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Sport Spectatorship and Life Satisfaction: A Multi-Country Investigation

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Abstract

Elite and professional sport events have been recognized as potential mechanisms to enhance well-being. This multi-country study investigates how engagement in such events, behaviorally through live spectating and psychologically through team identification, is associated with life satisfaction. Data from Australia ($N = 268$) revealed a positive association between live spectating and life satisfaction through a two-wave design measuring live spectating and life satisfaction in separate surveys. Data from the United States ($N = 564$) confirmed the live spectating–life satisfaction relationship found in Study 1. Additionally, Study 2 revealed individuals with higher levels of team identification perceived greater emotional support from other fans, and this perception, in turn, predicted life satisfaction. Our findings provide sport managers with implications for positioning appeals in support of sport programs and designing events that facilitate engagement to promote life satisfaction in the community.

Keywords: sport events, team identification, sport fans, spectators, social identity theory, public policy

Sport Spectatorship and Life Satisfaction: A Multi-Country Investigation

Governments across the world have invested substantial resources in spectator sport. In the United States (U.S.), city and state governments spent over $11 billion on the construction of major league sport stadiums and arenas between 2000 and 2010 (Howard & Crompton, 2014). In Australia, the State Government of Western Australia is expected to pay more than AU$1.5 billion to build Perth Stadium, a multi-purpose stadium that will be used for the home stadium of Australian Football League (AFL) teams and hosting other sport events (Spagnolo, 2015). Public investments in sport projects are typically justified by their potential to bring economic benefits to local communities (Howard & Crompton, 2014). Despite some evidence supporting this potential (Lee & Taylor, 2005), the vast majority of academic research indicates economic benefits from sport events are minimal (Baade, Baumann, & Matheson, 2011). As a result, researchers have focused on broader social benefits of sport events and facilities beyond economic impacts (Crompton, 2014).

One such benefit is the potential role spectator sport events (e.g., elite or professional sport events) have in promoting subjective well-being. Subjective well-being refers to "people's evaluations of their lives" (Diener, 2000, p. 34) and has emerged as an important research topic (Doyle, Filo, Lock, Funk, & McDonald, 2016; Hallmann, Breuer, & Kühnreich, 2013; Kavetsos & Szymanski, 2010; Pawlowski, Downward, & Rasciute, 2014). This emergence corresponds to policy makers identifying the promotion of subjective well-being as a key policy target (U.S. Department of Health and Human Services, 2010) and recognizing spectator sport events as potential mechanisms to enhance well-being (PriceWaterhouseCoopers, 2005). Literature suggests two possible pathways by which such events may contribute to promoting subjective well-being. First, people could increase their subjective well-being by *behaviorally* engaging in

sport events as spectators (Pawlowski et al., 2014). Second, people could maintain and enhance

their well-being by *psychologically* engaging in sport events through social identification with

teams competing in the events (Inoue, Funk, Wann, Yoshida, & Nakazawa, 2015).

The propositions that these two pathways can influence subjective well-being can be

theoretically drawn from a body of research demonstrating the meaning-making capacity of

leisure (Iwasaki, 2007) and psychological benefits of social identification (Haslam, Jetten,

Postmes, & Haslam, 2009; Mael & Ashforth, 2001). However, within spectator sport events,

previous research testing the two pathways has lacked methodological rigor and has produced

inconclusive results. Regarding the behavioral pathway, existing evidence implying the

association between live spectating (i.e., attendance at sport events) and subjective well-being

was based on studies that did not consider whether or not respondents attended given sport

events (Kavetsos & Szymanski, 2010), or was based on cross-sectional data (Pawlowski et al.,

2014). In addition, most of the previous studies used a single-item scale to measure subjective

well-being, although this type of scale is associated with a number of problems, such as the

inability to address measurement error and take into account the multifaceted nature of

subjective well-being (Diener, Emmons, Larsen, & Griffin, 1985).

Regarding the psychological pathway, the relationship between team identification (i.e.,

social identification with a sport team) and subjective well-being can be predicted based on

social identity theory (SIT; Tajfel & Turner, 1979). Research has shown that team identification

is associated with social well-being, a collective and public evaluation of life functioning

measured by collective self-esteem or community cohesion (Inoue, Funk, et al., 2015). However,

evidence of the positive relationship between team identification and subjective well-being—a

more *personal* and *private* evaluation of one's own life (Keyes & Lopez, 2001)—is inconclusive,

with a review of empirical studies suggesting that team identification could have an adverse effect (Inoue, Berg, & Chelladurai, 2015; Vallerand et al., 2008).

Moreover, to date, no research has jointly assessed the two pathways in a single study, although behavioral and psychological engagement respectively represent distinctive ways by which people express their connections to spectator sport events and teams (Funk & James, 2001). The absence of a broader empirical approach to consider both pathways and the lack of robust evidence to support each pathway underscore the importance of further exploring the relationship between sport spectatorship and subjective well-being. As such, this research investigates the extent to which engagement in spectator sport events, both behaviorally through live spectating and psychologically through team identification, could contribute to life satisfaction. Life satisfaction is a key component of subjective well-being, referring to a cognitive judgmental assessment of one's quality of life (Diener et al., 1985). Our focus on life satisfaction is based on the notion that subjective well-being, because of its multifaceted nature, must be decomposed into its specific components to fully understand its association with other personal attributes (Diener et al., 1985).

Figure 1 shows the research model developed to guide this investigation. By testing this model, the current research makes two important contributions. First, this research provides new evidence for the social benefits accrued from sport events and facilities by supporting and clarifying previous findings on live spectating and life satisfaction through a research method addressing key limitations of past research. Specifically, this improved approach (a) uses a two-wave design measuring live spectating and life satisfaction separately, (b) assesses life satisfaction using an established multi-item scale, and (c) validates the results across two countries, Australia and the U.S. By considering live spectating of a range of sport events as well

as a favorite team's home games, this research also shows the association between live

spectating and life satisfaction exists regardless of the context of the spectating experiences.

(Figure 1 about here)

Second, given the inconclusive evidence regarding team identification's direct

relationship with subjective well-being indicators (including life satisfaction), it is essential to

determine psychological processes that underlie this relationship. Self-categorization theory

(SCT; Turner, Oakes, Haslam, & McGarty, 1994) proposes that such processes involve the

mediation of social support, but this proposition has yet to be empirically confirmed. This

research extends the understanding of the psychological processes by which team identification

affects life satisfaction by demonstrating the mediating role of emotional support, a type of social

support that captures the uniqueness of the spectator sport context (Inoue, Funk, et al., 2015).

Theoretical Background and Hypothesis

Life Satisfaction

Life satisfaction is viewed as an attitude that arises from a global cognitive evaluation of

one's satisfaction with life (Diener et al., 1985) and has been used in various research initiatives.

For example, *Health People 2020*, which sets the national health agenda managed by the U.S.

Department of Health and Human Services, uses life satisfaction as an indicator of well-being

(U.S. Department of Health and Human Services, 2010). Although life satisfaction is not

synonymous with well-being, identifying factors that contribute to life satisfaction is imperative

to understanding what makes people's lives better.

Life satisfaction has been considered a unidimensional construct and is assessed with a

single-item scale (Lucas & Donnellan, 2012) or multi-item scale (Diener et al., 1985). Single-

item scales of life satisfaction are deemed useful when respondents' burden is a primary concern

for research. This applies to the use of longitudinal studies or wide population surveys (Lucas & Donnellan, 2012). However, for other types of research that require less burden for respondents (e.g., cross-sectional surveys), a multi-item scale of life satisfaction, namely, the Satisfaction with Life Scale (SWLS), represents a more adequate measure of life satisfaction because of its demonstrated reliability and validity (Diener et al., 1985). By reviewing empirical studies that adopted the SWLS, Pavot and Diener (1993) concluded that the SWLS constitutes a unidimensional, internally consistent measure of people's satisfaction with their life as a whole. Furthermore, the SWLS has shown sufficient sensitivity to detect change in life satisfaction caused by an intervention (Pavot & Diener, 1993). This finding indicates that life satisfaction (as measured by the SWLS) can be influenced by a specific life experience, such as live spectating of a sport event in the current research context.

Live Spectating and Life Satisfaction

Participation in leisure activities, through exercise (i.e., physical activity) and non-exercise (e.g., attendance at cultural events), provides a context where people can create meaning in life, and this is central to maintaining and enhancing life satisfaction (Iwasaki, 2007). Various psychological mechanisms have been proposed to explain the meaning-making capacity of leisure (Iwasaki, 2007), which can be summarized as two perspectives. First, the personal enjoyment and intrinsic interest associated with leisure allows people to gain psychological resources, such as positive emotions and self-esteem, through leisure participation (Iwasaki, 2007). Such resources, in turn, can protect people from adverse life events that might otherwise reduce meaning in life, helping maintain and enhance their life satisfaction. Second, leisure provides the opportunity for personal development and learning, which is essential for making one's life meaningful and satisfying (Iwasaki, 2007).

Each of the two perspectives is applicable to spectator sport. As a leisure activity, behavioral engagement in spectator sport may provide people with psychological resources (Hallmann et al., 2013) and the opportunity for personal development (Doerrenberg & Siegloch, 2014). Regarding psychological resources, a qualitative study of an AFL team's fans (Doyle et al., 2016) found that attending the teams' games allowed fans to experience positive emotions and feelings of achievement, and reduce daily stress. Data from a national survey in Germany also indicated the majority of respondents felt proud from watching their country's success at international sport events (Hallmann et al., 2013). Regarding the opportunity for personal development, evidence indicates sport spectating can influence personal development outcomes, such as increased motivation to find full-time employment (Doerrenberg & Siegloch, 2014).

Although the aforementioned psychological benefits of sport spectating may be attained through other behavioral means such as watching games on television (Knoll, Schramm, & Schallhorn, 2014), live spectating represents a unique type of behavioral engagement that can have an effect on life satisfaction. For example, Howard and Crompton (2014) defined *private consumption benefits* as the psychological benefits explicitly available to attendees of a sport event, and distinguished these benefits from *public consumption benefits*, which entail the benefits perceived by people without physically attending the event. In addition, the results of a survey with over 450 English soccer fans indicated that the vast majority of respondents viewed their favorite team's home stadium as a special place and its home game as a venue for making them feel alive (Charleston, 2009). The uniqueness of live spectating can be understood from the celebratory nature of sport events, which can promote a sense of community among spectators and allow them to explore new social relationships while strengthening existing ones (Doyle et al., 2016). In turn, the social relationships facilitated through events are likely to increase the

psychological benefits of sport spectating by enabling spectators to (a) attain psychological

resources through a shared sense of excitement and (b) achieve personal development through

expanded social networks that may lead to new learning and developmental opportunities.

Consistent with the theoretical perspectives on why behavioral engagement in spectator

sport could affect life satisfaction, growing evidence points to a positive association between live

spectating and life satisfaction. For example, by analyzing survey data from several European

countries, Kavetsos and Szymanski (2010) have found that individuals in countries that hosted

major sport events (e.g., the UEFA European Cup) reported higher life satisfaction than those in

non-host countries. In addition, through a large cross-sectional survey, Pawlowski et al. (2014)

provided evidence showing that frequency of sport event attendance had a positive association

with indicators of subjective well-being, such as happiness. However, the existing evidence is

subject to several limitations, namely, an inability to detect whether respondents attended sport

events (Kavetsos & Szymanski, 2010), the analysis of a single, same source survey (Pawlowski

et al., 2014), and the use of a single-item scale to measure life satisfaction (Kavetsos &

Szymanski, 2010). As a result, the relationship between live spectating and life satisfaction will

remain tentative until these limitations are resolved. The current study, therefore, tests the

following hypothesis by addressing the limitations of the previous research:

Hypothesis 1: Live spectating will be positively associated with life satisfaction.

Team Identification, Emotional Support, and Life Satisfaction

Along with the behavioral pathway as predicted in the first hypothesis, social identity

theory (SIT; Tajfel & Turner, 1979) indicates psychological engagement in spectator sport

through team identification—social identification with a sport team—may enhance life

satisfaction. Team identification has been conceptualized as a multi-dimensional construct

capturing various affective aspects of individuals' relationship with the team (Heere & James, 2007), or a unidimensional construct representing the extent to which being a fan of the team is important to one's identity (Trail, Anderson, & Fink, 2005). In this research, team identification is defined and measured through the unidimensional approach because identification with a social group plays a central role in determining well-being when membership in that group has importance to people (Cruwys, Haslam, Dingle, Haslam, & Jetten, 2014).

Specifically, social identification (when it is important to one's identity) is believed to provide people with psychological benefits, such as a sense of meaning and enhanced self-esteem, that predict high levels of life satisfaction (Haslam et al., 2009; Mael & Ashforth, 2001). For example, a study of patients recovering from heart surgery found social identification with friends and family correlated with an enhanced level of life satisfaction (Haslam, O'Brien, Jetten, Vormedal, & Penna, 2005). A positive association between social identification and life satisfaction was also identified in examining people's identification with their religion (Lim & Putnam, 2010). Moreover, social identification has been shown to help members of low-status groups (e.g., ethnic minorities) alleviate the adverse effect of prejudice and discrimination on life satisfaction (Outten, Schmitt, Garcia, & Branscombe, 2009).

As observed in other social groups, "being a sports fan appears to satisfy some of the benefits of identification for its adherents" (Mael & Ashforth, 2001, p. 206). For example, social identification with a sport team may allow people to affirm certain values, which can provide them with meaning in life (Mael & Ashforth, 2001). However, the relationship between team identification and life satisfaction may not be as straightforward as it appears (Vallerand et al., 2008). Evidence suggests that high levels of team identification could be associated with negative life consequences (Inoue, Berg, et al., 2015). This is manifested in the existence of

dysfunctional fans—highly identified fans who are likely to engage in problem behaviors, such as excessive drinking and aggression, at sport events (Wakefield & Wann, 2006). Branscombe and Wann (1991) also found that although team identification positively correlated with self-esteem, a strong predictor of life satisfaction (Diener & Diener, 1995), the strength of the relationship was weak ($r = .13$). This finding may indicate team identification's linkage with self-esteem is contingent upon such factors as the on-field success of the team and whether fans use certain coping strategies (e.g., biased perceptions) in facing the team's poor performance (Mael & Ashforth, 2001).

The ambiguity inherent in the relationship between team identification and life satisfaction highlights the need to identify a central variable that positively mediates this relationship. Such a mediator is likely to relate to the role of team identification in promoting social connections through the camaraderie shared by other fans (Mael & Ashforth, 2001). Specifically, SCT, an extension of SIT, posits people are more willing to help others when they categorize themselves and others as belonging to the same social group (Haslam et al., 2009; Turner et al., 1994). This tendency determines the perception of social support, or protection and assistance provided by others (Langford, Bowsher, Maloney, & Lillis, 1997). That is, "social support is more likely to be given, received, and interpreted in the spirit in which it is intended to the extent that those who…provide and receive that support perceive themselves to share a sense of social identity" (Haslam et al., 2009, p. 11).

Theoretically, SCT posits that the perception of social support mediates the relationship between team identification and indicators of subjective well-being, such as life satisfaction. However, studies conducted outside the sport context have provided mixed evidence for this prediction. For example, Haslam et al. (2005) found social support mediated the relationship

between social identification with family and friends and life satisfaction among heart surgery patients. Other studies, however, failed to confirm the mediating effect of social support in such contexts as African Americans' identification with their racial group (Outten et al., 2009), disadvantaged community residents' identification with other community members (McNamara, Stevenson, & Muldoon, 2013), and older adults' identification with their care home (Gleibs, Haslam, Haslam, & Jones, 2011).

The mixed results regarding the mediating role of social support highlight the need to consider the connection between the context of social identification and the nature of social support (Inoue, Funk, et al., 2015). Specifically, social support can be decomposed into different types based on functional differences, such as tangible support (i.e., providing money and other necessary items), informational support (i.e., giving useful advice and guidance), esteem support (i.e., helping to regain self-esteem after a failure), and emotional support (i.e., showing concern, encouragement, or acceptance; Inoue & Havard, 2015; Iwasaki & Mannell, 2000). Of these, Inoue and Havard (2015) found that the social support people receive from sport teams and their fans centers on two types: tangible support and emotional support. Moreover, a recent study of Japanese soccer fans showed team identification is positively associated with the perception of emotional support, but is unrelated to the perception of tangible support (Inoue, Funk, et al., 2015). The identified relationship between team identification and emotional support is thought to reflect the uniqueness of the spectator sport context that can evoke high emotions and passions among fans and spectators (Inoue, Funk, et al., 2015).

Overall, while SCT posits that the relationship between team identification and life satisfaction is mediated by social support, the available evidence suggests that focusing on a type of social support particularly relevant to the uniqueness of the spectator sport context, namely

emotional support, is essential to determine this mediating effect (Inoue, Funk, et al., 2015; Inoue & Havard, 2015). Consequently, our second hypothesis is:

Hypothesis 2: The relationship between team identification and life satisfaction will be mediated by the perception of emotional support from other fans.

Research Design

Australia and the U.S. represent suitable contexts to examine the relationship between sport spectatorship and life satisfaction. Across the two countries, two studies were conducted to test the hypotheses. In Study 1, data were collected from residents of Melbourne to test Hypothesis 1 and validate the association between live spectating and life satisfaction through a two-wave design and adopting a reliable multi-item measure of life satisfaction. In addition, this study was designed as a "multi-sport study" that aims to understand whether attending a wide range of sport events may help residents enhance life satisfaction. Evidence from this study would show that, regardless of event type, the frequency of attending a live sport event is associated with enhanced life satisfaction.

Building upon Study 1, Study 2 was conducted in Philadelphia to understand how attending live games of a favorite professional sport team (rather than a range of sport events as assessed in Study 1) relates to life satisfaction. We designed Study 2 as a "professional sport fan study" by defining the target population as adults following a professional sport team. Because professional sport teams are recipients of public funding for sport facilities in the U.S. (Howard & Crompton, 2014), understanding the role of these sport entities in life satisfaction has significant policy implications. Study 2 further considered the influence of team identification and emotional support on life satisfaction, as proposed in Hypothesis 2.

Study 1: A Multi-Sport Study

Research Context

Australia is host to an array of professional sport leagues including rugby league, basketball, soccer, netball, Australian Rules Football, and cricket. In Australia, Melbourne embodies a city with a heavy emphasis on sport spectatorship. Melbourne positions itself as the sporting capital, and the spectator sport experience is a critical component of tourism marketing for the city. Melbourne is home to a large number of professional teams, hosting a collection of mega, major, and hallmark sport events. The heavy emphasis on sport spectatorship and the ingrained sporting culture of the city suggest that Melbourne is an appropriate context for examining the relationship between the live spectating of sport events and life satisfaction.

Sample and Data Collection Procedure

The purpose of Study 1 was to test Hypothesis 1 by assessing the relationship between live spectating of a broad range of sport events and life satisfaction. To this end, an online survey was conducted with residents of Melbourne. Study 1 employed a two-wave design, in which a time lapse of eight days was created to separately obtain information regarding the independent variable (live spectating) and the dependent variable (life satisfaction). The two-wave design was adopted to provide a procedural remedy to minimize potential sources of common method biases, which occur when an observed correlation between two variables is artificially inflated by the use of a single data source (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). A separation between the collection of the independent and dependent variables helps diminish such inflation by reducing respondents' ability and motivation to provide similar patterns of responses for both variables (Podsakoff et al., 2003). A time lag of eight days was deemed appropriate, as a shorter time lag is unlikely to reduce respondents' ability to recall and use their previous responses to answer related questions. On the other hand, the use of a longer time lag could lead to respondent

attrition as well as type II error—a situation where a hypothesized relationship is found nonsignificant even though the significant relationship in fact exists (Podsakoff et al., 2003).

The Qualtrics Panel Service (QPS) was used to identify representative samples from the target population, adults living in Melbourne. The QPS affords the researchers the ability to search, collect, store, and manage data. We provided the QPS with key demographic characteristics (e.g., gender breakdown and household income distribution) of the target population to ensure the comprehensiveness and representativeness of the potential sample.

An initial sample of 2,215 individuals selected from the QPS initiated an online survey in Wave 1. Within this sample, all 634 individuals who completed the first survey in Wave 1 were invited to complete the second survey eight days later, with 315 finishing the survey in Wave 2. Among the 315 respondents who completed the surveys in both waves, 47 were removed from the dataset because they failed to pass attention filters. The attention filters are designed to reduce noise associated with inattentive responses to online surveys (Hauser & Schwarz, 2015). In this study, two attention filter items were randomly inserted at a specific point during the survey, and failure to pass either of the items resulted in removal from the final sample.

After excluding the 47 respondents, a final sample of 268 respondents (12.1% of those who initiated the first survey in Wave 1) were retained for Study 1. Overall, 50.4% of the respondents were female; 46.7% were married, and 29.9% were single without children; 29.5% had a TAFE (i.e., vocational training) or equivalent diploma as the highest level of education completed, 28.0% had an undergraduate degree, and 19.4% had a high school diploma; 23.5% had an annual household income between AU\$60,001 and AU\$80,000, 15.3% between AU\$80,001 and AU\$100,000, and 14.2% between AU\$40,001 and AU\$60,000; and the average age of the respondents was 46.04 years ($SD = 13.02$). These sample characteristics are

comparable to the population characteristics of Melbourne, where 50.9% are female, 41.6% are

aged between 30 and 59 years, 48% of the population aged 15 years and above are married, and

the median annual household income is just above AU$69,500 (Australian Bureau of Statistics,

2016).

Measures

Prior to the survey deployment, all of the five authors examined the face validity of

measures included in the survey. First, all authors independently reviewed the wording of the

measures. Next, they provided feedback and suggestions to ensure that all measures appear to

capture information of the intended variables pertinent to the respective research context and

setting. The face validity of all measures described below (as well as those used for Study 2) was

ensured based on this procedure.

First, live spectating was assessed with a single-item question asking to indicate the total

number of spectator sport events respondents attended in the last 12 months from 1 (*0 games*) to

11 (*10+ games*). To facilitate respondents' understanding of this question, multiple examples of

spectator sport events, such as AFL games, cricket, and motor racing, were provided in the

question. Life satisfaction was measured by three items from the SWLS (Diener et al., 1985) on

a 7-point Likert scale from 1 (*strongly disagree*) to 7 (*strongly agree*): "In most ways my life is

close to ideal," "The conditions of my life are excellent," and "Overall, I am satisfied with my

life." The three items were selected from the original five items in the SWLS because research

demonstrated they constitute more reliable indicators of life satisfaction than the other two items

(Schimmack & Oishi, 2005). In this study, a Cronbach's alpha for the three items was .93. To

address common method bias, life satisfaction was measured in Wave 2 and matched with live

spectating data measured in Wave 1 using a unique identification number assigned automatically

by the QPS for each respondent of the first survey.

As control variables, the following sociodemographic variables shown to correlate with life satisfaction (Kavetsos & Szymanski, 2010) were included: gender (1= male; 0 = female), marital status (five dummy variables with "single without children" as a referent group), education (an ordinal variable indicating the highest level of education attained on a 6-point Likert scale), income (an ordinal variable indicating annual household incomes on an 11-point Likert scale), and age. In addition, age-squared was included to take into account a potential U-shaped relationship between age and life satisfaction (Kavetsos & Szymanski, 2010).

Analysis and Results

Table 1 presents the results of descriptive statistics and correlations for the continuous variables included in the main analysis. Live spectating measured in Wave 1 positively correlated with life satisfaction measured in Wave 2 with a small to medium effect size ($r = .20$, $p = .001$). Two hierarchical regressions were further performed to assess the association between live spectating and life satisfaction by controlling for a set of sociodemographic characteristics described above. As shown in Table 2, Model 1, which included only the control variables, explained 13% of the variance in life satisfaction ($R^2 = .13$, $F = 3.77$, $p < .001$), with married without children ($\beta = .19$, $p = .006$), married with children ($\beta = .17$, $p = .02$), income ($\beta = .20$, $p = .002$), and age-squared ($\beta = .15$, $p = .02$) providing significant coefficients. In Model 2, the addition of live spectating to the first model led to a 3% increase in the proportion of variance explained for life satisfaction ($\Delta R^2 = .03$, $p = .003$), indicating that live spectating significantly and uniquely contributed to life satisfaction beyond respondents' sociodemographic characteristics. The comparison of coefficients in Model 2 revealed that live spectating had the largest association with life satisfaction ($\beta = .18$, $p = .003$) among all independent variables

examined. Collectively, these results provided empirical support for Hypothesis 1.

(Table 1 about here)

(Table 2 about here)

Study 2: Professional Sport Fan Study

Research Context

In the U.S., about 60% of the population describes themselves as a sport fan (Gallup, 2015). The U.S. hosts a vast collection of team and individual professional sport leagues, three of which rank in the top ten in the world for average single game attendance, including the National Football League, the number one league overall. Philadelphia is one of a small number of cities in the U.S. with a professional franchise in all four major league sports in North America. The city's sport investment is illustrated by the South Philadelphia Sports Complex, which includes three venues with a combined capacity of over 133,000 seats that host approximately 380 events per year. The sport event infrastructure within the city, together with the city's collection of professional sport teams, indicates that Philadelphia is a suitable context for investigating the relationship between live spectating and life satisfaction as well as between team identification, emotional support, and life satisfaction for professional sport fans.

Sample and Data Collection Procedure

The purpose of Study 2 was twofold. First, it was designed to test Hypothesis 1 by explicitly assessing live spectating of a favorite professional sport team. Second, it was designed to test Hypothesis 2 by examining the mediating effect of emotional support between team identification and life satisfaction. For this study, all measurements were collected using a single survey, given the evidence from Study 1 indicating that common method bias is less likely to be a severe concern for testing Hypothesis 1. In addition, because analyzing a mediating effect

requires a large sample size to have sufficient power to detect statistical significance (Fritz &

MacKinnon, 2007), a cross-sectional design was a more practical option for testing Hypothesis 2

than a two-wave design, which could result in a low response rate as observed in Study 1.

The online survey was initiated by 2,603 adults recruited from Philadelphia through the

QPS using the procedure to qualify potential respondents described in Study 1. Of these adults,

the final sample consisted of 564 individuals (21.7%) who indicated they regularly follow a

professional sport team and provided valid responses. Overall, 54.3% were male; 42.6% had a 4-

year college or higher degree as the highest level of education, 22.0% had some college

education, and 21.3% had a high school or General Educational Development diploma; 24.1%

had an annual household income of over $100,000, 17.9% had an annual household income

between $20,001 and $40,000, and 16.8% between $60,001 and $80,000; 80.3% were white;

50.9% were married; and the average age of the respondents was 44.47 years ($SD = 16.27$).

When compared to the population of Philadelphia, where 47.2% were male, 28.1% had a 4-year

college or higher degree, 22% had an annual household income of $100,000 or more, and 42.9%

were white (United States Census Bureau, 2015), our sample included a higher proportion of

individuals in certain population segments (i.e., male, white, highly educated, upper income)

which are characteristics of sport fans (Gallup, 2015). The overrepresentation of these segments

is consistent with the fact that only respondents who regularly followed a professional sport team

constituted the final sample.

Measures

We measured life satisfaction using the same three items as Study 1. In addition, the

following sociodemographic characteristics were measured to control for their potential effects

on life satisfaction: gender (1= male; 0 = female), marital status (five dummy variables with

"single without children" as a referent group), education (an ordinal variable indicating the highest level of education on an 8-point Likert scale), income (an ordinal variable indicating annual household incomes on an 11-point Likert scale), age, and age-squared.

To measure live spectating, team identification, and emotional support, we first asked respondents if they regularly follow a professional sport team. If the answer to this question was yes, then respondents were subsequently directed to indicate the name of their favorite professional sport team and answer questions relating to the following three variables. First, live spectating was constructed using a single item capturing the total number of the favorite team's home games respondents attended during the last 12 months. In the analysis, this variable represented an ordinal variable with its values ranging from 1 (*0 game*) to 11 (*10+ games*).

Team identification was measured with three items from Trail et al. (2005) assessing the level of agreement on a 7-point Likert scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*) to the following statements: "I consider myself to be a real fan of the favorite team," "Being a fan of the favorite team is very important to me," and "I would be disappointed if I had to stop being a fan of the favorite team." Consistent with the definition of team identification provided earlier, this scale is designed to capture the importance of being fans of a sport team to people's identity (Trail et al., 2005). Previous research has provided evidence for reliability and validity of the three-item scale, further demonstrating that it adequately predicts sport fans' consumption and well-being outcomes (Inoue, Funk, et al., 2015; Trail et al., 2005).

To measure emotional support, we adapted a scale developed by Iwasaki and Mannell (2000) that measures the extent to which individuals perceive that emotional support from their leisure-related friends (in this study, other fans of the favorite team) is available to them. Specifically, while Iwasaki and Mannell's original scale consisted of four items, the current

study used a reduced version of the scale including the following two items: "other fans of the

favorite sport team listen to my private feelings" and "I feel emotionally supported by other fans

of the favorite sport team." These two items, both of which were measured on a 7-point Likert

scale, were selected because they clearly capture the definition of emotional support as affective

assistance involving the provision of empathy and caring from others (Inoue & Havard, 2015;

Iwasaki & Mannell, 2000; Langford et al., 1997). Of the remaining two items in the original

scale, one item ("for me, leisure is a means of developing friendships") was excluded because its

wording, in particular the phrase "developing friendships," does not explicitly reflect the scope

of emotional support as defined above. In addition, the other item ("I lack emotional support

from my leisure companions") was removed because it was designed as a reverse-wording item,

which has been criticized for a tendency to contaminate responses by causing respondent

confusion and inattention (Sonderen, Sanderman, & Coyne, 2013). The limitations of the two

excluded items were reflected in the results of Iwasaki and Mannell's analyses, which yielded

substantially lower item-total correlation and factor loading values for these items, when

compared to the other two items adopted for the current study.

Reliability and Validity Assessment for the Multi-item Scales

Before testing hypotheses, we assessed the reliability and validity of the three constructs

measured by multi-item scales—life satisfaction, emotional support, and team identification—

through a confirmatory factor analysis (CFA) using Mplus 7.0 software. To address the potential

violation of multivariate normality, the CFA employed the maximum likelihood estimation with

robust standard errors (MLR) as an estimation method (Muthén & Muthén, 2010). The

measurement model that consisted of the three constructs provided the following indices

supporting an adequate model fit (MacKenzie, Podsakoff, & Podsakoff, 2011): Comparative Fit

Index (CFI) = .998, Root Mean Square Error of Approximation (RMSEA) = .015, and

Standardized Root Mean Square Residual (SRMR) = .022. Moreover, as shown in Table 3, all three constructs exceeded the recommended level of 0.70 for construct reliability and 0.50 for average variance extracted (AVE), providing evidence of adequate reliability and convergent validity (MacKenzie et al., 2011). The analysis further supported discriminant validity for all constructs by demonstrating that the square root value of AVE for each construct was greater than correlation coefficients between any pair of the constructs, as shown in Table 4 (MacKenzie et al., 2011). Given the evidence supporting reliability and validity, we retained the measurement model without any modification.

(Table 3 about here)

(Table 4 about here)

Analysis and Results

As a preliminary analysis, we compared the life satisfaction scores of the 564 respondents (i.e., self-identified professional sport fans) included in the final sample with the scores of the 296 respondents (i.e., self-identified non-sport fans) excluded from the final sample. The results of a *t*-test revealed that professional sport fans on average had a significantly higher life satisfaction score ($M = 4.75$, $SD = 1.30$) than non-sport fans ($M = 4.23$, $SD = 1.40$): $t(858) = 5.34$, $p < .001$. This finding indicates that professional sport fans on average are more likely to agree that they are satisfied with their life than non-sport fans.

To test the two hypotheses, we used structural equation modeling (SEM) with the MLR estimator through Mplus 7.0. Specifically, a structural model was estimated by specifying both live spectating and team identification as exogenous variables directly influencing life satisfaction, and emotional support as a mediator between team identification and life satisfaction. This structural model also included direct paths from the control variables to life

satisfaction to take into account potential differences in life satisfaction by sociodemographic characteristics. The model yielded the following results for the goodness-of-fit indices, CFI = .964, RMSEA = .036, SRMR = .044, demonstrating an adequate model fit (MacKenzie et al., 2011). In addition, this structural model explained 36% of the variance in emotional support (R^2 = .36, $p < .001$) and 19% of the variance in life satisfaction ($R^2 = .19$, $p < .001$).

Table 5 shows the results of the standardized coefficients for the paths specified in the structural model. First, live spectating had a small but significant positive association with life satisfaction ($\beta = .11$, $p = .006$), confirming Hypothesis 1. Second, the direct path from team identification to life satisfaction was nonsignificant ($\beta = -.02$, $p = .75$); however, team identification had a strong positive association with emotional support ($\beta = .60$, $p < .001$), which in turn positively predicted life satisfaction ($\beta = .26$, $p < .001$). Consistent with Hypothesis 2, these path coefficients produced the significant indirect positive effect of team identification on life satisfaction through emotional support ($\beta = .16$, $p < .001$). A follow-up analysis with a bootstrapping technique showed that the bias-corrected 95% confidence interval for the indirect effect based on 5,000 bootstrap samples excluded zero [.07, .25]. These results confirmed Hypothesis 2 by providing evidence for the full mediating effect of emotional support.

(Table 5 about here)

Discussion

Study 1 found the positive relationship between live spectating and life satisfaction by measuring Melbourne residents' self-reported frequency of attendance at an array of sport events. Importantly, this relationship does not appear to be influenced by common method variance, as Study 1 obtained life satisfaction measures in a separate survey conducted eight days after the first survey measuring live spectating. The results of Study 1 validate prior findings

(Pawlowski et al., 2014) reporting that attending live sport events correlates with people's positive life evaluations by confirming this relationship through a robust method integrating the two-wave design and a reliable multi-item measure of life satisfaction.

In Study 2, the comparison of life satisfaction mean scores between professional sport fans and non-sport fans in Philadelphia indicated that professional sport fans are more likely to report an elevated level of life satisfaction than non-sport fans. Moreover, the results of SEM in Study 2 revealed that professional sport fans' levels of life satisfaction increase as they attend more home games of their favorite team. Taken together, the collective evidence from Studies 1 and 2 supports Hypothesis 1 by showing that live spectating was a significant predictor of life satisfaction for a multi-sport context (Study 1) and single professional sport context (Study 2).

Study 2 provides evidence supporting Hypothesis 2 by indicating that emotional support fully mediates the relationship between team identification and life satisfaction. This finding suggests life satisfaction corresponds to an individual developing social identification with a sport team to fulfill a desire to feel unity and cohesion with other fans of that team (Mael & Ashforth, 2001). Although psychological benefits can be derived from team identification (Mael & Ashforth, 2001), the direct association of team identification with these benefits has been questioned (Vallerand et al., 2008). Our results reveal team identification's relationship to life satisfaction can be strengthened by the perception of emotional support from other fans.

Theoretical Implications

The current findings contribute new knowledge on how spectator sport events are associated with life satisfaction. First, the evidence reveals a significant relationship between live spectating and life satisfaction. We observed the positive association for both multi-sport and single sport contexts, across two countries, and using cross-sectional and two-wave designs. Live

spectating also remained an important predictor of life satisfaction even after attitudinal variables of team identification and emotional support were included in the analysis. Collectively, this evidence suggests that the more live spectating sport events a person attends, the more likely that person perceives the conditions of life as excellent, close to ideal, and feels satisfied with life in general. Hence, behavioral engagement in sport events and specific teams would theoretically produce meaningful leisure experiences that help shape a person's overall cognitive evaluation of his or her life (Funk & James, 2001; Iwasaki, 2007).

Within a participatory sport context, behavioral engagement with a leisure activity had little influence on life satisfaction after accounting for psychological connections to the activity (Sato, Jordan, & Funk, 2014). This is because measurements of behavioral engagement, such as the frequency of the activity, do not capture the relative meaning of the activity (Sato et al., 2014), a factor that could affect one's assessment of life satisfaction (Iwasaki, 2007). Consequently, the significant relationship between live spectating and life satisfaction found in this research highlights the unique role of behavioral engagement with spectator sport events in predicting life satisfaction.

The existing literature provided insight into the psychological processes through which team identification affects a *collective* assessment of well-being (Inoue, Funk, et al., 2015). In contrast, the psychological processes underlying the relationship between team identification and *personal* assessment of well-being (i.e., subjective well-being) remain ambiguous. Our research advances the literature by applying SIT (Tajfel & Turner, 1979) and SCT (Turner et al., 1994) to theorize the mediating effect of emotional support on the relationship between team identification and life satisfaction, a key indicator of subjective well-being, and by providing empirical evidence demonstrating that emotional support fully mediates this relationship.

Practical Implications

A number of practical implications can be derived from our findings. First, as the current research provides evidence for the social benefits of sport spectatorship, the findings can allow sport and event managers to advance an alternate justification for public investment in sport facilities, events, and programs. As noted above, the positive economic impact of sport facilities and events can be debated (Baade et al., 2011). Sport programs, particularly large-scale events and professional sport facilities, can require substantial resources without promoting economic development. However, the current research demonstrates that both behaviorally and psychologically engaging in sport programs leads to distinct social benefits as a form of enhanced life satisfaction. Consequently, sport and event managers can position their appeals for funding of programs and infrastructure based upon this social impact perspective.

Second, Study 1 results indicate that attending a broad range of sport events can contribute to enhancing life satisfaction. Although sport spectating and positive social impacts have been linked within existing research, this research often examines large-scale events (e.g., Kim & Walker, 2012). Based upon the current research, sport managers in the realm of smaller-scale sport initiatives, such as interscholastic athletic events, competitive youth sport programs, and minor professional sport teams, can market their events as a mechanism to bolster life satisfaction. In addition, these sport managers can also use the findings of the current research as a justification within applications for grant and public funding to subsidize sport program operations and facility upgrades.

Third, the current findings indicate that team identification affects life satisfaction when it promotes the perception of emotional support among fans. These findings are consistent with the tenet of SCT indicating that people are more likely to offer emotional support to others if

they define themselves and the others in the same in-group (Haslam et al., 2009; Turner et al., 1994). To provide attendees with the opportunity to activate a collective identity as fans of the same team and exchange emotional support, sport organizations can design sport stadia that allow attendees to develop existing relationships with their family and friends while establishing new relationships with other spectators (Doyle et al., 2016). Social elements have been revealed as critical components of stadium atmosphere, while interaction with others has been posited as a determining factor of an individual's emotional experience at a stadium (Uhrich & Benkenstein, 2010). This finding is reflected through the design of new stadia in North American professional sport, which features interactive fan spaces. Sport facility managers and marketing personnel can continue this emphasis, while also re-thinking their existing stadium design to develop more informal spaces to facilitate interactivity.

Limitations and Future Research

While the current research addressed methodological and measurement shortcomings within existing research in the realm of sport spectatorship and life satisfaction, limitations must still be acknowledged. First, although we tested the relationship between sport spectatorship and life satisfaction by controlling for a set of sociodemographic characteristics shown to predict life satisfaction (Kavetsos & Szymanski, 2010), previous research suggests that this relationship may be further influenced by other correlates of life satisfaction, such as health status, social relationships, and religious practices (Angelini, Cavapozzi, Corazzini, & Paccagnella, 2014).

Second, although the current research considered the influence of both spectator sport events in general (Study 1) and events specific to favorite professional teams (Study 2), it did not account for more specific differences in the type of spectating experiences. For instance, watching an individual sport provides a different experience than watching a team sport, and the

duration of a sport event can create a different experience. Consequently, these different experiences may have dissimilar influence on life satisfaction. In addition, sport spectating that involves gambling (e.g., horse racing) can represent a far different experience, which could then influence life satisfaction in a distinct way.

Moreover, evidence suggests a potential interaction between social identification and status of a social group with which people identify. Specifically, although members of a high social status group (e.g., a racial majority group) tend to report higher life satisfaction than members of a low status group (e.g., racial minority group), social identification would alleviate the negative effect of membership in the low status group on life satisfaction (Outten et al., 2009). Hence, the extent to which live spectating and team identification relates to life satisfaction may be influenced by whether individuals support a winning (i.e., high status) or losing team (i.e., low status) in a competition. The current research did not account for these nuances.

Building upon our findings and the limitations of our research, a collection of future research can be advanced. First, longitudinal research can be conducted to test whether the associations uncovered within the current research sustain over time. This longitudinal research could also incorporate a more specific focus in terms of the sport spectating context, as well as attempting to examine the effect of the timing of the sport spectating experience relative to the timing of data collection.

Second, while the current results provide support for the unique contribution of live spectating to life satisfaction, various other ways are available to behaviorally and psychologically engage with a sport event or team, such as television, social media, and newspapers. Future research can extend the current findings by examining the impact of these

different sport consumption contexts on life satisfaction and comparing their impact with the impact of live spectating.

Finally, future research can explore what happens as a result of the association between sport spectating and life satisfaction. For instance, an investigation can be conducted to understand whether individuals who engage in spectator sport and, in turn, experience improved life satisfaction consume more sport in terms of attendance and merchandise. Word-of-mouth activities, such as referrals and sharing via social media, represent additional variables relevant to the associations uncovered within the current research that should also be explored.

Conclusions

The current research represents a two-study, multi-country investigation of the association between sport spectatorship and life satisfaction. The results demonstrate that attendance at spectator sport events predicts life satisfaction, and that a relationship between team identification and life satisfaction is mediated by emotional support. Collectively, these results underscore the value of spectator sport events in positively contributing to an individual's life. The findings can inform the promotion of sport events to highlight these relationships to practitioners and government officials. Furthermore, sport managers can design spectator experiences to leverage these relationships and reinforce the positive outcomes. It is hoped that this research advances further investigation of the association between sport spectatorship and well-being.

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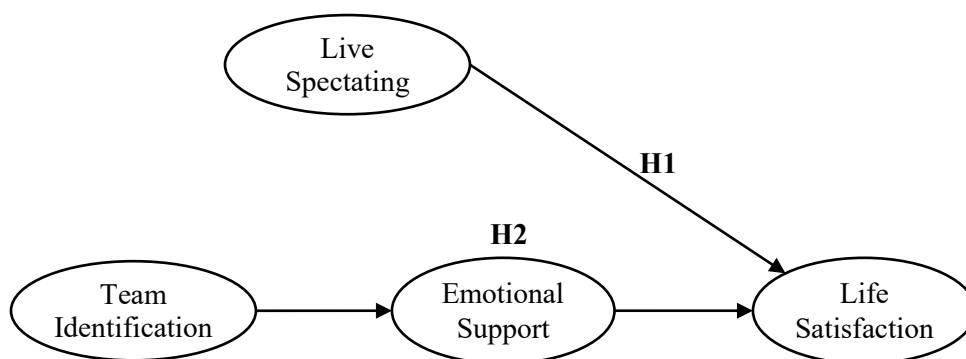*Figure 1*. Research model. H = Hypothesis

Table 1
Descriptive Statistics and Correlations for Study 1

Variable	*M*	*SD*	1	2	3	4	5	6
1. Education	3.44	1.15	—					
2. Income	4.50	2.38	.25**	—				
3. Age[a]	0.00	13.02	-.14*	-.01	—			
4. Age squared[a]	168.99	167.22	-.04	-.06	-.34**	—		
5. Live spectating	3.92	3.62	-.05	.17**	.01	-.01	—	
6. Life satisfaction[b]	4.77	1.35	.02	.24**	.04	.08	.20**	—

Note. N = 268.
[a] Based on mean-centered values.
[b] Measured in the second survey in Wave 2.
* *p* < .05. ** *p* < .01.

Table 2

Hierarchical Regression Analyses Predicting Life Satisfaction

Independent variable	1		2	
	β	t	β	t
Gender	-.05	-0.86	-.10	-1.59
Life partner with children	.10	1.62	.10	1.60
Single with children	-.02	-0.37	-.05	-0.82
Married without children	.19**	2.79	.17**	2.67
Married with children	.17*	2.34	.14	1.94
Life partner without children	.10	1.61	.09	1.36
Education	-.03	-0.54	-.02	-0.29
Income	.20**	3.16	.17**	2.65
Age[a]	.11	1.72	.12	1.84
Age squared[a]	.15*	2.37	.15*	2.32
Live spectating			.18**	3.00
R^2	.13		.16	
Adjusted R^2	.09		.12	
ΔR^2			.03**	
F	3.77**		4.35**	

Note. $N = 267$. β = Standardized coefficients.

[a] Based on mean-centered values.

$^{*} p < .05.$ $^{**} p < .01.$

Table 3

Standardized Factor Loadings, Construct Reliability Coefficients, and Average Variance Extracted for the Measurement Model in Study 2.

Construct / Item	β	CR	AVE
Life Satisfaction		.87	.69
In most ways my life is close to my ideal.	.75		
The conditions of my life are excellent.	.87		
Overall, I am satisfied with my life.	.87		
Emotional Support		.81	.68
Other fans of the favorite sport team listen to my private feelings.	.69		
I feel emotionally supported by other fans of the favorite sport team.	.95		
Team Identification		.83	.63
I consider myself to be a real fan of the favorite team.	.71		
Being a fan of the favorite team is very important to me.	.96		
I would be disappointed if I had to stop being a fan of the favorite team.	.68		

Note. $N = 564$. All standardized factor loadings were significant ($p < .001$); β = Standardized factor loadings; CR = Construct reliability coefficients; AVE = Average variance extracted.

Table 4

Descriptive Statistics and Correlations of the Constructs for Study 2

Construct	M	SD	1	2	3
1. Life Satisfaction	4.75	1.30	(.83)		
2. Emotional Support	4.41	1.42	.22**	(.83)	
3. Team Identification	5.63	1.15	.12*	.60**	(.79)

Note. $N = 564$. Values in parentheses represent the square root of the average variance extracted.
* $p < .05.$ ** $p < .01.$

Table 5
Standardized Results of the Structural Model in Study 2

Path	β	*t*
Direct effects		
Live Spectating → Life Satisfaction (Hypothesis 1)	**.11****	**2.74**
Team Identification → Life Satisfaction	**-.02**	**-0.33**
Team Identification → Emotional Support	**.60****	**15.52**
Emotional Support → Life Satisfaction	**.26****	**3.89**
Education → Life Satisfaction	.11*	2.43
Income → Life Satisfaction	.18**	3.87
Age[a] → Life Satisfaction	-.06	-1.29
Age squared[a] → Life Satisfaction	.19**	4.24
Gender → Life Satisfaction	-.05	-1.12
Life partner with children → Life Satisfaction	.03	0.78
Single with children → Life Satisfaction	-.05	-0.90
Married without children → Life Satisfaction	.04	0.82
Married with children → Life Satisfaction	.06	1.06
Life partner without children → Life Satisfaction	.03	0.79
Indirect effects		
Team Identification → Emotional Support → Life Satisfaction (Hypothesis 2)	**.16****	**3.54**

Note. N = 564. Hypothesized paths are bolded; β = Standardized coefficients.
[a] Based on mean-centered values.
* $p < .05$. ** $p < .01$.