?" was revised to "Very frequently." The change was made to the anchor for the "follow" item based on the recognition that, with the prevalence of mobile devices, those with a strong identification may follow a team more than "Almost every day." In addition to the original SSIS and SSIS-R, the questionnaire included demographic questions (i.e., gender, age).

Data analysis. SPSS (v. 23) statistical software was used to compute frequency counts for the self-report item, to compute mean scores for the SSIS and the SSIS-R, to determine the percentage of male and female participants, and the age range of the participants. Cronbach's alpha coefficients were computed to assess evidence of reliability for the original SSIS and the

SSIR-R. Confirmatory factor analysis (CFA) was computed using AMOS, a component of SPSS (v. 23) to provide evidence of model fit and evidence of validity.

Results

The sample included 244 male (52.5%) and 219 female (47.1%) participants (two individuals provided no response), with the mean age being 21. For the single item, "Do you identify yourself as a fan of the Boston Red Sox, even if just a little bit?" 42% of the participants responded "Yes" and 58% responded "No."

Scale reliability. Cronbach's alpha scores and item-to-total correlations were computed as evidence of reliability. The Cronbach's alpha score for both the original SSIS and SSIS-R was .96, thus exceeding the recommended minimum of .70 (Hair, Black, Babin, Anderson, & Tatham, 2009), providing evidence of reliability. The item-to-total correlations were also examined to provide further evidence of reliability. Item-to-total correlations ranged from .71 - .95 for the items in the original SSIS and .68 - .94 for the SSIS-R items. For both scales, the item-to-total correlations exceeded the suggested level of .40 (Churchill, 1979), providing additional evidence of reliability.

Confirmatory factor analysis (CFA). The items for each scale were examined via CFA to provide evidence of validity. The loadings for the original SSIS items ranged from .72 - .97; the item loadings for the SSIS-R ranged from .68 - .96, exceeding suggested thresholds (Hair et al., 2009) and providing evidence of validity for both scales. Additionally, for both scales, the item loadings were significant, $p < .01$. The overall model fit for each scale was also assessed; for the original SSIS the model fit was deemed acceptable [TLI=.99, CFI=.99, RMSEA=.06, and SRMR=.01] based on the recommendations of Hu and Bentler (1999). The overall model fit for the SSIS-R was also deemed acceptable [TLI=.99, CFI=.99, RMSEA=.07, and SRMR=.02] (Hu & Bentler, 1999). Finding reasonable evidence of reliability and validity, we proceeded with the assessment of team identification.

Team identification. Team identification scores were analyzed for the original SSIS and the SSIS-R. A team identification score was computed by averaging a respondent's scores for the respective scale items. With the original SSIS, identification scores for the full sample ranged from 1.0 to 8.0; the mean score for the overall sample was 2.58 ($SD = 1.98$). Seventy-five percent of the participants had a mean score below 4.0, 11% had a mean score of 4.0 or 5.0, and 16% had a mean score of 6.0 or higher. Using a traditional approach to grouping and interpreting the data, 75% of the respondents would be classified as "low identification," even though the responses reflect disagreement with the scale items (see Table 3).

Responses to the SSIS-R were also averaged to produce a team identification score, based on the participants who answered "Yes" to the screening question ($n = 190$). Scores ranged from 1.0 to 8.0, and the mean score was 4.18 ($SD = 2.10$). Forty-three percent of the participants had a mean score below 4.0, 25% had a mean score of 4.0 or 5.0, and 32% had a mean score of 6.0 or higher. An important difference with the SSIS-R is that the individuals who responded to the scale items did identify, at least to some degree, as a fan of the Red Sox (i.e., they answered "Yes" to the screening item). Accordingly, when assessing the differences in strength of identification, there should not be any misinterpretation when grouping respondents as having a low level of identification (1.0-3.0), a moderate level of identification (4.0-5.0), or a high level of identification (6.0-8.0) (see Table 3).

Table 3. Team Identification Scores

	SSIS (n=465)	SSISR (n=190)
Low 1.0-2.0-3.0	75%	43%
Moderate	11%	25%

4.0-5.0		
High **6.0-7.0-8.0**	16%	32%
Mean **(SD)**	2.58 (1.98)	4.18 (2.10)
Median	1.57	3.86
Range	1.0 – 8.0	1.0 – 8.0

Behavioral intentions. Because researchers have reported the utility of team identification to predict behaviors or behavioral intentions (e.g., Theodorakis, Koustelios, Robinson, & Barlas, 2009; Wann, Weaver, Belva, Ladd, & Armstrong, 2015), we examined whether the SSIS-R had the potential to similarly predict behaviors or intentions. Participants responded to five items pertaining to behavioral intentions: attend a home game, attend an away game, watch a game on television, listen to a game on the radio, and purchase merchandise. The SSIS and the SSIS-R scores were correlated with the measures of behavioral intentions.

As shown in Table 4, correlations between team identification (both SSIS and SSIS-R) and the behavioral intentions were positive and significant. The correlations were essentially the same for the SSIS and SSIS-R. Because each scale measures team identification, a strong relationship between behavioral intentions and team identification is to be expected. It is important to keep in mind that the correlations with the SSIS include individuals that are not identified; the correlations with the SSIS-R do not include individuals who are not identified.

It is also feasible that researchers may be interested in including not identified persons in their analyses of behavioral intentions to compare individuals that are not identified with those that are identified. Accordingly, we also computed the correlations with the not identified respondents included by assigning persons answering "No" to the screening question with an

identification score of 0.0 (see Table 4). Not surprisingly, the correlations were consistent with the figures from the first two computations.

Table 4. Correlations: Team Identification and Behavioral Intentions

	SSIS (n=465)	SSIS-R (n=190)	SSIS-R & Not Identified (n=465)
Attend Home	.773	.739	.771
Attend Away	.292	.295	.201
Watch on TV	.776	.729	.732
Listen to Radio	.664	.595	.654
Purchase Merchandise	.807	.764	.805

All significant at the 0.01 level

The results provide evidence of reliability and validity for a measure of team identification that may be used to distinguish those that have some level of identification from those not identified, more accurately assess strength of identification, and may be used to more accurately assess within group differences, i.e., low, moderate, and high identification.

Discussion

Our purpose was to address and attempt to resolve a key problematic issue pertaining to the measurement of sport team identification. We tested a revised team identification scale, the SSIS-R, which detects both identified and not-identified individuals, while still allowing for the assessment of within group differences (i.e., those with low to high identification with a team). In

the remainder of this article, we discuss the continued study of team identification, and the prospective utility of the SSIS-R in terms of its value to those who study team identification.

The Study of Team Identification

Scholars have assessed team identification in numerous studies, most often finding differences based on varying degrees of identification. However, the manner in which researchers have compared or grouped individuals has been problematic, specifically concerning those individuals who do not identify with the focal team. With a revised team identification scale, we believe scholars will be able to avoid the issue of misinterpretation when examining team identification, and if desired study those that do and do not identify with a focal team.

Rigor: A key issue. The problem of including individuals that are not identified with a focal team as part of a low identification group is more than mere mislabeling. A key issue is the rigor with which we conduct our research. It may help to first point out why we have an interest in studying groups and group differences. Indeed, a question we asked ourselves in reviewing the team identification literature and conducting the research was: Why do we care about groups? The answer, as it would appear in a majority of the team identification literature, is that we are interested in groups (or varying levels of team identification) because there are often differences in thoughts, attitudes, and behaviors between groups of individuals. Frequently, these differences are found to be statistically significant, a data attribute highly sought and rewarded in academia, and highly useful to sport marketers (for example) as elements of segmentation strategies, and developing marketing plans for target groups.

If, as researchers, we are simply studying team identification to find statistically significant group differences, the problems addressed in this article are less meaningful, because—as the body of team identification literature to date illustrates—statistical significance is found even with misinterpretation of results. However, if, as academics, we wish to study and discuss team identification as accurately as possible, and to provide valid information to colleagues working directly with sport consumers, the issue of misinterpretation is critical. As

scholars, we should strive for accuracy in every phase of research, from the initial conception of an idea through data collection and analysis, to dissemination of our findings. Unfortunately, in our assessment and study of team identification, we appear to have fallen short. Analyzing results and reporting that individuals responding to items have a "low" level of team identification, when they actually report they are not identified (or even possibly dis-identified) is poor science. The problem is exacerbated if sport marketers develop programs attempting to strengthen identification among individuals that actually are not identified with a team.

Our point at this juncture is not to argue that the preceding work on team identification should be discarded. To the contrary, we would argue this work has made a valuable and lasting contribution to the sport science and sport marketing literatures. At the least, we have learned that it is possible to measure team identification, and to distinguish the strength of identification. Further, results from previous research by and large include the point that those with high team identification have different thoughts, attitudes, and behaviors relative to a focal team, compared to those that do not have high team identification. The point we are making is that, moving forward, although we most certainly should learn from what has been done, it is imperative that we improve our measures of team identification in a fashion that allows us to determine whether individuals are identified or not, and for those that are identified, to assess the strength and impact of their team identification with greater confidence.

Classifying team identification groups. Scholars have often used some type of "split" to segment those characterized by high and low team identification. Some common methods used by scholars include a median split (e.g., Madrigal & Chen, 2008; Wann et al., 2004), upper and lower percentiles (e.g., Dimmock & Grove, 2005; Parker & Fink, 2010), a midpoint scale split (e.g., Fink, Parker, Brett, & Higgins, 2009), and in some instances, grouping individuals somewhat arbitrarily, neither at a median nor a scale midpoint (e.g., Wann & Grieve, 2005). In these instances, scholars have converted a continuous measure of team identification into a dichotomous variable; most have subsequently used analysis of variance (ANOVA) to determine

whether differences exist between low and high identification groups. It warrants mention, however, that the splitting of a continuous variable can be problematic from a statistical standpoint and can result in misleading conclusions. Thus, although such methods are fairly common, they are rarely justifiable (MacCallum, Zhang, Preacher, & Rucker, 2002).

Although grouping respondents based on degree of identification has proven useful in understanding differences among individuals, there are improvements we could make in how we derive such groups. With the SSIS-R (or other revised assessments of team identification), scholars and sport marketers have the opportunity to study (1) those that identify with a focal team and those that do not identify with a focal team, and (2) intragroup differences based on strength of identification—low, moderate, and/or high. One advantage of the SSIS-R over the original version, and other assessments of team identification, is that by virtue of the screening item, researchers can directly compare persons identified with (at any level) and those not identified with a sports team. In essence we can compare fans and those that are not fans of a team.

The fan/not a fan distinction may be important to sport marketers, for example, trying to grow a brand by attracting *new* fans, rather than just increasing the level of identification of current fans. Administering the SSIS-R, a sport marketer could first identify consumers that are not fans, then follow up and learn specific information about such persons. It would be useful to better understand what drives their consumption, and to compare that information with those that are team fans, and develop marketing strategies accordingly. We may learn that those not identified with a focal team really do just want discounted tickets and/or giveaways. Using the SSIS-R sport marketers would be able to more readily determine whether consumers have low, moderate, or high team identification. As illustrated in this work, accurate comparisons of the different groups has been lacking; it may be that previous group differences were driven by comparisons of those that were and were not identified. With the SSIS-R, sport marketers can test whether there truly are intragroup differences, particularly in relation to frequency and degree of consumption.

Returning to the topic of classifying team identification groups, in some instances, such as when sport marketing professionals are interested in classifying various sport consumers into typologies for marketing research purposes, the categorization of consumers into groups based on team identification may be warranted (provided that authors acknowledge the statistical and theoretical limitations of such a practice, see MacCallum et al., 2002). In such situations, when studying those that identify with a focal team, it is important to consider the method used to characterize individuals as having a low, moderate, or high level of identification. With the SSIS-R (or other revised assessments of team identification) we recommend avoiding a median split. Researchers should examine the percentiles and determine natural breaks in the distribution of a sample. At the least, using a tri-partite percentile approach researchers may be able to differentiate based on low, moderate, and high identification. In some instances it may be that there are high and low identification groups, or perhaps moderate and high identification groups. With the SSIS-R, those that do indicate through their response to the screening item that they have some level of identification, researchers must be attentive to the pattern of responses when interpreting the results.

For those choosing to continue using existing measures of team identification without making revisions to account for not identified individuals, whatever approach is used to "split" a sample into subgroups, the problematic "low" group may continue to include some who are truly characterized by low identification, but also some that are not identified. The approach to grouping really will not matter for those using existing scales without revisions, because there is a high likelihood the problems with misinterpretation will persist.

Team Identification: Then and Now

Our intent with this work was to alleviate the problem of misinterpretation that has plagued sport team identification research since the development and publication of the original SSIS (Wann & Branscombe, 1993). This was accomplished by testing a psychometrically sound, revised version of a team identification scale (i.e., the SSIS-R) that allows for the detection of not-

identified individuals. Moving forward with the study of team identification, we encourage scholars to use a similarly modified team identification scale. The SSIS-R presented in this article is one means to do so, however the other various team identification scales could and should be adapted in a similar way to account for those not identified with a focal team, and to more accurately differentiate intragroup differences.

Throughout this article, we have emphasized and illustrated critical issues in the interpretation of team identification scores. In working through these problems and developing a modified team identification assessment, one might wonder (as we did) whether the body of team identification literature to date is now void. As noted, addressing the problem of misinterpretation and shifting to the SSIS-R does not negate the knowledge we have gained in studying team identification for 25+ years. Many of the differences we have found in terms of "high" versus "low" identified individuals likely still hold. However, we cannot over-emphasize that the "low" identification groups have almost always contained not identified individuals; the changes we have proposed to assess team identification should remedy this issue.

Conclusion

Team identification has been and will continue to be a central and critical topic of interest to sport science and sport management scholars, colleagues working directly with sport consumers, and business personnel in the sport industry. People are interested in sport teams, and that interest is not likely to wane in the future. Better comprehension of the connection people form with a sport team will enable us to more fully understand the thoughts, attitudes and behaviors that are antecedents of and are influenced by such connections. Our interest in sport teams influences how we think, what we say, and what we do. We have gained a substantial amount of knowledge concerning team identification and its impact and the process of sport fandom. If we are to advance our knowledge and understanding, we will need measures such as the SSIS-R to accurately determine whether individuals are identified or not, allowing us to examine those that are identified and not with a focal team, along with examining prospective differences among

those that identify with a focal team. Some may be of the opinion researchers have saturated the topic, that we have essentially learned all we can or need to about team identification. We strongly disagree with that thinking. Although researchers have certainly advanced this literature, we should not be satisfied with the status quo. We have learned a great deal about team identification over the years, yet it is evident through critical reflection that we still have much more to understand about individuals' connections to sport teams.

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