

TITLE: Enhancing Older Adults' Sense of Belonging and Subjective Well-being through Sport
Game Attendance, Team identification, and Emotional support

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Acknowledgment

The Janet B. Parks NASSM Research Grant and the Sport Industry Research Center at Temple University supported the research reported in this article. The authors would like to thank Nyla Branscombe for her helpful feedback on an earlier draft of this article.

Abstract

Objective: We investigate how (a) attendance at sport games and (b) identification with a sport team as fans (i.e., supporters of the team) influence older adults' perceptions of emotional support, belonging and subjective well-being (SWB). **Methods:** An experimental pilot study was conducted with 50 older adults, followed by a main survey study administered to 534 older adults from various communities across the United States. **Results:** Pilot study results indicated that game attendance and team identification had a positive and significant influence on older adults' perceptions of emotional support from fellow team fans. These results were replicated in the main study, which also showed that older adults' perceived emotional support from fellow fans was positively associated with their sense of belonging which predicted their SWB. **Discussion:** The findings provide insights into how older adults may be engaged in meaningful forms of social life to help them maintain and enhance mental health.

Keywords

Subjective well-being, group identification, belonging, spectator sport, older adults

Enhancing Older Adults' Sense of Belonging and Subjective Well-being through Sport Game Attendance, Team Identification, and Emotional Support

Approximately 15% of older adults experience some type of mental health problem (World Health Organization, 2017), which is a significant public health concern because the likelihood of suffering the negative consequences of poor mental health (e.g., suicidal ideation, physical illness) increases with age (Rodda, Walker, & Carter, 2011). Older adults are more likely to maintain positive mental health if they experience a sense of belonging (Bailey & McLaren, 2005; McLaren, Gomez, Gill, & Chesler, 2015; Sum, Mathews, Pourghasem, & Hughes, 2009). Consequently, previous studies have investigated how participation in activities may enhance older adults' sense of belonging. These studies provide mixed evidence as to whether or not activity participation is associated with older adults' belonging (Bailey & McLaren, 2005; Laukka, 2007; Szabo, Allen, Stephens, & Alpass, 2019). Our research resolves two limitations of previous work that underpin the equivocal findings regarding the association between activity participation and older adults' sense of belonging.

First, existing research has not fully considered the nature of an activity when investigating the extent to which participation enhances a sense of belonging for older adults. This is despite the notion that different types of activity are associated with different levels of interpersonal intimacy and, hence, can contribute to the enhancement of one's social life conditions to a varying degree (Johnson, Whitlatch, & Menne, 2014; Lemon, Bengtson, & Peterson, 1972). Specifically, many of the activities examined in past studies, such as Internet (Sum et al., 2009; Szabo et al., 2019) and music use (Laukka, 2007), are classified as solitary activities which involve a low level of interpersonal intimacy (Johnson et al., 2014; Lemon et al., 1972). Thus, focused attention is needed to understand how *social activities*, which "could promote interpersonal interactions, develop social identity and regulate emotions" (Dai, Zhang, & Li, 2013, p. 1227), may affect older adults' sense of belonging.

Second, when conceptualizing the link between activity participation and belonging,

researchers have ignored the extent to which the pursuit is a meaningful part of an individual's self-concept. Instead, the relationship has been observed by operationalizing participation explicitly as the extent or frequency of participating in an activity (Bailey & McLaren, 2005; Laukka, 2007; Sum et al., 2009; Szabo et al., 2019). According to the social identity approach (SIA; e.g., Cruwys, Haslam, Dingle, Haslam, & Jetten, 2014; S. A. Haslam, Jetten, Postmes, & Haslam, 2009), activity participation is more likely to enhance a sense of belonging if it is an internalized and meaningful source of social identity. Consequently, it is essential to investigate whether older adults' sense of belonging is enhanced by (a) participating in a social activity and (b) sharing a social identity with other in-group members (i.e., group identification; Cruwys et al., 2014).

The purpose of the present research is to examine how older adults' sport game attendance and their team identification—group identification with a sport team as fans (i.e., supporters of the team)—may affect their sense of belonging. Sport game attendance is a social activity that can arouse strong emotional responses and shared experiences for spectators that hold promise for enhancing a sense of belonging (Cialdini et al., 1976). Spectator sports (e.g., professional, semi-professional, collegiate, community sport teams) also bring people into shared social identities that represent diverse social classes, demographics, and backgrounds (Mael & Ashforth, 2001). For these reasons, spectator sports present a potentially fruitful context for older adults to develop meaningful social relationships and increase their sense of belonging.

Figure 1 illustrates the structural relationships tested in this research. First, we investigate whether (a) attending games of a local sport team and (b) identification with that team (i.e., team identification) display a positive relationship with older adults' perceptions of emotional support, which we propose as a direct predictor of their sense of belonging. Moreover, we examine the extent to which an enhanced sense of belonging is linked with four measures of subjective well-being (SWB)—life satisfaction, eudemonia, positive affect, and negative affect—that capture different aspects of a person's assessment of his or her life (Dolan & Metcalfe, 2012).

Defining Sense of Belonging and Emotional Support

Sense of belonging refers to the perception that a person is an integral part of a social environment or system (Hagerty, Lynch-Sauer, Patusky, Bouwsema, & Collier, 1992). Defined as “one specific process of relatedness” (Hagerty, Williams, Coyne, & Early, 1996, p. 235), sense of belonging is an important mental health and well-being concept that has implications for clinical and public health practices (Hagerty et al., 1992). Research has demonstrated that older adults’ sense of belonging predicts their state of mental health indicated by reduced instances of depression and suicidal ideation as well as enhanced life satisfaction (Bailey & McLaren, 2005; McLaren et al., 2015; Sum et al., 2009). Meanwhile, a sense of belonging is enhanced when individuals feel that they have access to emotional support, which refers to a specific type of social support entailing the availability of affective assistance such as caring, love, and empathy from others (Krause, 2016; Krause & Wulff, 2005; Langford, Bowsher, Maloney, & Lillis, 1997; Skaalvik & Skaalvik, 2011). The availability of emotional support is particularly important for older adults because maintaining integrity in later life often requires them to look back on past actions objectively, which may lead to the experience of negative emotions, such as anger and shame (Krause, 2004). To effectively manage those negative emotions, the presence of trusted others who can offer affective assistance becomes essential (Krause, 2004).

Game Attendance and Emotional Support

The aforementioned discussion highlights the importance of finding novel ways to develop emotionally supportive relationships for older adults that enhance their sense of belonging and mental health. In this regard, the literature suggests that people may gain increased access to emotional support by engaging in social activities, such as watching sport or attending religious services (Doyle, Filo, Lock, Funk, & McDonald, 2016; Krause, 2016; Krause & Wulff, 2005). Participation in social activities allows people to interact with individuals who are like-minded and share similar interests in a particular domain. For example, attending religious services enables people to develop extended social networks within a particular

religious group, which include not only immediate relationships (e.g., family members, close friends) but also ties derived from shared participation in the services (e.g., followers of the same religion). Thus, the more frequently individuals participate in a given social activity, the more contacts they establish with in-group members, which will expand their social networks and increase opportunities to receive emotional support (Krause, 2016; Krause & Wulff, 2005).

While empirical evidence supporting the relationship between social activity participation and emotional support primarily comes from studies of religious followers (Krause, 2016; Krause & Wulff, 2005), sport game attendance is another social activity that has the potential to increase older adults' access to emotional support. By attending sport games, people can publicly show their affiliation with a favorite team and engage in social interactions with other team supporters (Wann, Brame, Clarkson, Brooks, & Waddill, 2008). This feature of sport game attendance is likely to be strengthened when it is associated with a local team, as attending such games constitutes a behavior through which people show their support for the team and the community in which it is based (Heere & James, 2007; Oishi et al., 2007). Interviews with fans of an Australian professional sport team suggested that the shared experience of supporting a local team led them to exchange positive emotions with other fellow spectators, many of whom were from the same local community (Doyle et al., 2016). Thus, attending sport games, especially those of a local team, is a form of social activity that may correlate with enhanced perceptions of emotional support for older adults. We therefore hypothesize:

Hypothesis 1 Attendance at games of a local sport team is positively associated with older adults' perceptions of emotional support.

Team Identification and Emotional Support

In proposing the effect of social activity participation on emotional support, the literature assumes that individuals who frequently participate in an activity are more likely to consider it an important part of their self-concept and, thus, are more willing to establish meaningful relationships with others that pursue the same activity (Krause, 2016; Krause & Wulff, 2005).

However, factors that are unrelated to the importance of an activity may influence a person's frequency of participation. For example, people may participate in religious services to accompany family members who are more religious (Ashmore, Deaux, & McLaughlin-Volpe, 2004). Likewise, attending a sport match may reflect an opportunity to spend time with friends or family, rather than to display a meaningful affiliation with the team (Lock & Funk, 2016). Hence, behavioral participation in social activities may not fully capture the extent to which these activities contribute to the attainment of emotional support. This indicates the need to consider the role of group identification in affecting the availability of emotional support, as highlighted by the SIA (Cruwys et al., 2014; S. A. Haslam et al., 2009)

The SIA is an overarching theoretical perspective that offers crucial insights into the conditions where social relationships may contribute to physical, social, and psychological health (S. A. Haslam et al., 2009). According to the SIA, social relationships do not produce homogeneous health benefits. Rather, social relationships have a positive effect on health and well-being when they are associated with meaningful social identities that are internalized as a part of a person's self-concept (S. A. Haslam et al., 2009). This is because shared group identification provides the basis for consensual thinking and behavior in groups that provides in-group members with a frame of reference through which they can contribute to, and interpret, different social situations (Hogg & Smith, 2007). Thus, when individuals perceive that they share a meaningful identity, they are more willing to give social support to other in-group members (S. A. Haslam, Reicher, & Levine, 2012). Likewise, social support that occurs as a result of shared group identification is more likely to be appreciated and valued by the recipient as it is delivered through a consensual and normative framework (S. A. Haslam et al., 2012). Social support given and received through the prism of an internalized social identity, therefore, is more likely to enhance a person's sense of belonging.

In sum, the SIA posits that group identification increases the availability and quality of emotional support from in-group members. In line with this proposition, evidence indicates that

developing a high level of team identification can facilitate the exchange of helping behaviors among fans of the team and increase the perceived quality of emotional support (Inoue, Funk, Wann, Yoshida, & Nakazawa, 2015; Inoue, Sato, Filo, Du, & Funk, 2017; Levine, Prosser, Evans, & Reicher, 2005). Importantly, the effect of team identification on perceived emotional support may exist regardless of whether or not a person attends games (Inoue et al., 2017; Wann et al., 2008). Outside of live contests, highly identified fans of a local sport team have various opportunities (e.g., engaging in casual conversation with family, friends and other community residents; wearing the team's apparel at public places, such as restaurants and bars) to share their passion and support for the team. Furthermore, these opportunities—which take place away from the home stadium—enable social connections that offer meaningful sources of emotional support (Inoue et al., 2017; Wann et al., 2008). Thus, we hypothesize:

Hypothesis 2 Team identification is positively associated with older adults' perceptions of emotional support.

Emotional Support, Sense of Belonging, and Subjective Well-being

Substantial evidence indicates that individuals' sense of belonging is enhanced when they perceive that emotional support from others is available to them (Krause, 2016; Krause & Wulff, 2005; Skaalvik & Skaalvik, 2011). In addition, a greater sense of belonging is positively associated with SWB as indicated by a higher level of life satisfaction (Sum et al., 2009), eudemonia (Wann, Hackathorn, & Sherman, 2017), and positive affect (Sandstrom & Dunn, 2014), as well as a lower level of negative affect (Sandstrom & Dunn, 2014). Building on the extant evidence, we hypothesize:

Hypothesis 3 Perceived emotional support from other sport fans is positively associated with older adults' sense of belonging.

Hypothesis 4 Sense of belonging is positively associated with older adults' life satisfaction (**H4a**), eudemonia (**H4b**), and positive affect (**H4c**), and negatively associated with negative affect (**H4d**).

Method

The present research consisted of two studies. First, we conducted an experimental pilot study to test hypotheses 1 and 2. This pilot study focused explicitly on the first two hypotheses because, to date, no quantitative evidence is available to support the relationship between game attendance and perceived emotional support or between team identification and emotional support for older adults. Second, a main study was conducted using a web-based survey to test all hypotheses of this research. In the remainder of this section, we explain the method and results of the pilot study, followed by a description of the main study's method.

Pilot Study

The primary aim of this pilot study was to test hypotheses 1 and 2 by (a) determining the causal effects of attending a local sport team's games on older adults' perceptions of emotional support (hypothesis 1) and (b) assessing the correlation between team identification and perceived emotional support (hypothesis 2). The secondary aim was to confirm the reliability of existing measurement scales for team identification and perceived emotional support (Bhattacharya & Elsbach, 2002; Inoue et al., 2017), which have not been administered to older adults.

Study participants and procedure. Fifty older adults (34 females, 16 males; age: $M = 72.88$, $SD = 5.34$, range 64–84) were recruited by advertising the study in a monthly newsletter published by a non-residential senior center located in a suburban city in the upper Midwest Region of the United States (U.S.). Based on the inclusion criteria approved by the university's institutional review board, interested individuals were eligible to participate in the study if they were able to participate in regular social events organized by the senior center, had no severe physical or mental impairment, and provided their informed consent for study participation.

The 50 study participants were randomly assigned to (a) a treatment group ($n = 25$) that attended three home games of a women's volleyball team at a local public university over a four-week period, or (b) a control group ($n = 25$) that did not attend any games of this team. One week

after the third volleyball game, the participants in the treatment group completed a paper-based questionnaire that included questions on team identification and perceived emotional support (see the next section for specific measures). The participants in the control group also answered the same questionnaire around the same time as those in the treatment group. Data collection for each group was conducted separately to minimize the interactions between the treatment and control groups. All study participants received a \$50 gift card upon the completion of the study.

Measures. Both team identification and perceived emotional support were measured using multi-item measures with a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). First, *team identification*, defined as participants' degree of group identification with the volleyball team, was measured with Bhattacharya and Elsbach's (2002) three-item scale (see Table 1 for the descriptions of the three items in this scale). A Cronbach's alpha coefficient for the pilot study was .95, supporting the reliability of this scale to assess older adults' team identification. Second, *perceived emotional support* was measured with a two-item scale from Inoue et al. (2017) designed to assess the extent to which people perceive that affective assistance from other fans of a sport team is available to them (the two items are described in Table 1). The scale yielded a Spearman-Brown coefficient value of .89, demonstrating that it is a reliable measure of older adults' perceptions of emotional support from fellow fans.

Additionally, six participant characteristics were measured through the questionnaire and included as control variables in a multiple regression analysis. These characteristics were: gender (1 = male, 0 = female), age (a continuous variable), single (1 = single; 0 = otherwise), having children (1 = yes; 0 = no), education (an ordinal variable measuring the highest level of education completed on a 6-point Likert scale), and university affiliation (1 = attended the university that the volleyball team belongs to as a student; 0 = otherwise). These variables were included based on research demonstrating that they may influence individuals' disposition to seek group identification and emotional support (e.g., Ashton & Fuehrer, 1993).

Analyses and results. One participant from the control group provided an incomplete

survey and was removed from subsequent analyses. Thus, the final sample consisted of 49 older adults (age: $M = 72.84$, $SD = 5.39$, range 64–84), including 25 in the treatment group and 24 in the control group. The characteristics of the final sample were: 67.3% female, 40.8% single, 83.7% having children, 67.3% with a four-year college or higher degree, and 53.1% having attended the university that the volleyball team belongs to as a student.

We conducted a multiple regression analysis to test the effects of game attendance (1 = treatment group; 0 = control group) and team identification on perceived emotional support by controlling for the six participant characteristics described above. The results showed that game attendance ($\beta = .26$, $t = 3.15$, $p < .01$) and team identification ($\beta = .70$, $t = 8.13$, $p < .01$) had a significant effect on perceived emotional support, while none of the control variables yielded significant coefficients. These results supported both hypotheses 1 and 2.

Overall, the evidence from the pilot study demonstrated the effect of game attendance (hypothesis 1) and team identification (hypothesis 2) on older adults' perceived emotional support. Additionally, the scales for both team identification (Bhattacharya & Elsbach, 2002) and perceived emotional support (Inoue et al., 2017) were shown to be reliable measures of these constructs for older adults. The main study described below was developed from these findings.

Main Study

Study participants. The purpose of the main study was to test all hypothesized relationships shown in Figure 1. Using the Qualtrics online sample service, we collected responses to an online survey from 534 older adults in the U.S. who were 65 years or older and self-described as fans of a local sport team in the region where they lived at the point of data collection. We recruited older adults from 68 counties across the country, all of which had at least one major professional or collegiate sport team. Overall, 53.6% of the study participants were female; 62.7% had children; 27.3% were single; 30.9% had an annual household income of \$60,000 or less; 68.5% had a four-year college or higher degree; and the average age was 70.93 years ($SD = 4.79$, range 65–94).

Measures. All study constructs were measured through an online survey distributed by the Qualtrics online sample service. In this survey, study participants were asked to first specify their favorite sport team (only one team per participant) and then respond to survey items related to this team in terms of team identification, perceived emotional support, and game attendance. *Team identification* and *perceived emotional support* were measured using the same scales employed in the pilot study (see Table 1 for a description). *Game attendance* was measured based on participants' responses to the following question: "how many [Team's] live games have you attended within the last 12 months?" Response options ranged from 1 (*none*) to 11 (*10+ games*).

Sense of belonging was measured using a three-item scale developed and validated by Sheldon and Hilpert (2012) to assess the extent to which individuals experience a sense of belonging and relatedness to others in their daily lives (see Table 1 for the description of the scale). In addition, following Dolan and Metcalfe (2012), *SWB* was assessed by single-item measures of life satisfaction, eudemonia, positive affect, and negative affect, using an 11-point scale. Participants were asked to indicate the following: "Overall, how satisfied are you with your life?" (life satisfaction; 0 = *not satisfied at all*; 10 = *completely satisfied*); "Overall, how worthwhile are the things that you do in your life?" (eudemonic; 0 = *not at all worthwhile*; 10 = *completely worthwhile*); "Overall, how happy did you feel yesterday?" (positive affect; 0 = *not at all*; 10 = *completely*); and "Overall, how anxious did you feel yesterday?" (negative affect; 0 = *not at all*; 10 = *completely*). These four items have been adopted by the Office for National Statistics to measure SWB in the United Kingdom (Office for National Statistics, 2015). Because each measure is related yet separable (Dolan & Metcalfe, 2012), we specified each of the four items as a separate outcome variable for the analyses.

Additionally, we obtained information on six participant personal characteristics through the online survey and included these characteristics as control variables in the main analysis. These characteristics were: gender (1 = male, 0 = female), age (a continuous variable), single (1 =

single; 0 = otherwise), having children (1 = yes; 0 = no), income (an ordinal variable measuring the annual household income on an 11-point Likert scale), and education (an ordinal variable measuring the highest level of education completed on an 8-point Likert scale). As additional control variables that capture participant social characteristics, we included a dummy variable of volunteering (1 = regularly volunteer at a local charity or church; 0 = otherwise). We also measured the extent to which participants maintained social connections with their family and friends using the following three 4-point scale items from Onyx and Bullen (2000): “In the past week, how many phone conversations have you had with friends?” (1 = *none*; 4 = *many*); “How many people did you talk to yesterday?” (1 = *none at all*; 4 = *many*); and “Over the weekend do you have lunch/dinner with other people outside your household?” (1 = *no, not much*; 4 = *yes, nearly always*). The inclusion of these personal and social characteristics as control variables was consistent with studies showing that they could affect older adults’ sense of belonging and SWB (McLaren et al., 2015; Waddell & Jacobs-Lawson, 2010).

Analyses. Prior to testing the proposed structural relationships, the reliability and validity of the multi-item scales measuring team identification, perceived emotional support, and sense of belonging were assessed using a confirmatory factor analysis (CFA). A maximum likelihood estimation technique with robust standard errors (MLR) in Mplus 7.0 was used to offer robust estimates for this measurement model. Following CFA, we estimated a structural model with the MLR estimator to test the relationships shown in Figure 1. This structural model specified game attendance and team identification as exogenous variables influencing perceived emotional support, and perceived emotional support as a predictor of sense of belonging. In turn, sense of belonging was proposed to predict the four measures of SWB. An additional correlational path between game attendance and team identification was included to capture the possibility that those who attended more games would report higher levels of team identification and vice versa. Moreover, direct paths from the control variables to sense of belonging and each SWB measure were included to account for potential differences based on participants’ personal and social

characteristics discussed above.

Results

Measurement Model

The CFA results supported the overall fit of the measurement model consisting of the measures of team identification, perceived emotional support, and sense of belonging, with all fit indices satisfying criteria for model acceptance (MacKenzie, Podsakoff, & Podsakoff, 2011): $\chi^2/df = 31.16/17 = 1.83$, Comparative Fit Index (CFI) = .99, Standardized Root Mean Square Residual (SRMR) = .03, and Root Mean Square Error of Approximation (RMSEA) = .04. In addition, as shown in Table 1, all three measures exceeded the threshold 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). Furthermore, the correlations between the three constructs measured by the multi-item scales, as well as other observed variables (see Table 2), suggest that the discriminant validity of all multi-item scales was satisfactory; specifically, the square root value of the AVE for each scale exceeded the correlation coefficients between any pair of the scales (MacKenzie et al., 2011). Given the evidence of reliability and validity, this measurement model was retained without modification.

Structural Model

The hypothesized structural model fit the observed data well ($\chi^2/df = 247.36/136 = 1.82$, CFI = .95, RMSEA = .04, SRMR = .05), and a significant correlation was identified between game attendance and team identification ($r = .21$, $t = 4.85$, $p < .01$). Table 3 presents the standardized results of the hypothesized paths first, followed by the effects of the control variables on sense of belonging and each of the four SWB measures.

In support of hypothesis 1, game attendance was positively associated with perceived emotional support ($\beta = .08$, $t = 2.09$, $p = .04$). Next, team identification had a significant positive association with perceived emotional support, confirming hypothesis 2 ($\beta = .73$, $t = 16.70$, $p < .01$). Confirming hypothesis 3, perceived emotional support was positively associated with

sense of belonging ($\beta = .11, t = 2.20, p = .03$), when controlling for the effects of personal and social characteristics. Hypotheses 4a–4d were also confirmed with our analysis indicating that sense of belonging had a positive association with life satisfaction ($\beta = .42, t = 7.83, p < .01$), eudemonia ($\beta = .38, t = 7.43, p < .01$), and positive affect ($\beta = .29, t = 5.95, p < .01$), and an inverse association with negative affect ($\beta = -.18, t = -3.49, p < .01$). Collectively, these results confirmed all study hypotheses.

The analysis of control variables indicated that older adults reported a greater sense of belonging if they: were female ($\beta_{\text{gender}} = -.17, t = -3.71, p < .01$); had stronger connections with their family and friends displayed through phone calls ($\beta = .17, t = 3.35, p < .01$) or lunch/dinner ($\beta = .20, t = 4.15, p < .01$); or regularly volunteered at a local charity or church ($\beta = .10, t = 2.33, p = .02$). The statistical significance of the effects of the control variables varied substantially across the four SWB measures. For example, income was significantly associated with life satisfaction ($\beta = .12, t = 2.85, p < .01$) only. Also, the degree of family and friend connections displayed through conversations had a significant association with eudemonia ($\beta = .09, t = 2.27, p = .02$) and positive affect ($\beta = .15, t = 3.96, p < .01$), but not with the remaining two measures. The varying effects of the control variables highlighted the importance of sense of belonging in predicting older adults' SWB, as it was the only variable that had significant effects on all four measures in our analysis.

Mediation Analyses

Our proposed structural model (Figure 1) implies that (a) perceived emotional support may mediate the effects of game attendance and team identification on sense of belonging, and (b) sense of belonging, in turn, may mediate the effects of perceived emotional support on the four measures of SWB. To explore these notions, we performed mediation analyses by calculating indirect effects for the six mediation pathways shown in Table 4, using the direct path coefficient estimates yielded by the structural model. Following the recommendations of Zhao, Lynch, and Chen (2010), we used unstandardized coefficient estimates of indirect effects, as well

as their bias-corrected 95% confidence interval (CI), to assess the statistical significance of each mediation pathway.

The results revealed that team identification had a positive indirect effect on sense of belonging through the mediation of perceived emotional support ($B = .05, t = 2.18, p = .03$) and the bias-corrected 95% CI of this indirect effect excluded zero [.01, .09]. In contrast, the indirect effect of game attendance on sense of belonging via perceived emotional support was nonsignificant ($B = .00, t = 1.49, p = .14$; 95%CI [.00, .01]). These results indicated that perceived emotional support mediated the relationship between team identification and sense of belonging, but not between game attendance and sense of belonging.

Regarding the mediation pathways involving sense of belonging, the indirect effects of perceived emotional support via sense of belonging were positive and significant for life satisfaction ($B = .04, t = 2.04, p = .04$; 95%CI [.01, .09]), eudemonia ($B = .05, t = 2.07, p = .04$; 95%CI [.01, .11]), and positive affect ($B = .05, t = 2.05, p = .04$; 95%CI [.01, .09]); whereas its indirect effect via sense of belonging was negative and significant for negative affect ($B = -.04, t = -1.97, p = .05$; 95%CI [-.10, -.01]). Altogether, the results provide evidence that sense of belonging mediated the relationships between perceived emotional support and all four measures of SWB.

Discussion

This research contributes to clarifying previously equivocal findings about the relationship between activity participation and sense of belonging for older adults. In establishing this relationship, previous researchers examining the role of solitary activities have reported mixed evidence indicating that this type of activity has conditional (Szabo et al., 2019) or no effects (Laukka, 2007) on older adults' belonging. We thus shifted focus to understand the effects of social activities, which take place within a specific group context and involve social interactions with other in-group members (Dai et al., 2013). Through a focused investigation of sport game attendance, we found that this form of social activity affects older adults' perceptions

of emotional support, which in turn predicts their sense of belonging. Other researchers (Krause, 2016; Krause & Wulff, 2005) found that church attendance, another prominent form of social activity, had a positive effect on perceptions of emotional support and belonging, but they did not specifically focus on older adults. The findings of the present research confirm the role of social activities in enhancing older adults' sense of belonging, and extend the previous work by establishing sport game attendance as a social activity that can engage older adults in emotionally fulfilling relationships.

Second, our findings show that group identification with a local sport team provides opportunities for enhanced access to emotional support for older adults. These findings confirm the central proposition of the SIA, which highlights that the availability and quality of social support is determined by the extent to which a given social category (such as a sport team and its fans) is an internalized and meaningful part of a person's self-concept (Cruwys et al., 2014; S. A. Haslam et al., 2009). Relatedly, the comparison of the path coefficients for the main study suggests that, although both team identification and game attendance have positive and significant relationships with emotional support, the former ($\beta = .73$) has a much stronger association than the latter ($\beta = .08$). In addition, our follow-up mediation analyses revealed that, of these two variables, only team identification indirectly affects older adults' sense of belonging through the mediation of perceived emotional support. These findings correspond to the aforementioned limitations associated with only measuring the frequency of activity participation (Ashmore et al., 2004; Lock & Funk, 2016). That is, a frequent attendee may or may not self-categorize with the team (e.g., a grandmother who attends to spend time with her grandchildren), and hence the frequency of participating in a social activity may or may not increase the availability or quality of emotional support that is crucial to an enhanced sense of belonging. In contrast, group identification provides a more accurate measure of how social activity participation influences the availability of emotional support and, as a consequence, a sense of belonging (Cruwys et al., 2014; S. A. Haslam et al., 2009). A similar pattern was also found in a

study of U.S. college students, showing that students' group identification with their university's sport team, but not the frequency of attendance at the team's games, predicted lower levels of loneliness (Wann et al., 2008). Thus, together with the existing evidence, our findings provide further support for the theoretical underpinnings of the SIA (S. A. Haslam et al., 2009) by highlighting the psychological benefits of group identification.

Third, the effect of game attendance and team identification on emotional support extends earlier studies that investigated the capacity of spectator sports to serve as a basis for emotional assistance and helping behaviors (Doyle et al., 2016; Inoue et al., 2015, 2017; Levine et al., 2005). Although previous studies have attempted to link spectator sports to older adults' well-being (Kawakami et al., 2017; Wann, Rogers, Dooley, & Foley, 2011), the present research is the first to demonstrate that engagement in spectator sports can increase the availability of emotionally supportive relationships for older adults that are essential for maintaining a positive self-concept (Krause, 2004). Moreover, we found that perceived emotional support from fellow fans explained an enhanced sense of belonging, controlling for the effect of another important form of social activity (i.e., volunteering) and general social connections older adults have with their family and friends. This evidence suggests that social activity participation and group identification in relation to spectator sports can enable older adults to access emotional support beyond their immediate relationships (e.g., family, close friends), such as support from community residents that follow the same local team. Our results extend prior work that focused primarily on the role of emotional support from family and close friends in older adults' life (Doran, Burden, & Shryane, 2018; Krause, 2004, 2007).

The present findings have practical implications. First, practitioners involved in the delivery of social interventions and programs for promoting mental health among older adults should strive to increase perceptions of emotional support by fostering participation in group-based social activities, rather than solitary activities, that can develop group identification and emotionally supportive relationships (C. Haslam et al., 2014). As the main study reports, the

enhanced perception of emotional support facilitates older adults' sense of belonging, and through the mediation of an enhanced sense of belonging it indirectly increases older adults' SWB. The direct and indirect effects of perceived emotional support are relevant to efforts to maintain and improve older adults' mental health, as previous research indicates that both belonging and SWB can serve as protective factors against mental illness (Cruwys et al., 2014; Hagerty et al., 1992).

Second, to leverage the potential of spectator sports to enhance older adults' perceived emotional support, sense of belonging, and SWB, government officials and policymakers should work closely with local sport event organizers to engage in collaborative efforts to make sport events more accessible to the older population. Watching sport has the advantage, pertinently for older adults, that it does not require the physical exertion of some other activities (e.g., exercise, sport club participation)—an important feature as aging increases the prevalence of physical limitations that make participation in physical activities difficult (Holmes, Powell-Griner, Lethbridge-Cejku, & Heyman, 2009). In addition, as the results of the pilot study indicate, the psychological benefits of spectator sports for older adults are not constrained to large-scale sport events. Rather, community-based, affordable sport events, such as collegiate volleyball games, can provide older adults with the opportunity to increase emotional support, belonging, and SWB. Thus, government officials and policymakers are encouraged to collaborate with community-based sport events to increase the availability of accessible seating in venues, offer ticket discounts, and provide public transportation to the events in order to encourage event participation among a range of local older adults.

Furthermore, activities other than physically attending games at live venues, such as watching games on television in a group or engaging in group conversations about a team, may serve as an effective way to enhance the meaning older adults attribute to their identification with a sport team (Inoue et al., 2017), which increases their perceived emotional support, belonging, and SWB. In this regard, a small but increasing number of social programs have

started to adopt sporting memories work, which seeks to help treat dementia and other mental health problems by engaging older adults with group activities in which they share their memories about sport events, teams, and players with other participants (Clark, Murphy, Jameson-Allen, & Wilkins, 2015). To date, the use of this approach has been limited primarily to institutional care settings and older adults suffering from serious mental illness such as dementia. However, our evidence shows that programs and interventions that target older adults living in the community, who make up over 90% of the older population (Institute of Medicine Food Forum, 2010), can adopt similar approaches to help maintain and enhance well-being and mental health among this large segment of the older population.

Limitations and Future Research

The following limitations of this research should be acknowledged. First, we found a significant association between perceived emotional support from fellow sport fans and sense of belonging and, furthermore, that this relationship exists when controlling for the effects of older adults' various personal and social characteristics. Despite this significant result, the observed strength of association was moderate, which highlights the importance of determining mediating and moderating variables that would strengthen the relationship between older adults' perceptions of emotional support from sport fans and belonging. To this end, future researchers are encouraged to conduct an in-depth qualitative study of how older adults connect their perceptions of emotional support related to spectator sports with their sense of belonging and SWB. The information from such qualitative investigations can be used to elaborate our structural model to increase its ability to explain the amount of variance in older adults' sense of belonging.

Second, the main study findings indicate that emotional support enhanced through spectator sports may contribute to older adults' sense of belonging as equally as engagement in volunteering. However, the present focus on spectator sports does not allow us to conclude whether group participation in this context is more or less effective than other social or category-

based settings. To address this question, it would be desirable to design an experimental study that assigns some participants to groups taking part in alternative social activities (e.g., book clubs, religious services) to examine the efficacy of spectator sport settings (both live sport events and other forms of spectating, such as watching games on television) in comparison with other settings.

Third, by collecting data from older adults living in nearly 70 counties in the U.S., the present research offers evidence that has high generalizability in this specific country context. In addition, given previous research indicating that spectator sports can be a setting to promote mental health and well-being in other countries, such as Australia (Doyle et al., 2016), the United Kingdom (Clark et al., 2015), and Japan (Inoue, Sato, & Nakazawa, 2018; Kawakami et al., 2017), it can be assumed that the relationships identified in this research are applicable beyond the U.S. Nevertheless, to further understand the role of spectator sports in older adults' lives, it is important that future researchers will engage in multicounty investigations to test our structural model using data from older adults living in various countries and determine whether model modifications are needed to take into account country-specific characteristics (e.g., economic and social factors, popularity of spectator sports, availability of other social activities).

Conclusion

In conclusion, we found that older adults' perceptions of emotional support are enhanced by participation in social activities and associated group identification, and those perceptions, in turn, affect their sense of belonging and SWB. Our findings offer insights into the mixed evidence about the effect of activity participation on sense of belonging for older adults (Bailey & McLaren, 2005; Laukka, 2007; Szabo et al., 2019). These findings also contribute to the SIA (Cruwys et al., 2014; S. A. Haslam et al., 2009) by adding evidence to the role of group identification in enhancing older adults' mental health and well-being. Moreover, the present research extends a body of work that has sought to advance spectator sports as a setting that can facilitate access to emotional support, sense of belonging, and SWB (Clark et al., 2015; Doyle et

al., 2016; Inoue et al., 2015, 2017; Kawakami et al., 2017; Levine et al., 2005). Given the mass appeal of spectator sports, it is hoped that our evidence leads to the development of novel programs that may engage older adults in meaningful forms of social life to help this population to maintain and enhance mental health.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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Table 1 Standardized factor loadings, construct reliability coefficients, and average variance extracted for the measurement model for the main study

Construct / Item	β	CR	AVE
<i>Team identification</i>		.85	.65
[Team's] successes are my successes.	.82		
When someone praises [Team], it feels like a personal compliment.	.87		
When someone criticizes [Team], it feels like a personal insult.	.73		
<i>Perceived emotional support</i>		.81	.67
Other fans of [Team] listen to my private feelings.	.79		
I feel emotionally supported by other fans of [Team].	.85		
<i>Sense of belonging</i>		.83	.61
I feel a sense of contact with people who care for me, and whom I care for.	.84		
I feel close and connected with other people who are important to me.	.79		
I feel a strong sense of intimacy with the people I spent time with.	.72		

Notes. $N = 534$; β = standardized factor loading; CR = construct reliability coefficient; AVE = average variance extracted. All standardized factor loadings were significant ($p < .01$). Actual team names were included for [Team] in the survey. All items were measured with a 7-point Likert scale.

Table 2 Descriptive statistics and correlations of the constructs for the main study

Constructs	M	SD	1	2	3	4	5	6	7	8
1. Team identification	3.65	1.47	(.81)							
2. Perceived emotional support	3.53	1.52	.75**	(.82)						
3. Sense of belonging	5.80	0.91	.14**	.18**	(.78)					
4. Game attendance ^a	3.20	3.25	.21**	.23**	.13**	—				
5. Life satisfaction ^a	8.25	1.25	.06	.05	.42**	.12**	—			
6. Eudemonia ^a	8.17	1.62	.03	.06	.41**	.08*	.59**	—		
7. Positive affect ^a	7.86	1.84	.01	.09	.28**	.05	.54**	.43**	—	
8. Negative affect ^a	3.05	2.75	.19**	.12*	-.13**	-.03	-.25**	-.14**	-.31**	—

Notes. $N = 534$. Values in parentheses represent the square root of the average variance extracted.

^a Included as observed variables. * $p < .05$. ** $p < .01$.

Table 3 Standardized results of the structural model for the main study

Path	β	t
<i>Hypothesized effects</i>		
H1: Game Attendance → Perceived Emotional Support	.08*	2.09
H2: Team Identification → Perceived Emotional Support	.73**	16.70
H3: Perceived Emotional Support → Sense of Belonging	.11*	2.20
H4a: Sense of Belonging → Life Satisfaction	.42**	7.83
H4b: Sense of Belonging → Eudemonia	.38**	7.43
H4c: Sense of Belonging → Positive Affect	.29**	5.95
H4d: Sense of Belonging → Negative Affect	-.18**	-3.49
<i>Effects of control variables on sense of belonging</i>		
Family and Friend Connections (Phone Call) → Sense of Belonging	.17**	3.35
Family and Friend Connections (Conversation) → Sense of Belonging	-.01	-.14
Family and Friend Connections (Lunch/Dinner) → Sense of Belonging	.20**	4.15
Gender → Sense of Belonging	-.17**	-3.71
Age → Sense of Belonging	.04	.85
Single → Sense of Belonging	-.09	-1.63
Having Children → Sense of Belonging	.08	1.67
Income → Sense of Belonging	.05	1.02
Education → Sense of Belonging	.06	1.20
Volunteering → Sense of Belonging	.10*	2.33
<i>Effects of control variables on life satisfaction</i>		
Family and Friend Connections (Phone Call) → Life Satisfaction	-.03	-.63
Family and Friend Connections (Conversation) → Life Satisfaction	.08	1.91
Family and Friend Connections (Lunch/Dinner) → Life Satisfaction	.02	.35
Gender → Life Satisfaction	.06	1.51
Age → Life Satisfaction	.01	.22
Single → Life Satisfaction	.01	.23
Having Children → Life Satisfaction	.04	.97
Income → Life Satisfaction	.12**	2.85
Education → Life Satisfaction	-.06	-1.24
Volunteering → Life Satisfaction	-.00	-.05
<i>Effects of control variables on eudemonia</i>		
Family and Friend Connections (Phone Call) → Eudemonia	.02	.46
Family and Friend Connections (Conversation) → Eudemonia	.09*	2.27
Family and Friend Connections (Lunch/Dinner) → Eudemonia	.02	.49
Gender → Eudemonia	.03	.74
Age → Eudemonia	-.02	-.55
Single → Eudemonia	-.05	-1.04
Having Children → Eudemonia	-.03	-.59
Income → Eudemonia	.01	.13

(continued)

Table 3 (continued) Standardized results of the structural model for the main study

Path	β	t
Education → Eudemonia	-.01	-.32
Volunteering → Eudemonia	.09*	2.14
<i>Effects of control variables on positive affect</i>		
Family and Friend Connections (Phone Call) → Positive Affect	-.09*	-2.14
Family and Friend Connections (Conversation) → Positive Affect	.15**	3.96
Family and Friend Connections (Lunch/Dinner) → Positive Affect	.04	.77
Gender → Positive Affect	.09*	2.06
Age → Positive Affect	.08	1.95
Single → Positive Affect	-.03	-.63
Having Children → Positive Affect	.01	.13
Income → Positive Affect	-.10	-1.86
Education → Positive Affect	.01	.27
Volunteering → Positive Affect	.03	.85
<i>Effects of control variables on negative affect</i>		
Family and Friend Connections (Phone Call) → Negative Affect	.08	1.53
Family and Friend Connections (Conversation) → Negative Affect	.02	.35
Family and Friend Connections (Lunch/Dinner) → Negative Affect	.02	.41
Gender → Negative Affect	-.09*	-2.06
Age → Negative Affect	.01	.13
Single → Negative Affect	.00	.05
Having Children → Negative Affect	.13**	2.95
Income → Negative Affect	-.03	-.70
Education → Negative Affect	-.04	-.84
Volunteering → Negative Affect	-.03	-.67

Notes. $N = 534$. β = Standardized coefficients.

* $p < .05$. ** $p < .01$.

Table 4 Results of mediation analyses

Path	<i>B</i>	<i>t</i>	95% CI	
			Lower	Upper
Game Attendance → Perceived Emotional Support → Sense of Belonging	.00	1.49	.00	.01
Team Identification → Perceived Emotional Support → Sense of Belonging	.05*	2.18	.01	.09
Perceived Emotional Support → Sense of Belonging → Life Satisfaction	.04*	2.04	.01	.09
Perceived Emotional Support → Sense of Belonging → Eudemonia	.05*	2.07	.01	.11
Perceived Emotional Support → Sense of Belonging → Positive Affect	.05*	2.05	.01	.09
Perceived Emotional Support → Sense of Belonging → Negative Affect	-.04*	-1.97	-.10	-.01

Notes. *N* = 534. *B* = Unstandardized coefficients. CI = confidence interval.

**p* < .05.

Figure 1 Proposed structural model. H = Hypothesis

