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Inoue, Yuhei , Berg, Brennan K and Chelladurai, Packianathan (2022) Spectator Sport and Population Health: A Consultation with U.S. College Athletics Employees. *Journal of Global Sport Management*, 7 (1). pp. 21-42. ISSN 2470-4067

**DOI:** <https://doi.org/10.1080/24704067.2019.1566755>

**Publisher:** Informa UK Limited

**Version:** Accepted Version

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**Spectator Sport and Population Health: A Consultation with U.S. College Athletics  
Employees**

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**Please cite this article as:** Inoue, Y., Berg, B.K., & Chelladurai, P. (in press). Spectator sport and population health: A consultation with U.S. college athletics employees. *Journal of Global Sport Management*. <https://doi.org/10.1080/24704067.2019.1566755>

## **Abstract**

A growing number of studies have been published to understand how spectator sport may influence the health of a population. However, it is unknown if these studies address research questions relevant to professionals engaging in the promotion of spectator sport. We conducted a web-based survey with 136 practitioners employed in U.S. college athletics to identify their research priorities and needs regarding spectator sport's influence on population health. The combination of qualitative and quantitative analyses show that future research needs to be focused particularly on one of the following research themes: (a) social psychological benefits of sport spectatorship and (b) psychological impact of sport spectatorship. The findings further suggest the integration of environmental well-being and eudaimonic well-being into the domain of population health. Based on these findings, we propose future research directions as informed and guided by the practitioners' perspectives.

**Keywords:** college sports; spectatorship; public health; intercollegiate athletics; well-being

## 1. Introduction

Understanding the role of sport in promoting the health of a population, or *population health*, represents an important research agenda for sport management scholars (Berg, Warner, & Das, 2015; Chalip, 2006; Inoue, Berg, & Chelladurai, 2015; Rowe, Shilbury, Ferkins, & Hinckson, 2013). Such research efforts can allow the sport management field to establish legitimacy as a distinctive academic discipline, while facilitating the field's interdisciplinary collaborations with other health-related fields such as medicine and public health (Chalip, 2006). These efforts also align with a recent call by leading management scholars to undertake research that can address grand societal challenges including the promotion of health (George, Howard-Grenville, Joshi, & Tihanyi, 2016). Hence, investigations into the link between sport and population health afford sport management scholars the opportunity to produce knowledge advancing not only the literature in the field, but also the broader management and health literature. Pragmatically, if empirically established knowledge of the population health benefits of sport is successfully transferred to sport practitioners, it would provide sport organizations with an alternative justification for public investment in sport facilities, events, and programs (Inoue, Sato, Filo, Du, & Funk, 2017). Such a justification has become increasingly important because of inconclusive evidence from economic impact analysis (Howard & Crompton, 2014; Inoue & Havard, 2014).

Sport has been traditionally linked with population health in terms of active sport participation (e.g., Berg et al., 2015; Henderson, 2009; Rowe et al., 2013). Yet a growing number of studies have been published within and outside the sport management field that provide insight into how population health may be influenced by spectator sport (e.g., Cornil & Chandon, 2013; Henry, 2016; Inoue et al., 2017; Taks, Littlejohn, Snelgrove, & Wood, 2016). Specifically, Inoue et al.'s (2015) scoping study of gray and published literature between 1990 and 2014

identified 135 empirical studies linking spectator sport with population health. Studies reviewed in their scoping study sought to understand both positive and negative influences of spectator sport on population health. Sample research questions of the reviewed studies include whether viewing an international sport competition may increase hospital admissions for cardiovascular incidences (e.g., Niederseer et al., 2013); how collegiate sport events may influence the alcohol consumption of university students (e.g., Neal, Sugarman, Hustad, Caska, & Carey, 2005); and whether group identification with a sport team may be associated with measures of social well-being, such as collective esteem and social life satisfaction (Wann, Waddill, Polk, & Weaver, 2011). Building upon Inoue et al.'s scoping study and previous empirical studies reviewed by them, the goal of the current study is to advance the field's understanding about the population health impact of *spectator sport*—athletic competitions or sport events provided for consumers as a form of entertainment (Chelladurai, 2014)—by addressing an important gap in the extant literature.

Although Inoue et al.'s (2015) effort to summarize and synthesize the findings of the literature is a significant initial step, it is yet to be known if the previous research has addressed the needs of *spectator sport practitioners*, who are employed by organizations (e.g., professional sport franchises, U.S. intercollegiate athletic departments) that bear a major responsibility to alleviate the negative influences of spectator sport on population health and enhance its positive influences. Promoting population health may not be part of these organizations' mission statement; however, it will be a critical part of social responsibility in accentuating the positive side effects of their enterprise and not harming others in the process of achieving their stated objectives (Chelladurai, 2016). Fulfilling this responsibility would require that spectator sport practitioners be cognizant of the effects of their organizations' offerings on population health in

general and specific health-related behaviors in particular. If sport management scholars are to help the practitioners (Weese, 1995), they need first to know what research questions are relevant to the practitioners in spectator sport.

Consequently, we address the following central question that remains to be answered:

*What research questions related to the influences of spectator sport on population health are relevant to professionals who engage in the practice of promoting spectator sport?*

Understanding the priorities of these spectator sport practitioners can enhance the contribution of sport management academics in better assisting practitioners in improving their practices related to spectator sport's influence on population health, which in turn helps gain public support for sport projects (Howard & Crompton, 2014; Inoue et al., 2017). The identification of practitioners' true research needs can further offer the academics an opportunity to develop a theory grounded in the practice of sport as it relates to population health issues (Chalip, 2006).

This study intends to contribute to the literature by (a) determining the importance assigned by sport spectator practitioners to the existing research themes regarding spectator sport's influence on population health and (b) identifying other themes that are seen as important by the practitioners but have yet to be investigated in the extant literature. Moreover, it seeks to suggest future research directions as informed and guided by the practitioners' research priorities. To this end, we employ a consultation exercise that engages practitioners to assess and provide insights into the findings of previous literature (S. Anderson, Allen, Peckham, & Goodwin, 2008; Arksey & O'Malley, 2005; Levac, Colquhoun, & O'Brien, 2010).

The context of this study is major college athletic departments in the United States. This focus is consistent with Inoue et al.'s (2015) findings indicating that U.S. college athletics is one of the most studied settings in previous studies linking spectator sport with population health.

Given this attention in the extant literature, it is imperative to ensure that future researchers will address research questions relevant to college athletics employees and hence provide these employees with meaningful implications (Weese, 1995).

## **2. Research on spectator sport and population health**

Spectator sport entails hard-fought competitions between individuals or teams, whose entertainment value is determined by the unpredictability and excellence of the competitions, the quality of ancillary services (e.g., game-day promotions, halftime shows), and the quality and degree of social interaction among people following the competitions (Chelladurai, 2014). In particular, the following three categories of services provided within spectator sport have been studied in relation to population health (Inoue et al., 2015): *spectator services* (i.e., offering the public the opportunity to watch athletic competitions at live events or through the media), *sponsorship services* (i.e., providing companies with the opportunity to associate with athletes, sport organizations, and events for image building and market access), and service to social ideas, or *social services* (i.e., operating social programs and activities to promote health-related objectives). Population health, on the other hand, refers to the health of a group of people (e.g., community residents, spectators, fans), entailing three categories of well-being proposed by the World Health Organization (2003)—physical, mental, and social—as well as health-related behaviors (Inoue et al., 2015).

The potential effect that spectator sport has on aspects of population health has been recognized in the sport industry. For example, the International Olympic Committee established a partnership with the WHO in 2010 to advance its role in promoting healthy active communities (Alleyne, 2014). In 2006, Fédération Internationale de Football Association launched a program entitled ‘11 for Health’ to promote physical activity as well as deliver important health messages

among children (Dvorak, Fuller, & Junge, 2012). This industry recognition is in accord with the increasing effort in the academic literature to empirically understand the effect of spectator sport on population health, as evidenced by the recent publication of several review articles synthesizing findings of related empirical studies (e.g., Andriessen & Krysinska, 2009; Inoue et al., 2015; Murphy & Bauman, 2007; Weed et al., 2015).

Of the review articles published recently, Inoue et al.'s (2015) scoping review represents the most comprehensive attempt to date, as it reviewed studies linking spectator sport with all aspects of population health defined above, while other review articles focused on studies concerning spectator sport's influences on specific health-related behaviors, such as physical activity (Murphy & Bauman, 2007; Weed et al., 2015) and suicidal behavior (Andriessen & Krysinska, 2009). Specifically, 135 empirical studies were included in Inoue et al.'s review, which were classified into nine research themes based on a focus on the specific aspects of the relationships between spectator sport and population health. These themes are as follows, from most to least studied: (a) event's impact on physical impairment and mortality; (b) event's impact on unhealthy habits and practices; (c) social psychological benefits of sport spectatorship; (d) effectiveness of health promotion programs; (e) event's impact on crime, violence, and suicide; (f) event's impact on sport and physical activity participation; (g) psychological impact of sport spectatorship; (h) role modeling effects of athletes; and (i) sponsorship and advertising of unhealthy products (see Table 1 for the detailed illustration of each theme).

From a theoretical standpoint, given that each of these themes captures a distinct relationship between different aspects of spectator sport and population health, no single theoretical framework can fully explain why spectator sport affects population health. Rather, multiple frameworks must be identified to offer a theoretical rationale for specific pathways



through which each of the three categories of services provided within spectator sport—spectator services, sponsorship services, and social services—influences a given aspect of population health (Inoue et al., 2015). For example, the logic behind the effects of spectator services on social well-being as illustrated in the theme ‘social psychological benefits of sport spectatorship’ can be explained by the social identity approach to health (Haslam, Jetten, Postmes, & Haslam, 2009), and its specific application to spectator sport contexts—Wann’s (2006) team identification–social psychological health model. According to these theoretical frameworks, group identification with a local sport team (i.e., team identification) allows people to develop meaningful social connections and access to social support, which, in turn, enhance their social well-being (Haslam et al., 2009; Wann, 2006). Additionally, the concept of demonstration effects (Weed et al., 2015) and a social ecological model (Aizawa, Wu, Inoue, & Sato, 2018) offer theoretical insights into the theme ‘event’s impact on sport and physical activity participation.’ These perspectives collectively propose that the hosting of sport events contributes to an increased rate of sport participation in local communities by inspiring people’s motivation toward sport participation (Weed et al., 2015) and facilitating the development of policy, behavioral, and social environments that help translate their enhanced motivation into actual sport participation behavior (Aizawa et al., 2018).

Importantly, Inoue et al. (2015) highlighted the paucity of studies linking spectator sport with population health in the field of sport management by reporting that only 11 of the 135 articles included in their scoping study were published in sport management journals. However, our follow-up review of published and in-press articles in three premier journals in the field—the *Journal of Sport Management* (JSM), *Sport Management Review* (SMR), and *European Sport Management Quarterly* (ESMQ)—reveals a steady increase in publications on this topic. Since

early 2014 when Inoue et al. concluded their article search,<sup>1</sup> 23 new empirical studies concerning one of the aforementioned nine themes have been published in these journals, including eight articles in the JSM and ESMQ respectively and seven in SMR. As shown in Table 2, seven of the nine themes were examined by the 23 articles identified, with eight of these articles addressing event's impact on sport and physical activity participation (e.g., Aizawa et al., 2018; Brown, Essex, Assaker, & Smith, 2017) and seven focusing on understanding the psychological impact of sport spectatorship (e.g., Doyle, Filo, Lock, Funk, & McDonald, 2016; Inoue et al., 2017).

The recent increase in the number of studies published in sport management journals suggests a growing interest in the effects of spectator sport on population health among sport management academics. An examination of the research themes addressed in the recently published studies also indicates that the two themes, event's impact on sport and physical activity participation and psychological impact of sport spectatorship, have received the most attention in the sport management literature. The main concern as noted above, however, would be whether the interest and attention of sport management academics align with those of spectator sport practitioners whose involvement is essential to effectively address these health-related issues (Weese, 1995; Zaharia & Kaburakis, 2016). To date, no attempt has been made to explore which specific research themes related to population health are perceived to be important by these practitioners. This potential concern highlights the need for a consultation exercise described next.

### **3. Consultation exercise**

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<sup>1</sup> Although Inoue et al. (2015) reviewed studies published until May 2014, we manually reviewed all articles published in the three journals since January 2014 (until March 2018) to include the articles that were published between January and May 2014 but were not captured by Inoue et al.'s database search. Our manual search initially identified 26 relevant articles, but three articles—Mutter and Pawlowski (2014a, 2014b) and Pawlowski et al. (2014)—were excluded from Table 2 because they were included in Inoue et al.'s scoping study.

The scoping study method, as proposed by Arksey and O'Malley (2005) and later adopted by Inoue et al. (2015), entails five stages: (a) identifying a research question that guides a literature search, (b) identifying relevant studies using multiple literature sources, (c) selecting studies reviewed for a scoping study based on predetermined inclusion criteria, (d) charting data from the reviewed studies to identify and summarize key information, and (e) collating and synthesizing the findings of the existing literature through frequency and thematic analyses. As a critical follow-up to these five stages, a consultation exercise is designed to gain insight beyond the findings of the academic literature by engaging stakeholders in the field to evaluate these preliminary findings, to determine research priorities, and to identify under-researched areas (S. Anderson et al., 2008; Arksey & O'Malley, 2005; Levac et al., 2010; O'Brien et al., 2016). Stakeholders suitable for the consultation exercise are those who are likely to face or address a given research issue, such as policymakers, practitioners from local organizations, and consumers and residents directly impacted by the issue. After being presented the findings from a scoping study of the literature, those stakeholders are instructed to use the findings as a foundation to provide a higher level of content expertise, perspective, and meaning (Levac et al., 2010).

As S. Anderson et al. (2008) noted, consultation exercises 'have an important part to play in scoping studies concerned with the identification of research priorities, in helping to target research questions, and in validating the outcomes of scoping studies through peer-review' (p. 8). Consultation exercises also constitute a knowledge transfer mechanism by which the findings of the initial scoping study are translated and disseminated to stakeholders, who would, in turn, adopt this knowledge for designing and improving their practice (Levac et al., 2010). Because of these merits, consultation exercises make a distinctive contribution to the literature beyond initial

scoping study findings (Levac et al., 2010; O'Brien et al., 2016).

#### **4. Research context and questions**

In conducting a consultation exercise, those stakeholders who have first-hand knowledge of the operations of enterprises that are the focus of the study and who can add valuable insight to the findings of previous literature must be identified (Levac et al., 2010). While such knowledgeable stakeholders typically include policymakers, consumers (or residents), and practitioners as noted above, in our research context the third group of stakeholders, more specifically spectator sport practitioners including members of the administrative cadre of those enterprises that offer spectator sport (e.g., professional sport franchises, U.S. intercollegiate athletic departments providing high-level football and basketball programs), represents the most knowledgeable stakeholders. This is because these practitioners are expected to have greater awareness of any issues linking their offerings of spectator sport and population health in general or any specific instances, such as excessive drinking, compared to other stakeholder groups. They are also more likely to be part of any initiatives taken by their organization to alleviate public health issues caused by its respective operations. In addition to the amount of relevant knowledge spectator sport practitioners are thought to have, a focus on these practitioners allows the current consultation exercise to provide information that will help future researchers address Weese's (1995) call for producing applied knowledge that can serve the sport management profession.

We confined the study population of this consultation exercise to practitioners employed by the U.S. college athletic departments in the Power Five conferences of the National Collegiate Athletic Association (NCAA) Division I Football Bowl Subdivision: Big 12, Pacific 12, Big 10, Southeastern Conference (SEC), and Atlantic Coast Conference (ACC). We focused on these athletic departments because they are primary providers of spectator sport services in the U.S

sport system, generating a total revenue of \$6 billion in 2015 (Lavigne, 2016). In addition, these departments are actively involved with the delivery of social activities and programs intended to address health concerns in their communities (Schlereth, Scott, & Berman, 2014). For example, such efforts are represented by the athletic department at the University of Minnesota, one of the Big 10 institutions, that has implemented multiple programs directed at the promotion of healthy eating and physical activity as well as the prevention of tobacco use (University of Minnesota Athletics, n.d.). Moreover, these big-time athletic departments were identified as one of the most researched contexts in Inoue et al.'s (2015) review, with previous studies addressing multiple research themes in this context, such as the psychological impact of sport spectatorship (Hirt, Zillmann, Erickson, & Kennedy, 1992), event's impact on unhealthy habits and practices (Glassman, Dodd, Sheu, Miller, & Arthur, 2008), and event's impact on crime, violence, and suicide (Rees & Schnepel, 2009).

In summary, to inform and guide future research by revealing practitioners' research priorities regarding the effects of spectator sport on population health, the current consultation exercise was conducted in the context of U.S. intercollegiate athletic departments that offer the highest level of competition. This exercise was designed to examine the importance of existing research themes as rated by those employed in these organizations. We further sought to gain college athletics employees' perspectives about other important areas of research beyond those identified in the literature. Our research questions are summarized as follows:

**RQ1:** What is the importance assigned by U.S. college athletics employees to existing research themes related to the influence of spectator sport on population health?

**RQ2:** What are other areas of research perceived as important by U.S. college athletics employees to advance their understanding of the influence of spectator sport on

population health?

## **5. Methods**

### ***5.1. Participants and procedures***

To recruit participants from the study population, namely, employees of athletic departments in the NCAA's Power Five conferences, we gathered valid email addresses of 2,969 full-time administrators and coaches<sup>2</sup> employed by all 65 Power Five athletic departments. Using this email list, data collection was done at two different times. First, in May 2016, an invitation email containing a link to a web-based survey was sent to the 2,969 employees.<sup>3</sup> After the two-week period of data collection, 93 provided usable responses (3.1% of the study population).

Second, to address potential nonresponse bias (Miller & Smith, 1983) associated with the low response rate of the first survey, in October 2017, we conducted the second data collection using the same web-survey as the first survey to obtain responses from non-respondents of the first survey. Through this second survey, we collected usable responses from an additional 43 employees.

Upon completion of the second survey, the extent of nonresponse bias was assessed by statistically comparing the 93 respondents of the first survey to the 43 respondents of the second survey (i.e., non-respondents of the first survey) on key study variables (Miller & Smith, 1983), especially their responses to all nine Likert-scale items related to RQ1 (see the next section for descriptions of these items). A multivariate analysis of variance (MANOVA) identified no

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<sup>2</sup> For coaches, we targeted only those who work for football, men's and women's basketball, baseball, and men's ice hockey programs because these sports typically attract a large number of spectators.

<sup>3</sup> Following the suggestions of past researchers (Fan & Yan, 2010; Sánchez-Fernández, Muñoz-Leiva, & Montoro-Ríos, 2012), we adopted various strategies for increasing responses for a web-based survey. These included developing a short and concise survey to reduce the completion time, using personalized messages for each survey invitation by addressing the full name of each participant in the message, and sending a pre-notification one week before the survey invitation as well as two reminders for non-respondents within the two weeks after the initial survey invitation (Fan & Yan, 2010; Sánchez-Fernández et al., 2012).

significant difference between the two groups regarding their responses to these items,  $F(9, 126) = 0.66, p = .75$ ; Wilk's  $\Lambda = .96$ . Given the consistency in responses between the two groups of respondents, the data were pooled for the subsequent analyses (Miller & Smith, 1983). This led to the final sample size of 136, or 4.3% of the 2,969 employees originally invited to the study.

Table 3 provides characteristics of the 136 respondents constituting the final study sample. The respondents worked for organizations located in all five U.S. regions and metropolitan areas varying in population size. The respondents' characteristics also differed in terms of gender (67.6% male), years of employment with the current organization, and position. In addition, the current sample included employees from all of the Power Five conferences, with employees of each conference representing 15% or more in the sample. Overall, the diverse characteristics of the final sample, in addition to the apparent consistency between the respondents and non-respondents as observed through the comparison of the first- and second-survey respondents, increase confidence in the reliability of the survey data (Miller & Smith, 1983).

## ***5.2 Instrument***

We designed a survey instrument to collect both quantitative data through Likert-scale items and qualitative data through an open-ended question. As we were the first to obtain practitioners' perspectives of various research themes concerning the relationship between spectator sport and population health, no existing scales that exactly capture the phenomena examined were available in the literature. Consequently, we created the survey instrument through the following systematic procedures. First, we developed initial survey items based on items used in past research examining practitioners' perspectives of given research topics related to sport management, such as corporate social responsibility (Sheth & Babiak, 2010) and sustainability

(Casper, Pfahl, & McSherry, 2012). Second, a preliminary survey containing the initial items was reviewed by four graduate students in sport management and three postdoctoral scholars (two in sport management and one in public health). This step was intended to obtain feedback to enhance the content validity of the survey as well as refine the clarity and conciseness of each item (Casper et al., 2012). Finally, we consulted with a university staff member with expertise in designing web-based surveys to improve the overall survey design and logic. Items included in the final survey to answer the research questions are described below.

First, as preliminary analysis, to explore college athletics employees' overall perceptions about the influence of spectator sport on population health, we asked respondents to describe (a) the direction of the impact that spectator sport can have on population health on a 5-point scale from 1 (*very negative*) to 5 (*very positive*), and (b) the extent to which their organizations are concerned with this impact on a 5-point scale from 1 (*not at all concerned*) to 5 (*most concerned*).

Second, to understand the importance assigned by practitioners to each of Inoue et al.'s (2015) nine research themes (RQ1), respondents were asked to review the description of each theme and then indicate how important the theme is to their organizations. A 5-point scale from 1 (*not important*) to 5 (*very important*) was adopted for all questions asking the importance of research themes.

Third, to determine other important research areas for college athletics employees (RQ2), we included an open-ended question asking to indicate what other areas of research they think important in understanding the impact of spectator sport on population health. Before this question, a brief review of the nine research themes was presented to respondents to ensure that it would be possible for them to identify new research areas beyond those examined in the



literature.

### **5.3. Analysis**

#### *5.3.1. Quantitative analysis*

In addressing RQ1, we used descriptive statistics and frequency analysis to assess the perceived importance of the nine research themes identified by Inoue et al. (2015) to the college athletics employees. In addition, as with Funk, Jordan , Ridinger, and Kaplanidou (2011), we used one-sample *t*-tests in comparison with the scale midpoint rating of 3 to determine whether the respondents, on average, perceived a given theme as important. Moreover, we performed a set of MANOVA to examine if respondents' perceived importance of the research themes differ depending on their personal characteristics as well as characteristics of the organization for which they worked.

#### *5.3.2. Qualitative analysis*

We coded qualitative responses to the open-ended question discussed above based on the nine themes offered by Inoue et al. (2015), which also allowed for the identification of responses that did not fit into one of these themes. The first and second authors independently analyzed qualitative responses and resolved any discrepancies in initial coding results through discussion. When responses did not fit into one of the nine themes, the first and second authors independently assigned new codes to the statements. The first and second authors then reached agreement on the final code assigned to each response that offered further areas of consideration. Finally, the third author reviewed the codes assigned by the two authors and verified that all codes captured the meaning of respondents' comments. This practice increased validity before accurate conclusions could be drawn (Goulding, 2002).

## **6. Results**

### **6.1. Quantitative results**

In response to the question about the extent to which their organizations are concerned with the impact of spectator sport on population health, 24 respondents (17.6%) indicated ‘not at all concerned’; 18 (13.2%) indicated ‘slightly concerned’; 28 (20.6%) indicated ‘somewhat concerned’; 53 (39.0%) indicated ‘moderately concerned’; and 13 (9.6%) indicated ‘extremely concerned.’ Overall, the majority of the 136 respondents ( $n = 94$ ; 69.1%) indicated that their organizations are at least somewhat concerned with spectator sport’s impact on population health, yielding a mean rating of 3.10 ( $SD = 1.27$ ) on the 5-point scale. Regarding the direction of spectator sport’s impact, nearly 85% of the respondents ( $n = 114$ ) indicated that spectator sport can have a positive ( $n = 84$ ; 61.8%) or very positive ( $n = 30$ ; 22.1%) impact on population health, with a mean of 4.02 ( $SD = .70$ ).

In relation to RQ1, the nine research themes discussed by Inoue et al. (2015) were rated in the following order of importance based on the mean ratings of all respondents (see Table 4): social psychological benefits of sport spectatorship ( $M = 4.22$ ;  $SD = 0.88$ ); psychological impact of sport spectatorship ( $M = 3.44$ ;  $SD = 1.01$ ); event’s impact on sport and physical activity participation ( $M = 3.18$ ;  $SD = 1.09$ ); effectiveness of health promotion programs ( $M = 3.13$ ;  $SD = 1.02$ ); sponsorship and advertising of unhealthy products ( $M = 3.11$ ;  $SD = 1.17$ ); event’s impact on unhealthy habits and practices ( $M = 3.06$ ;  $SD = 1.16$ ); role modeling effects of athletes ( $M = 2.89$ ;  $SD = 1.22$ ); event’s impact on crime, violence, and suicide ( $M = 2.75$ ;  $SD = 1.05$ ); and event’s impact on physical impairment and mortality ( $M = 2.47$ ;  $SD = 1.18$ ). In addition, according to the results of frequency analysis, while almost all themes were rated as at least moderately important (i.e., 3 or higher in the scale) by the majority of our respondents, the theme concerning the event’s impact on physical impairment and mortality received a rating below the

midpoint by over half (52.9%) of the respondents.

The results of one-sample  $t$ -tests further indicate that two themes—social psychological benefits of sport spectatorship ( $t = 16.11, p < .01$ ) and psychological impact of sport spectatorship ( $t = 5.10, p < .01$ )—had mean ratings significantly higher than the scale midpoint of 3 (*moderately important*). On the other hand, the means of the following five themes did not significantly differ from the midpoint: event's impact on sport and physical activity participation ( $t = 1.97, p = .05$ ); effectiveness of health promotion programs ( $t = 1.51, p = .27$ ); sponsorship and advertising of unhealthy products ( $t = 1.10, p = .27$ ); event's impact on unhealthy habits and practices ( $t = 0.59, p = .56$ ); and role modeling effects of athletes ( $t = -1.06, p = .29$ ). Moreover, the remaining two themes—event's impact on crime, violence, and suicide ( $t = -2.77, p < .01$ ) and event's impact on physical impairment and mortality ( $t = -5.23, p < .01$ )—had mean scores significantly below the midpoint.

Additionally, the results of MANOVAs revealed that none of the characteristics reported in Table 3 affected respondents' ratings of the importance of each of the nine themes ( $p > .05$ ). These results indicate the consistency of research priorities by college athletic employees regardless of their personal and organizational background.

Overall, the quantitative data addressing RQ1 demonstrate that while college athletics employees who responded to the current survey recognized the importance of most of the existing research themes, they deemed the following two themes particularly important: (a) social psychological benefits of sport spectatorship and (b) psychological impact of sport spectatorship. In contrast, the themes of event's impact on crime, violence, suicide, physical impairment and mortality are less likely to be perceived as important by those employees.

## **6.2. Qualitative results**

With reference to RQ2, participants were asked about other areas of research they believed to be important to understand the impact of spectator sport on population health. Many of the responses could be categorized in one of the nine research themes offered by Inoue et al. (2015), or indicated that these nine themes covered all possible research areas (as represented by the following comment: ‘I believe you hit 9 great areas to focus on’). Yet some respondents recommended areas of research that went beyond the nine themes offered by Inoue et al. and would help inform industry practice.

First, the following quote illustrates how inquiry into *environmental well-being* (e.g., prevention of air pollution; Musa, Yacob, Abdullah, & Ishak, 2015) can be seen as a part of the population health agenda from practitioners’ perspective: ‘[Our concern is] the impact that sporting events have on the environment in the community (i.e., sustainability, Zero-Waste, etc.)’ (associate athletic director at a Pacific-12 school). In particular, respondents highlighted the need for research on the ‘effect of gameday crowds and traffic on local residents’ (assistant athletic director at an ACC school) and how this effect ‘impacts people's well-being before/after the events’ (director at an ACC school) and may create such risk factors as pollution in the community. Notably, incorporating the promotion of environmental well-being into population health issues is in accord with recent trends in the health literature (Mitchell & Popham, 2008).

Second, practitioners addressed issues related to how spectator sport may influence local communities’ social equality and academic achievement, both of which capture the concept of *eudaimonic well-being*, namely, the realization of human potential through increased competence, literacy, and access, as well as reduced disparity (L. Anderson et al., 2013; Ryan & Deci, 2001). The following quotations illustrate these issues: ‘perhaps something about the way spectator sports influence thoughts about diversity and inclusion’ (concerning social equality;

deputy athletic director at an SEC school); and ‘the impact of local collegiate and professional sports on school attendance and achievement in the communities’ (concerning academic achievement; coach at a Big 12 school).

Additionally, though not directly addressing RQ2, participants offered comments categorized under the nine research themes identified by Inoue et al. (2015). Consistent with its high importance rating demonstrated by the quantitative data, several practitioners recommended inquiry into topics that were classified in the theme pertaining to the social psychological benefits of sport spectatorship. For instance, an associate athletic director at an ACC school stated ‘I think it's important to look at what impact spectator sports have on interpersonal relationships.’ The following quotation also refers to the potential impact of spectator sport on family life: ‘Do spectator sports foster more parental involvement in their children's lives? Are spectator sports being used by parents as a way to connect and engage with their kids?’ (associate athletic director at an SEC school).

## **7. Discussion**

### ***7.1. Implications***

The analysis of the quantitative data reveals the importance of the extant research themes regarding spectator sport’s influence on population health as rated by college athletics employees. Moreover, the qualitative results identify a handful of new themes that could expand the scope of research concerning this topic. Implications drawn from these findings are discussed below.

First, regarding practitioners’ research priorities, in addressing RQ1, the quantitative results based on one-sample *t*-tests show that future researchers are more likely to receive recognition from practitioners by focusing on one of the following two research themes: social

psychological benefits of sport spectatorship and psychological impact of sport spectatorship. Of these themes, our review of recent sport management studies as reported in Table 2 revealed that an increasing number of the studies have addressed the themes of the psychological impact of sport spectatorship. In contrast, there is a lack of research to specifically investigate the social psychological benefits of sport spectatorship—a research theme rated as the most important by the respondents of this consultation exercise—with only two studies (Collins & Heere, 2018; Oja, Wear, & Clopton, 2018) identified by our review addressing this theme.

According to Inoue et al. (2015), previous studies concerning this theme investigated how psychological engagement with a sport team may have effects on social well-being. As discussed in Section 2, the theoretical rationale behind such effects was provided by Wann's (2006) team identification–social psychological health model, which shows that team identification (defined as psychological connections with a local sport team) contributes to social well-being by fostering social connections among people following the team. Moreover, in the broader social psychological literature, the social identity approach to health (Haslam et al., 2009) has been developed to illustrate the psychological processes through group identification with a social category (such as a sport team) is linked with different aspects of well-being, including social well-being. However, empirical studies of sport fans have yet to fully support the hypotheses drawn from these frameworks (Wann, Hackathorn, & Sherman, 2017; Wann et al., 2011). This lack of conclusive evidence highlights the opportunity for future sport management researchers to contribute meaningful knowledge to practitioners by producing conceptual and empirical work that illustrates how spectator sport events can be designed and promoted to positively impact the social well-being of sport consumers and local residents. The qualitative data also provided possible questions for future research, such as how engagement in spectator sport might

influence one's interpersonal relationships and family life.

Second, one of the primary benefits of a consultation exercise is to more closely bridge research and practice by having stakeholders inform future empirical study (Arksey & O'Malley, 2005; Levac et al., 2010). In this regard, our qualitative data indicate additional aspects of well-being that need to be examined as part of the discourse on population health. The spectator sport practitioners repeatedly stated the need for research to inform practice in areas that did not fit into one of the nine research themes offered by Inoue et al. (2015). Increasingly, stakeholders have begun to recognize the multifaceted nature of well-being and its effects on population health (e.g., Centers for Disease Control and Prevention, 2016). Such an expanded view of well-being would go beyond the definition used by Inoue et al., which focused on physical, mental, and social well-being, plus health-related behaviors. Specifically, while the existing research focused primarily on the hedonic approach (e.g., life satisfaction, positive and negative moods, national pride) in defining mental and social well-being, practitioners recommended inquiry into the *eudaimonic approach*, which defines well-being in both the personal and social spheres in terms of 'the actualization of human potentials' (Ryan & Deci, 2001, p. 143), as manifested in academic achievement and social equality. Given that the promotion of hedonic and eudaimonic well-being often involves different pathways (Baumeister, Vohs, Aaker, & Garbinsky, 2013; Ryan & Deci, 2001), future research on the latter represents opportunities for new contributions to sport industry practice and the population health literature.

In addition, the emphasis placed on environmental well-being may indicate that modern practitioners have begun adapting to the sociopolitical expectation that they will at least be attentive to environmental stewardship through sport (Dingle, 2007). The link between environmental well-being and more traditional aspects of population health (e.g., physical well-

being) has been well-documented in the health literature (Mitchell & Popham, 2008). While issues related to environmental sustainability have been studied in the sport management literature (Casper et al., 2012), this consultation exercise indicates that spectator sport's impact on environmental well-being needs to be intentionally connected with population health research.

Moreover, according to our preliminary analysis of quantitative data, over half of the current respondents reported their organizations had at least some concern about this influence. This finding suggests that future research investigating the role of spectator sport in population health may be well-received by the industry and result in collaboration opportunities with sport organizations. It is still important to note that just over 30% of the respondents noted their organization are only slightly or not at all concerned about the effect of spectator sport on population health. This low level of concern for some organizations highlights the importance of the knowledge transfer between research and practice, which involves informing future and current managers of the latest research findings through such means as research collaborations, practitioner-oriented publications, classroom instruction, and outreach education (Irwin & Ryan, 2013; Weese, 1995; Zaharia & Kaburakis, 2016). Our consultation exercise was the first step toward this knowledge transfer by providing field practitioners with the opportunity to learn research themes and findings investigated by existing studies (Arksey & O'Malley, 2005; Levac et al., 2010). More efforts such as this would be needed to encourage the practitioners to adopt programs and policies that leverage the population health benefits of spectator sport while reducing its detrimental outcomes.

Another important finding from the preliminary analysis is that the direction of the impact of spectator sport on population health was predominantly perceived as positive, in spite of extant empirical evidence indicating that spectator and sponsorship services can negatively



influence population health by promoting such practices as excessive alcohol consumption (Kelly, Ireland, Alpert, & Mangan, 2014) and gambling (Lamont, Hing, & Vitartas, 2016). The respondents' favorable assessment suggests their tendency to overlook the negative aspects of spectator sport, which is likely to reflect their professional background as a spectator sport practitioner whose responsibilities often include publicizing the positive roles their organization plays in society to enhance the organization's reputation and contribute to its financial performance. As such, in relation to the knowledge transfer discussed above, it would be essential for sport management scholars to engage in efforts to help practitioners recognize that their events could have not only positive but also negative effects on population health and that further activities designed to reduce the negative impact are necessary.

## ***7.2. Limitations and conclusions***

As primary providers of spectator sport services, employees of Power Five athletic departments constituted an appropriate group of stakeholders that can offer valuable insights into the two research questions of this study. Yet, despite our efforts to alleviate the effects of nonresponse bias on our findings as reported above, the low response rate does not allow us to completely alleviate concern about the influence of this bias, and hence the results of the current study should be interpreted with caution. This limitation suggests the need to validate the findings of this study through a follow-up study that can capture responses from larger portions of the population, for example, by collaborating with the NCAA or conferences of the target groups.

Another limitation of this study is the utilization of the United States as the specific national context. To address this limitation, further efforts to obtain data from practitioners in other countries, especially managers of professional sport organizations, would benefit future research for two reasons. First, although college sport represents a central provider of spectator

sport in the United States, the impact of professional sport on population health (both positively and negatively) is likely to be greater in other countries where college sport constitutes a much smaller segment of the sport industry. Second, the relatively greater financial resources available to major professional sport organizations in other countries, such as European professional football leagues and clubs, could allow them to play a more important role in promoting population health than major college athletic departments in the United States.

As previously described, the purpose of a consultation exercise is to inform scholars of key research areas they can focus on in the future (S. Anderson et al., 2008; Arksey & O'Malley, 2005; Levac et al., 2010). Through this exercise, research priorities that have the potential to enhance industry practice are identified because of the participation of individuals with day-to-day working experience in sport organizations. Guiding the direction of research as informed by inputs from professional practice is a significant contribution of our consultation exercise, and similar methods should be more regularly conducted in the sport management field to better serve practitioners (Weese, 1995). Moreover, to further enhance the utility of a consultation exercise, it is desirable that future researchers seek to extend the methods described in this article by obtaining richer qualitative data from practitioners using interviews or focus groups. In the current research context, consultation exercises using such qualitative methods could further develop the field's knowledge about how population health is conceptualized by practitioners, as well as what other areas of research would be desired by the practitioners to help them enhance spectator sport's contribution to population health while reducing its detrimental effects.

The current findings based on spectator sport practitioners' perspectives should also be complemented by insights from other stakeholders whose health could be influenced by spectator

sport, such as consumers and local residents. In line with the critical paradigm advanced by Frisby (2005), future investigations adopting this direction can increase the field's efforts to produce knowledge that represents the interests and benefits of those affected by the managerial actions of sport practitioners.

In conclusion, sport is a significant social institution, but it has yet to be viewed that way by policymakers in promoting population health (Berg et al., 2015). As expanded attention is given to the holistic health benefits of sport spectatorship and the significant role spectator sport could play in health promotion (Inoue et al., 2015; Taks et al., 2016; Weed et al., 2015), practitioners and policymakers will have another tool to reach various groups of the population that may overlook promotional messages elsewhere. Though sport is not a panacea, it needs to have a more prominent role in endeavors to improve population health. The current work represents a continued effort to advance the role of the sport management field in enhancing spectator sport's contribution to population health. Given the resources of spectator sport organizations and their distinct promotional influence that could enhance population health, this effort should not subside anytime soon. It would also enable spectator sport organizations to more clearly demonstrate their social value and contributions to a community. It is hoped that this study will stimulate increased empirical attention to this crucial issue that has global relevance.

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Table 1. Illustration of research themes identified by Inoue et al.'s (2015) scoping study

Theme	Representative Examples
Event's impact on physical impairment and mortality	Studies examining whether or not watching sport events and their outcomes may influence physical conditions of the population, as indicated by physical impairment, mortality, and hospital admission.
Event's impact on unhealthy habits and practices	Studies investigating how sport events and their outcomes or personal involvement in spectator sport may influence engagement in unhealthy practices and habits, such as gambling, alcohol consumption, and intake of unhealthy foods.
Social psychological benefits of sport spectatorship	Studies investigating the influence of social identification and psychological attachment with a sport team on social well-being as measured by such indicators as national pride, sense of belonging, and collective self-esteem.
Effectiveness of health promotion programs	Studies evaluating the degree to which health promotion activities and programs sponsored by athletes and sport organizations would impact health-related behaviors of participants.
Event's impact on crime, violence, and suicide	Studies examining the influence of sport events and their outcomes on the mental well-being of the population, as seen in increased violence, crime, and suicide.
Event's impact on sport and physical activity participation	Studies concerning the extent to which the public's active participation in sport and physical activity may be inspired by sport spectatorship and the hosting of sport events.
Psychological impact of sport spectatorship	Studies identifying the positive and negative impacts of sport fandom and spectatorship on individuals' psychological state.
Role modeling effects of athletes	Studies investigating how the adoption of health-related behaviors and attitudes may be influenced by personal attachment to an athlete associated with these behaviors and attitudes.
Sponsorship and advertising of unhealthy products	Studies concerning how sport sponsorship, endorsement, and advertisement may promote the use of tobacco, alcohol, and unhealthy food products.

Table 2. Research themes examined by recent studies published in the Journal of Sport Management, Sport Management Review, and European Sport Management Quarterly

Theme	Studies	<i>f</i>
Event's impact on sport and physical activity participation	Aizawa et al. (2018); Brown et al. (2017); Harris & Houlihan (2016); Hodgetts & Duncan (2015); Liu et al. (2014); Macrae (2017); Ramchandani et al. (2015); Taks et al. (2014)	8
Psychological impact of sport spectatorship	Doyle et al. (2016); Inoue et al. (2017); Jang et al. (2017); Jang et al. (2018); J. Kim et al. (2017); J.W. Kim et al. (2017); Schlegel et al. (2017)	7
Social psychological benefits of sport spectatorship	Collins & Heere (2018); Oja et al. (2018)	2
Sponsorship and advertising of unhealthy products	Kelly et al. (2014); Lamont et al. (2016)	2
Event's impact on crime, violence, and suicide	Beremdt & Uhrich (2018); Toder-Alon et al. (2018)	2
Role modeling effects of athletes	Woolf et al. (2014)	1
Event's impact on unhealthy habits and practices	Agha & Tayler (2017)	1



Table 3. Sample characteristics ( $N = 136$ )

Variable	Categories	<i>n</i>	%
Gender	Male	92	67.6
	Female	44	32.4
Years of employment	1–5 years	53	39.0
	6–10 years	27	19.9
	11–15 years	13	9.6
	More than 15 years	35	25.7
	Missing	8	5.9
Region	Northeast	7	5.1
	Southeast	50	36.8
	Midwest	40	29.4
	Southwest	21	15.4
	West	18	13.2
Population size of the metropolitan area	Less than 500,000	77	56.6
	500,000–999,999	19	14.0
	1,000,000–4,999,999	32	23.5
	5,000,000 or more	8	5.9
Conference	Atlantic Coast Conference	27	19.9
	Big 10	30	22.1
	Big 12	20	14.7
	Pacific-12	30	22.1
	Southeastern Conference	29	21.3
Position	Coach	13	9.6
	Deputy athletic director	7	5.1
	Associate athletic director	44	32.4
	Assistant athletic director	15	11.0
	Director	23	16.9
	Manager	14	10.3
	Coordinator	9	6.6
	Other	11	8.1

Table 4. Descriptive statistics for perceived importance of research themes ( $N = 136$ )

Research Theme	$M$	$SD$	Rank	$t^a$	$p$	% below midpoint
Social psychological benefits of sport spectatorship	4.22	0.88	1	16.11	< .01	4.4
Psychological impact of sport spectatorship	3.44	1.01	2	5.10	< .01	19.1
Event's impact on sport and physical activity participation	3.18	1.09	3	1.97	0.05	27.9
Effectiveness of health promotion programs	3.13	1.02	4	1.51	0.13	27.2
Sponsorship and advertising of unhealthy products	3.11	1.17	5	1.10	0.27	27.2
Event's impact on unhealthy habits and practices	3.06	1.16	6	0.59	0.56	33.1
Role modeling effects of athletes	2.89	1.22	7	-1.06	0.29	39.7
Event's impact on crime, violence, and suicide	2.75	1.05	8	-2.77	< .01	44.9
Event's impact on physical impairment and mortality	2.47	1.18	9	-5.23	< .01	52.9

<sup>a</sup>The results of one-sample  $t$ -tests (comparison value = 3) are shown.