

# THE MANAGEMENT OF EMOTIONS IN SPORTS ORGANIZATIONS

EDITED BY: Manuel Alonso Dos Santos, Ferran Calabuig Moreno and  
Irena Valantine  
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# THE MANAGEMENT OF EMOTIONS IN SPORTS ORGANIZATIONS

Topic Editors:

**Manuel Alonso Dos Santos**, Catholic University of the Most Holy Conception,  
Chile

**Ferran Calabuig Moreno**, University of Valencia, Spain

**Irena Valantine**, Lithuanian Sports University, Lithuania

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# Editorial: The Management of Emotions in Sports Organizations

Manuel Alonso Dos Santos<sup>1,2\*</sup>, Ferran Calabuig Moreno<sup>3</sup> and Irena Valantine<sup>4</sup>

<sup>1</sup> Marketing and Market Research Department, University of Granada, Granada, Spain, <sup>2</sup> Administration Department, Universidad Católica de la Santísima Concepción, Concepción, Chile, <sup>3</sup> Physical Education and Sports Department, University of Valencia, Valencia, Spain, <sup>4</sup> Department of Sports Management, Economics and Sociology, Lithuanian Sports University, Kaunas, Lithuania

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## Editorial on the Research Topic

### The Management of Emotions in Sports Organizations

Emotions are a relevant factor in consumer behavior (Calabuig Moreno et al., 2015; Foroughi et al., 2016). The context of sport consumption is especially suitable for the study of the effect of emotions on different variables relevant to sport management (Biscaia et al., 2012). However, there are still few empirical studies that analyze the consumption of emotions in sport. This special issue presents a compendium of articles on management, marketing, and economics of emotion sport with the aim of advancing in the application of new frontier knowledge, tools, and methods in the area of sports management.

This special issue consists of 12 articles. The first manuscript of this section is entitled “*Bullying Trends inside Sport: when Organized Sport does not Attract but Intimidates*.” The objective of Vveinhardt and Fominiene was to examine the causes of the development of intimidation in and around sporting organizations. This research revealed three levels of determinants that favor bullying: the micro level—interrelationships; the mezzo level—sports professionals’ (coaches’) behavior; and the macro level—management of interrelationships. The authors recommend actions leading to the recognition of bullying inside the organization and improving the competencies of the management of interrelationships in order to protect the victims of bullying and avoid new cases.

The second manuscript is titled: *Emotions and Sport Management: A Bibliometric Overview*. The authors use a bibliometric performance analysis and graphic mapping to provide a general vision of the academic research into emotions in the field of sports management. The results show that the U.S.A is the country that contributes most authors in the field and that it is a field still regarded as incipient (Baier-Fuentes et al.).

Mastromartino and Zhang published the manuscript titled *Affective Outcomes of Membership in a Sport Fan Community*. The objective was to carry out a review of the state of the research in the field of emotions and the sense of belonging to a sport fan community. The authors underline the need to monitor factors at both a technological and group or social level due to the dynamism of the communications and technology sector in order to detect changes in the sense of belonging.

The fourth manuscript is titled *Sport Spectatorship and Health Benefits: A Case of a Japanese Professional Golf Tournament*. Watanabe et al. measure how the factors of core product (player attraction, event attractiveness, and course characteristics) and peripheral spectator services (event services, event information, event amenity, and parking and transportation) influence spectators’

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### Edited and reviewed by:

Miguel-Angel Gomez-Ruano,  
Polytechnic University of  
Madrid, Spain

### \*Correspondence:

Manuel Alonso Dos Santos  
manuelalonso@ugr.es

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length of stay at a golf event, physical activity and life satisfaction. The tournament services influence physical activity, that could finally influence life satisfaction. As a consequence, the authors recommend incorporating health and well-being initiatives in the commercialization plans of sporting entities.

Tur-Porcar and Ribeiro-Soriano examine the criteria that are most affected by the commitment of athletes to sport organizations in the paper titled *The Role of Emotions and Motivations in Sport Organizations*. The authors employ the Analytic Hierarchy Process method and conclude that emotion and motivation are the most important factors in generating commitment within sport organizations. The authors recommend increasing the social motivation of the clients through improvements in well-being accompanied with team results and competitive victories, and improving emotional management through self-evaluation.

The sixth paper is titled *Portrait of Boredom Among Athletes and Its Implications in Sports Management: A Multi-Method Approach*. Velasco and Jorda present two studies with the aim of examining which aspects and incidents of being an athlete lead to boredom and how this negative emotion influences performance, attitudes and behavior. The first study reveals that boredom is prevalent amongst athletes, especially produced by carrying out repetitive tasks, lack of motivation and anticipated negative mood. The second study showed that boredom negatively influences performance and influences the over-consumption and alteration of sporting diets. Thus, the authors recommend that coaches search for signs of boredom through his or her sportspeople's consumption and the use of new technologies or materials to influence novelty and reduce boredom, as well as developing social relationships inside the group.

Kaplánová published the manuscript titled *Financial Awards and Their Effect on Football Players' Anxiety and Coping Skills* which examines the effect of economic rewards on the anxiety, coping skills and stress of players. The results of the experiment showed that the players subjected to economic rewards developed greater motivation, better physical and mental preparation and a greater inclination to respect the decisions of the coach. However, the players subjected to rewards suffer greater cognitive anxiety, finally affecting their sporting performance.

Shakina et al. presented the paper *Football Fans' Emotions: Uncertainty Against Brand Perception*. This paper examines the influence of the emotion of competition in a football match and the place where it is held on the attendance, ticket price and emotional state. Having analyzed more than 1,100 football matches from three seasons of the Brazilian state championship, the authors conclude that the price of the tickets does not have a significant influence on the attendance in a moment when the team playing is popular, thus demonstrating the emotional influence over the economic in the decision system of the spectator. Furthermore, the results showed

that attendance does not vary according to the competition of the match; the attraction of the team itself on the fan is stronger than the attraction of the competition during the match.

The ninth paper is titled *Overall Quality of Sporting Events and Emotions as Predictors of Future Intentions of Duathlon Participants* and analyses the moderating effect of emotion on the influence of quality, satisfaction, and perceived value on intention to attend a sporting event. The authors apply a QCA and SEM and reach the conclusion that quality and satisfaction are key factors in predicting intention to attend. The combination of these factors with emotion explain, in themselves, the intention to attend (Magaz-González et al.).

The tenth article is titled *The Influence of Emotion in the Management of Amateur Football Organizations*. This paper examines the influence of organizational variables on credibility, identification and loyalty to amateur sporting organizations. The results showed that the organizational variables explained behavior better than the emotional variables, but that their inclusion improves prediction (Hebles et al.).

The paper titled *Future intentions of fitness center customers: effect of emotions, perceived well-being and management variables* is the eleventh. García-Pascual et al. measure the influence of management variables (i.e., quality, satisfaction and perceived value), demographic variables (i.e., age and gender) and psychological variables (i.e., personal wellbeing and emotion) on future behavior of fitness center consumers. The authors conclude that the management variables predict future behavior better, to the detriment of the psychological ones. The authors recommend frequently monitoring levels of satisfaction and quality and implementing programs that emphasize positive emotions of employees and clients.

The last paper is titled *Social Atmospherics, Affective Response, and Behavioral Intention Associated With Esports Events* and aims to examine the relationship between the social atmosphere, affective response and the intention to attend a sporting event. As a result, Jang et al. conclude that cheering behavior, similarity, cosplay, and social density (social atmospherics) influenced affective responses and behavioral intention. The authors recommend sporting managers consider atmosphere as a trigger of affective response and include animation and cosplay promotions.

The editors of this special issue would like to thank all the authors for their contributions and recognize all the future research that still needs to be done, for example through the application of neurophysiological techniques that allow emotions to be more validly recorded, research into the drivers that open up new sport markets, or new ways of social communication based on communication technologies.

## AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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# Affective Outcomes of Membership in a Sport Fan Community

Brandon Mastromartino\* and James J. Zhang

Department of Kinesiology, International Center for Sport Management, University of Georgia, Athens, GA, United States

In this mini-review, we shed light on the important, yet under researched topic area in sport management – understanding the role that emotion plays for members of sport fan communities. Much research has been done on the relationship between sport organization and fan; yet, far more needs to be discussed on how the sense of community fans feel lead to affective outcomes and consumption behaviors. With an understanding of the affective outcomes resulting from a connection between fans, sport organizations can use the knowledge to develop promotional procedures and nurture their fan community in an effort to grow their fan base and elevate consumption behavior. The aim of this mini-review is to (a) draw attention to the value of sport fan communities and (b) highlight areas in which sport organizations can build marketing strategies. As it is necessary for sport organizations to better understand the role emotion plays in the consumer behavior of their fans, more attention needs to be paid in understanding the affective benefits of membership in a sport fan community.

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### Edited by:

Irena Valantine,  
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Josep Crespo Hervás,  
University of Valencia, Spain  
Larena Hoeber,  
University of Regina, Canada

### \*Correspondence:

Brandon Mastromartino  
bmastro@uga.edu

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## INTRODUCTION

The behaviors of sport fans have been a widely studied concept in sport management research. There has been extensive research because fans are the lifeblood for sport organizations and it is important for sport organizations to understand fan consumer behaviors in order to better fit their needs and generate more profits (Wann and James, 2019). Sport fans reinforce identification with a team by engaging in supportive and repetitive consumption behaviors such as attending live events, purchasing team merchandise, and watching games on TV or through Internet streaming services (Mastromartino et al., 2018). Sport fans are different than fans of other products such as car or clothing brands due to a unique emotional attachment an individual has with their sports teams. Wakefield (2007) highlights this attachment:

Highly identified fans will internalize or adopt the team or player's attitudes and behaviors as their own. If you are highly identified with a team, you feel good when the team wins, and bad when the team loses. You believe the team is a representation of who you are to yourself and to others. You practically feel as though you are part of the team (p. 37).

For a sport organization, it is more efficient to develop and maintain a diehard lifelong fan as opposed to constantly finding ways to engage new fans. Sport organizations are seeking to compete in the international marketplace, now more so than ever before. As the domestic market becomes saturated, sport organizations in North America are looking to build a global consumer base for their products (Zhang et al., 2014). This has led sport managers to believe that potential for long term growth can be accomplished through the global marketplace (Walker and Tehrani, 2001). For example, it is already evident in the National Basketball Association (NBA)



with its development of international exhibition games and also programs such as Basketball Without Borders. With new technologies, fan communities are stretching geographic boundaries, and with an understanding of how an individual connects with a fan community and the affective outcomes of that membership, sport organizations can expand their fan community across the globe.

Previous studies generally conclude that identification with a fan community is achieved when one feels a sense of connection with other members of the community and a sense of difference from those not in the community (Muniz and O'Guinn, 2001; Keller, 2003; Mastromartino et al., 2019b). Various elements of sport fan communities have been discussed in previous studies; however, they have mostly focused on behavioral outcomes, not psychological ones. For example, Yoshida et al. (2015) examined fan community identification of Japanese soccer and baseball fans. They found that identification and membership with the fan community had positive effects on team brand equity which resulted in increased fan community engagement, customized product use, member responsibility, and positive word of mouth. Grant et al. (2011) examined fan communities of newly formed professional sports teams in New Zealand to identify factors that contribute to building a successful brand community from scratch. They found that marketing strategies from the organization did not often match up with the markers of brand community and did not initiate marketing strategies to encourage the development of a brand community. Lastly, Mastromartino et al. (2019a) conceptualize a model of community identification where affective benefits are one of the perceived benefits of membership in a sport fan community. Previous research has hypothesized ideas regarding sport fan communities, but there have been no specific investigations into the role emotions play in sport fan communities. This highlights the need for more research to be done for organizations to better understand the affective outcomes of membership of fan communities and utilize them when formulating a marketing mix, which is particularly needed when attempting to lessen the impact of a lack of team history or success on fan identification and consumption behavior. This paper aims to examine the affective outcomes of membership in a sport fan community for the individual fan. Although there may be additional benefits on the group or societal level such as increases in national pride (Hallmann et al., 2013; Elling et al., 2014), these implications are outside the scope of this paper and should be examined in future research.

## SOCIAL CAPITAL THEORY

Social capital is the theoretical underpinning of understanding the psychological benefits one receives from membership in a sport fan community. Social capital can be defined as "resources embedded in a social structure which are accessed and/or mobilized in purposive actions" (Lin et al., 2001). This highlights that membership in a community has a value to each member and that value can be accessed by participating in that community. The value, or benefits, members gain vary from individual to individual, but can include an increase in self-esteem and

sense of belonging (Wann et al., 2011). Sport fans participate in the community in many ways such as going to games, becoming involved in social media discussion, or recruiting others to become fans. This type of participation increases a fan's connection to the community, allowing access to more resources and benefits for the individual (Phua, 2012). Following this line of theory, the more one participates and the more connections one makes in the community, and the better off they will be emotionally (Nicholson and Hoyer, 2008). A unique element of social capital is that it operates at various levels of a social structure, such as a sport fan community. It functions on the individual level for personal social capital gain, or it can be accessed to serve more general communal or societal needs (Coleman, 1988; Putnam, 1995). To oversimplify, The Beatles song *The End* states "And in the end, the love you take, is equal to the love you make." This implies there is certain value to contributing to the community, which is social capital. Kadushin (2012) notes there are two types of social capital in communities: social capital investment and individual social capital. Social capital investment is what one puts into their community, such as volunteer work, and leadership roles can increase involvement among other community members or improvement in the community such as lower crime rates and economic growth. Individual social capital is what impacts well-being on the individual level, such as an increased sense of wellness or self-esteem. However, these are not mutually exclusive consequences as an improved and active community can contribute to increases in personal well-being as well. The types of outcomes each individual experiences will vary from person to person some members may receive parts of some, or parts of none, or all of one, or none of one.

## AFFECTIVE OUTCOMES

Emotion and affect is strongly related to sport consumption (Moital et al., 2019) and responses such as positive emotions, product engagement, and happiness can be outcomes of consuming sport (Doyle et al., 2016; Jang et al., 2019). Emotional responses can be activated in specific sport consumption settings, such as attending a game live in person (Cho and Lee, 2019), engaging in traditions such as rivalries (Limbach et al., 2019), or following one's favorite athlete (Chang et al., 2018). As well, as the focus of this paper is, sport fans can activate emotional responses through their connection to other fans in a sport fan community. The affective benefits achieved from membership in a sport fan community are "those relating or arising from influencing feelings or emotions" (Mastromartino et al., 2019b). The Team Identification-Social Psychological Health Model from Wann (2006) shows us that the increase in social connections that comes with identifying as a fan of a team leads to well-being benefits. Building on that, Wann et al. (2011) found that team identification was positively related to a fan's social psychological health. Similarly, Wann et al. (2008) found that for even lowly identified fans, being connected to the fan community was more of a significant predictor of well-being than attending games. These studies suggest that it is likely an individual's psychological

well-being can increase through an association with the fan community of a sport team.

As a member of a sport fan community, individuals achieve benefits such as boosts in self-esteem and feelings of belonging because they are associated with a group of like-minded individuals and can feel like they are part of an exclusive club (Wann and James, 2019). Sport often brings disparate people together to share a communal experience (Kutcher, 1983; Melnick, 1993) and this shared experience leads to a kinship between members (McAlexander et al., 2002). Through their membership, the value members gain is a sense of uniqueness because a fan community has certain requirements needed for membership (such as knowledge or passion for the brand) that not everyone can obtain (Tian et al., 2001; Wu et al., 2012). The reasons individuals consume sport vary from person to person, but according to Wann (1995), and group affiliation is one of the most common motivations. Beyond having a shared passion for a sport or team, other factors can bring individuals together to create a common group identity such as symbols from associated communities (Heere and James, 2007; Heere et al., 2011), class affirmation (Taylor, 1987), or national unity (Klein, 1984, 1991). For example, McDonald et al. (2002) note that members of exclusive country or sailing clubs can be aligned by social class and then enjoy the benefits of being members in those exclusive clubs. Even though they may be united by other affiliations, it is the membership in the exclusive sport club or community that leads to self-esteem benefits.

When a brand employs an exclusivity marketing strategy, it is an example of a brand hijack Wipperfurth (2005) because it seeks to seduce the consumer by aiming at their heart, not their brain: “Is there anything you want more than the thing you can’t have?” (Wipperfurth, 2005). Further elaborating on that, the author uses the example of Red Bull as a brand that creates an air of exclusivity that attracts members of their fan community. Red Bull focuses their sampling efforts on exclusive sub communities in order to create a deep experience for the consumer. They do not focus on how many people sample the product, for them it’s who and how that matter. As well, Red Bull has limited access and availability of their merchandise. It is only their spokespersons such as celebrities and athletes who get access to t-shirts and hats, consumers do not have the ability to purchase any merchandise. This forces consumers to work hard to obtain any Red Bull related merchandise, and when they do they consider it a prized possession while giving them a story to tell their friends and family. Red Bull’s strategy “encourages consumers to feel special, as though they’ve discovered something different” (Wipperfurth, 2005).

Feelings of uniqueness can be especially heightened if an individual identifies as a member of the community in a niche sport (Mastromartino et al., 2019a; Mastromartino et al., 2020). In a study on fans of surfing, Moutinho et al. (2007) noted that fans in this community displayed similar attitudes and behaviors because it is a very specific sport that takes dedication to understand and be involved with. In this specific fan community, individuals would purchase and wear certain surfing apparel brands to signify they were part of the exclusive surf fan community. No one other than a diehard surf fan

would wear these brands, something that draws them closer to the fan community. Another example of this is in an analysis on mountain climbers and rugby players by Donnelly and Young (1988) who noted there is a complex process of identity construction that is built on subculture affiliation, or membership in exclusive groups. Through this previous research, it is clear that being part of an exclusive club with like-minded individuals is desirable for sports consumers and an integral part of a sport fan community, leading to affective benefits through their sense of membership in the community.

For fans to feel part of a fan community, they also need a sense of acceptance for their religious beliefs, gender, race, sexual orientation, or any other important part of their identity outside of their fandom. Not only is tolerance important for fan communities, positivity around those elements, and for welcoming new people into the community is important in feeling connected to that community. An example of this comes from Darling-Wolf (2004) in an examination of identity and gender in a fan community of a Japanese celebrity. The research found that this was a popular community because female fans felt that the community was a safe haven where other members of the community were supportive and not view their fandom any differently because they were a woman. This was an online community with clearly defined rules from the webmaster, but this community collectively acted to be positive and accepting of each other, and resulting in an enjoyable fan community experience for those involved. In a sport consumer context, Cleland (2015) found that British football fan message boards have been increasing in inclusive and tolerant attitudes, specifically through the rejection of homophobia. This has been a common topic of research in football fan communities and has aligned with other studies that show decreasing homophobia has been found among sport fans (Adams, 2011; Cashmore and Cleland, 2012; Nylund, 2012). However, there have been opposite results found in some sport fan communities, such as Kian et al. (2011) who found that homophobic and sexist posts went uncontested on message boards in fan communities of American football. The ability to be accepted for who they are has a strong impact in how a fan can connect with a fan community and the type of benefits they receive from acting in that community.

In addition to the feeling of acceptance from fellow community members, sport fans receive further affective benefits by having a direct relationship with the organization through their membership in the fan community. Although fan communities are often self-sufficient and operate within themselves, a relationship with the organization can give a fan community legitimacy and make members feel like they are part of the team they follow. In business practices, this function is often referred to as relationship marketing which can be defined as “all marketing activities directed toward establishing, developing, and maintaining successful relational exchanges” (Morgan and Hunt, 1994, p. 22). When it comes to relationship marketing in the sport fan context, professional sport organizations want their fans to feel like they contribute to the team and with that requires being interactive with the fan community. This interaction is a two-way process and (Bühler and Nufer, 2010) outline some examples of sport organizations

that have a direct relationship with their fans. One is the New Zealand All Blacks national rugby team who, through their website, invite fans to send messages to the players, and then post those messages through the team's locker room. Some sport organizations have official fan clubs where in return for their membership; fans receive perks such as gifts from the team and communication with players. An example of this is Juventus of the Italian Serie A football league who charges \$12 per year for fans to join and in return the fans receive autographed player photos, access to their online fan community, and an official team e-mail address. There are variations of these types of membership loyalty programs, but all serve to highlight the affective benefits from having a direct relationship with the organization.

Bee and Kahle (2006) examined why having a relationship with the organization is important for sport consumers as well. Their research argues that many sport organizations use market data to analyze simple purchasing behavior information such as the amount paid, the type of product purchased, where the product was purchased, and if it was a repeat purchase. However, with relationship marketing, an organization can work to build a stronger emotional connection with their fan community by approaching it in a way that allows them to understand why a particular product was purchased and assess the likelihood of a repeat purchase. This suggests that sport organizations should view their fans as lifetime partners and work to understand their changing needs, instead of a strong focus on short-term transactions and immediate profits (Stavros et al., 2008). Further research shows that the length of a relationship between the consumer and organization can lead to an increased sense of loyalty. Research findings by Raimondo et al. (2008) tell us that the longer someone feels they are loyal to a certain brand, the more likely they are to have positive attitudes such as satisfaction and trust, and as well as increased consumer behavior. Practically

speaking, this research suggests sport organization should focus on length of a time as a fan in order to develop social equity with their fan base.

## CONCLUSION

The concept of fan communities is a growing and evolving topic in sport research and among sport practitioners. Currently, most investigations on the affective outcomes of membership in a sport fan community are conceptual in nature and more empirical evidence needs to be discovered and disseminated in order for sport organizations to understand their consumer base and tailor marketing strategies around the emotions of fans. As well, future research should consider other sociodemographic factors such as age, income, race, gender, and sexuality which may mediate the affective outcomes of achieving a sense of membership in a sport fan community. This current work focuses on the affective outcomes on the individual fan level, but future research should also consider these outcomes on the group and societal level. Previous conceptualizations have suggested that affective benefits exist through membership in a sport fan community, but future research needs to dig deeper to fully understand all the factors at play. Understanding sport fans is continually an evolving process as technology and society changes and continued observation of their behavior in fan communities is essential for sport academics and practitioners in order to remain at the cutting edge of research and practice.

## AUTHOR CONTRIBUTIONS

BM wrote the first draft of the manuscript based on BM and JZ's collective conceptualization. BM and JZ edited subsequent drafts.

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# The Role of Emotions and Motivations in Sport Organizations

Ana Tur-Porcar<sup>1\*</sup> and Domingo Ribeiro-Soriano<sup>2</sup>

<sup>1</sup> Faculty of Psychology, Universitat de València, Valencia, Spain, <sup>2</sup> Institut Universitari d'Investigació en Economia Social, Cooperativisme i Emprenedoria, Universitat de València, Valencia, Spain

In sport organizations, a stance aimed at creating a positive emotional and social climate may be necessary. This study examines athletes' individual psychosocial factors that are linked to sports practice and sports performance. These factors include individual motivation, emotions, and beliefs. The main objective is to create a hierarchy of emotional and motivational factors that sport organizations can use to increase athletes' commitment. The Analytic Hierarchy Process (AHP) is used to do so. This method enables analysis of priorities and criteria to support decision-making. The results show that motivation, defined here as the drive that leads individuals to develop plans to achieve their goals by balancing short- and long-term goals, and emotion regulation, defined as the capacity to be aware of and manage one's emotions to reach a balanced emotional state, are the most important criteria to generate this commitment within sport organizations.

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### \*Correspondence:

Ana Tur-Porcar  
ana.tur@uv.es

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## INTRODUCTION

Sport organizations play a critical role in the development of sport, especially at an elite level. They do so by not only encouraging athletes' training but also creating plans to improve athletes' skills so that they can either achieve excellence or, more broadly, stay fit (Casey et al., 2012; Wagstaff et al., 2012b). Accordingly, a growing body of research analyzes various factors that affect sport organizations in terms of fostering sport and enhancing their quality. Examples of these factors are sports performance (Pain and Harwood, 2008), stress in sports (Kerdijk et al., 2016), organizational success (Weinberg and McDermott, 2002), and organizational citizenship behavior. This organizational citizenship behavior refers to members' non-formal behavior, which helps the organization to function correctly. Examples include the pressure to participate in unwanted activities and the role of members (Love and Kim, 2019). Nonetheless, research on the factors that influence how sport organizations function is a recent field, and further exploration is needed to understand which factors can improve the internal dynamics of these organizations and help them achieve their fundamental goals.

Sport organizations are social entities that are involved in sport. They have specific objectives and structures to achieve structured, identifiable skills that form part of the sports sector where they operate. Two key elements are the way these organizations function and the management of the organization as a group of individuals working together to achieve the organization's aims. Hence, good organizational management encompasses the effectiveness, efficiency, and efficacy of relational dynamics (processes), the acquisition of resources (inputs), and the achievement of goals (performance; Wagstaff et al., 2012b).

Therefore, ensuring such organizations function correctly and are well managed partially depends on psychosocial factors that affect the quality of the organization's internal dynamics, as well as the level of engagement of members in the organization's goals. So far, however, studies have primarily focused on analyzing individual psychosocial factors that are linked to sports practice and sporting performance, such as individual motivation, emotions, and beliefs (Fletcher and Wagstaff, 2009; Allal-Chérif and Bidan, 2017). In contrast, there is scarce research on the effect of these psychosocial factors on intraorganizational dynamics and, by extension, the commitment of members to creating an ethos of hard work and effort within the organization (Wagstaff et al., 2012b).

It has been shown that factors related to emotions, knowledge of emotions, emotional control, and emotional self-regulation are involved in the way organizations function (Wagstaff et al., 2012b; Didymus and Fletcher, 2017). However, scholars have not yet ranked the importance of knowledge of one's own emotions and those of others, the use of these emotions, the capacity for emotional self-regulation, and motivation in sport organizations.

In sport organizations, taking measures to create a good emotional and social atmosphere may be necessary. Athletes are immersed in demanding situations. These demands may come from the athletes themselves, the environment, or both. The question is, what factors are necessary to achieve good emotion management in sport organizations?

The analysis in this study was carried out using the Analytic Hierarchy Process (AHP). This structured decision-making technique was used to create an emotion- and motivation-related hierarchy of psychosocial factors based on the judgments of a group of experts in sports practice and organizations. The criteria and variables in relation to emotional control, emotional self-regulation, and motivations were defined on the basis of the literature. They were then presented to the experts, who used their expert opinions to build a hierarchy. In short, this study provides qualitative hierarchical analysis of the importance of knowledge of emotions, emotional self-control, the use of emotions, and motivations in sport organizations.

The rest of the paper is structured as follows. Section "Emotions and Motivation in Sport Organizations" provides a review of the literature on the criteria of emotional self-evaluation and expression, evaluation and knowledge of others' emotions, the use of emotion, emotional self-regulation, and motivation. Section "Method and Results" describes the method and presents the results. Finally, Section "Discussion and Conclusion" outlines the conclusions and main implications of the study.

## EMOTIONS AND MOTIVATION IN SPORT ORGANIZATIONS

Sport organizations are social entities involved in the sports industry. They have well-defined objectives and structures to achieve structured, identifiable skills that are part of the sports sector where they operate. Therefore, a sports organization is associated with the way an organization functions as a group of individuals who work together to perform tasks that lead to

the accomplishment of the organization's goals (Wagstaff et al., 2012b; Lee and Raschke, 2016).

The correct functioning of an organization partially depends on the psychosocial factors that affect the quality of its internal dynamics and its members' level of engagement in its goals. Studies have primarily focused on analyzing individual psychosocial factors linked to sports practice and sporting performance, including individual motivation, emotions, and beliefs (Fletcher and Wagstaff, 2009). However, less attention has been paid to how these same factors may influence organizational dynamics and, by extension, the commitment of members to create an ethos of hard work and effort within the organization (Wagstaff et al., 2012b).

Given the importance of establishing a cohesive social environment among the members of sport organizations, the aim of this study is to rank the importance that a group of experts in sports practice and organizations attach to emotional intelligence and individual and collective motivations. The following subsections define the role of one's own emotions and those of others, the use of emotions, the capacity for emotional self-regulation, and the motivation of individuals in sport organizations.

## Emotional Control and Self-Regulation in Sport Organizations

Studies have highlighted the importance of organizational psychology in sport (Fletcher and Wagstaff, 2009). Sport organizations are groups of people with sport-related objectives who are interested in achieving common goals. Organizations are complex entities. The way they function largely depends on a series of interconnected factors involving the people who make up the organization (Wagstaff et al., 2012a). Accordingly, the internal dynamics of effective sport organizations are based on intra- and inter-personal emotional skills such as the ability to manage one's own emotions and those of others (Wagstaff et al., 2013). Research by Wagstaff et al. (2012b) identified three emotional skills (identifying, processing, and managing emotions) associated with emotional regulation (i.e., re-evaluation, suppression, and impulse control). These skills are involved in one's own experiences and relate to the expression of one's own and others' emotions.

In the framework of positive psychology, some micro-level changes in people such as positive emotions or fluent relationships between members can extend to the macro level and cause group-level effects (Fredrickson and Dutton, 2008). Therefore, individual factors such as people's behaviors, emotions, or individual feelings can affect the organization and enhance or hinder its ability to function properly (Wagstaff et al., 2012b). People are involved in this process on an individual level, but this process can also extend to the organization as a whole.

In this theoretical framework, emotional intelligence can be defined as the ability to perceive, understand, express, and manage emotions effectively (Mayer et al., 2004). As such, emotional intelligence involves the knowledge (i.e., the perception and comprehension) of one's own emotions and those of others, the use of emotions to resolve conflicts effectively, and

the regulation or management of one's own and others' emotions (Mayer et al., 2016). Accordingly, emotional intelligence enables accurate, well-adjusted thinking about one's own and others' emotions and feelings and helps people to think more clearly (Mayer et al., 2008). Emotional knowledge, of both oneself and others, encourages accurate assessment of emotions and supports the management of emotions in stressful situations on an individual and group emotional level. This point is especially relevant in sports (Groves et al., 2008; Lu and Kuo, 2016).

Thus, emotional intelligence can lay the foundations for the skills that play a role in social interactions (Cherniss, 2002). According to Cherniss (2002), the health of a community or organization depends on the effectiveness of the segments of that community or organization, which is made up of people. When these segments do not interact properly, the community or organization suffers, hence the importance of establishing communication channels that are free from emotional tension. The effectiveness of an organization partially depends on the emotional competencies of its members and affects the way the organization functions and is managed.

Furthermore, from an ecological perspective, effective emotional performance depends on the social environment (Hober et al., 2019). In this context, upward spirals (Fredrickson and Joiner, 2002) or positive spirals (Fredrickson and Dutton, 2008) are cycles of improvement in the management of emotions that contribute to building more positive organizations, especially in sports. These positive spirals occur not only upward but also outward from the organization, infusing, and energizing networks and other organizations under this common understanding. Thus, in a sports organization that is sensitive to the emotional control and psychosocial well-being of its members, psychosocial capital will be more readily extended to other members of the organization, which in turn will have more tools for conflict resolution. Fostering an organizational culture of emotional control will influence members' acceptance of strategies to develop emotional control and skills to build a good rapport with others (Wagstaff et al., 2012b).

In accordance with these theories, the criteria and subcriteria analyzed in this study are emotional self-evaluation and expression, knowledge and evaluation of others' emotions, the use of emotions, and emotion regulation. In addition to these four criteria, motivation is also considered, as explained later.

*Self-evaluation and emotional expression* (i.e., evaluating and expressing one's own emotions) is the ability to understand one's own emotions and to be able to express them naturally (Rieffe and De Rooij, 2012). This criterion is subdivided into three subcriteria: emotional self-assessment, self-understanding of emotions, and self-understanding of feelings. Emotional self-evaluation (i.e., how we value and express our own emotions) is the ability to know how one feels (happy, angry, and sad, etc.), to understand one's own emotions, and to be able to express these emotions naturally. When expressing anger, fear, anger, sadness, joy, shame, and so forth, a person with this skill is aware of the emotion and uses it adaptively. Anger can be adaptive if it keeps danger at bay; joy is adaptive if it helps us analyze facts with enthusiasm and objectivity; frustration in the face of failure can help change the course of action and encourage future responses,

or it can lead to pessimism and the like. A self-understanding of emotions is based on understanding one's own emotions. It is the ability to analyze emotions and understand them, using objective arguments to know one's mood if happy, sad, and so on. Finally, a self-understanding of feelings is understanding why one has certain feelings and why one tends to be sad, happy, angry, and so on.

*Appreciation and knowledge of others' emotions* is the ability to perceive and understand the emotions of other people. This criterion has three subcriteria: the observation of emotions, sensitivity, and understanding of emotions. Observing emotions means being a good observer of others' emotions and discovering the emotions of others by observing their behavior. The behavior of others is used to interpret their emotions, which involves the ability to observe the emotional state that others are experiencing. Sensitivity means being sensitive to the emotions of others by observing the emotions of others, being able to know their emotions, and putting oneself in the place of others to help with adaptation. Understanding emotions means understanding the emotions of the people nearby. It is the ability to analyze the emotions of others, understand them, and use objective arguments aimed at fully understanding their state of mind to help them.

*The use of emotion* is the ability to use emotions to channel them toward actions that are constructive and allow personal development. This criterion has the subcriteria of mood improvement, self-motivation, and competence. Mood improvement refers to pushing oneself to make the maximum effort and sending positive messages to maintain a mood that is conducive to action. Self-motivation is related to being self-motivated, setting goals, and striving to achieve them. Competence means that people reassure themselves that they are competent. It means trusting one's self-worth and expressing one's qualities.

*Emotion regulation* is the ability to be aware of emotions and manage them to reach a balanced emotional state or recover emotionally from situations that cause psychological distress. This criterion consists of emotional awareness and management, emotional self-control, and rationality and temperament. The subcriterion of emotional awareness and management refers to being aware of emotions and handling them in a such a way as to calm down quickly when angry, stay grounded when joyful, keep a cool head in situations of fear, and so on. Emotional self-control means having good control of one's emotions and being able to control them at all times to prevent one's emotional state from becoming maladaptive. The subcriterion of rationality and temperament means being able to control one's temperament and the way one acts to overcome difficulties in a rational, objective manner. For example, temperament can alter the extent to which people are irascible or cheerful and refers to the ability to control that tendency to act more objectively.

## Motivation in Sport Organizations

Research on motivation in sport has primarily focused on the individual dimension, namely the role of motivation in an



athlete's performance or persistence in training (Thøgersen-Ntoumani and Ntoumanis, 2006). However, there seems to be scant research on motivation in the field of sport organizations.

Motivation refers to the psychological processes that orient, energize, and support actions taken toward a goal (Latham and Pinder, 2005). Organizations in general, but specifically sport organizations, that foster an enthusiastic, motivating climate are concerned with the engagement of their members in hard work and effort oriented at improvement. Effort and tenacity are fundamental to support prolonged sporting activity. People in organizations have individual motivations and goals that affect their degree of engagement in work (Escamilla-Fajardo et al., 2016). Therefore, motivation is important in a sports organization.

According to the model of self-determination theory, individuals act proactively in different scenarios and situations of daily life (Deci and Ryan, 2000; Ryan and Deci, 2000). In sports, individuals participate in plans to achieve goals based on causal orientations that may be internal, external, or undetermined. This idea gives rise to the concept of intrinsic versus extrinsic motivation. Intrinsic motivation occurs when an individual does something out of interest or because of the pleasure it produces (i.e., for internal reasons). In contrast, extrinsic motivation is based on the benefits that will be obtained from doing something. Extrinsically motivated individuals participate because of their interest in achieving a goal (Ryan and Deci, 2000). Intrinsic motivation is a form of motivation that is integrated and identified with the individual. It occurs in a process of self-determination whereby individuals focus their efforts until the goal is achieved. It is associated with affective, attitudinal, and behavioral processes (Deci and Ryan, 2000; Deci and Ryan, 2008). People are intrinsically focused on the process. From this perspective, sport organizations that pursue the intrinsic motivation of their components devote their efforts to the process and are supported by affective attitudes of pleasure derived from the work itself (Grant, 2008).

Prosocial motivation is also relevant when efforts to perform tasks are aimed at benefiting others, which is reflected by an empathetic disposition or concern for others (Meglino and Korsgaard, 2004; Grant, 2008). However, as described by Grant (2008), prosocial motivation is linked to intrinsic motivation with some differences. Intrinsic motivation is more process oriented and is oriented toward the present and toward the work itself, which leads to improvement. In contrast, prosocial motivation is oriented toward results, meaning that the outcome of the work will benefit others. Organizations that pursue goals aimed at benefiting others are more focused on the future (Quinn, 2005). Sport organizations have goals related to members' sports activity. These goals are medium to long term, so they are focused on the present as well as the future. In sport, individuals work for themselves and others. Teamwork is essential in some sports such as football or handball. In this context, the pursuit of benefits to third parties resembles individual objectives, so prosocial motivation may have a strong presence in sport organizations.

In addition to the four criteria related to emotional control and self-regulation in sport organizations (i.e., self-evaluation and emotional expression, assessment and knowledge of others'

emotions, use of emotion, and emotion regulation), motivation represents the fifth criterion of the model. Motivation is defined as the drive and energy that leads individuals to create a plan to achieve their goals by balancing short- and long-term objectives. Different types of motivations can be identified, such as intrinsic, extrinsic, and prosocial. Accordingly, the criterion of motivation has four subcriteria: intrinsic motivation, the importance of work, extrinsic motivation, and prosocial motivation. Intrinsic motivation, in reference to engagement with work, alludes to feelings of satisfaction with and enjoyment of work. The importance of work refers to whether the individual adopts persistent attitudes at work to achieve the proposed goals. Extrinsic motivation refers to whether the results of the work yield financial or social benefits or benefits in the form of recognition. Extrinsic motivation means that work is seen as important if it provides the rewards that individuals want to achieve, working only for external incentives. Finally, prosocial motivation means that the task is carried out thinking of the benefit it will have for others, where the individual performing the task has other people in mind. The work is designed to benefit and help others. Altruism is part of this type of motivation. Based on these criteria, the model analyzed using the AHP is presented in **Figure 1**.

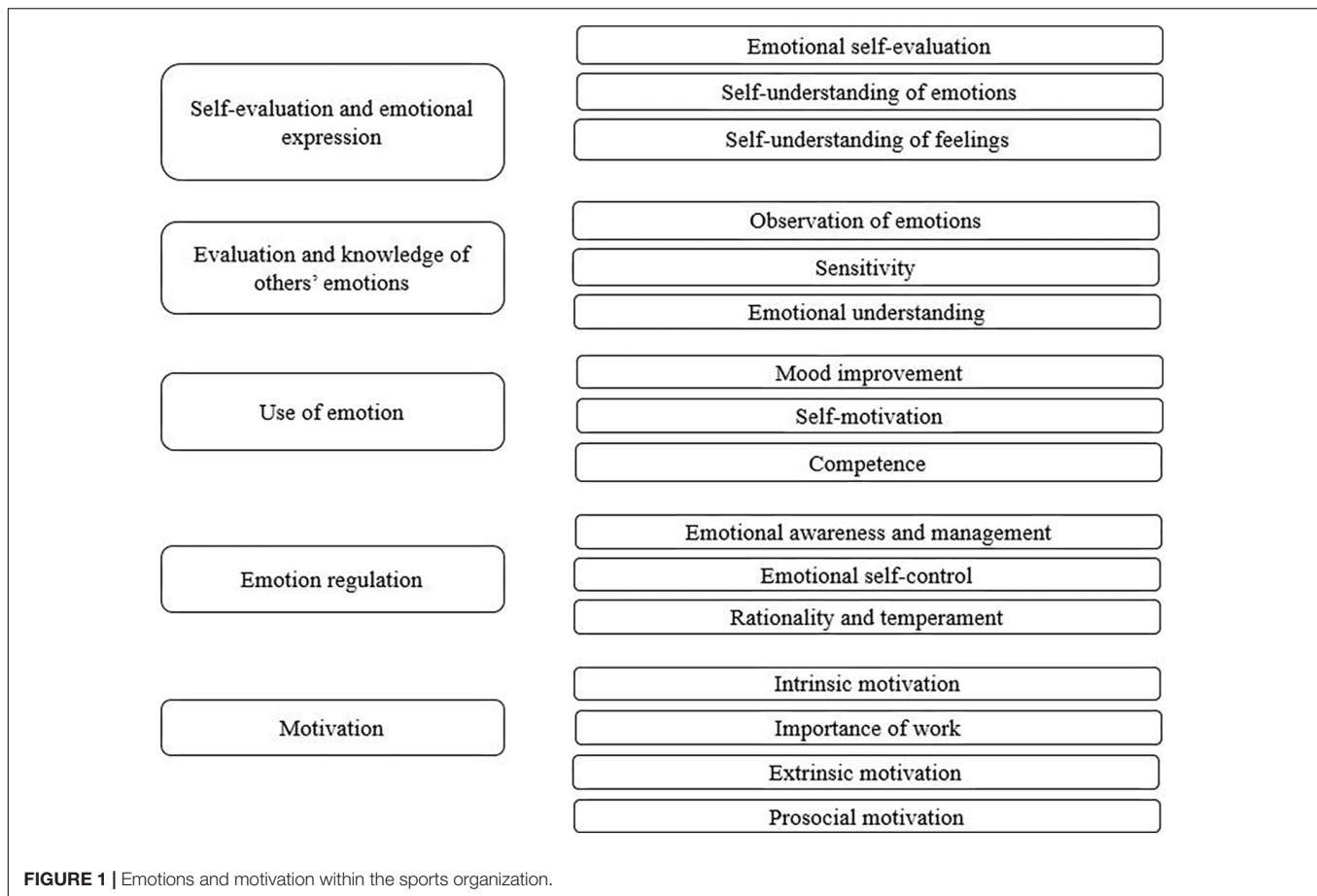
## METHOD AND RESULTS

The AHP enables analysis of priorities and criteria to support decision making. The AHP was developed in the 1970s by Thomas Saaty, who used mathematical and psychological knowledge to build this method. The AHP identifies the best alternative in highly uncertain contexts (Soma, 2003).

The AHP requires the identification of the criteria that will form the hierarchy. The AHP focuses on two aspects: hierarchical design and evaluation (Vargas, 1990). These criteria can be identified from, for example, a review of the literature, a pilot survey, or interviews with experts. The hierarchy lets researchers group the criteria into categories such as social problems, educational questions, political subjects, sustainability issues, and the like. The upper levels of the hierarchy represent the general objectives, and the lower levels relate to specific criteria and subcriteria, which represent the alternatives to be selected. This study adopts the comparative scale defined by Saaty (1987, 1990, 2008) to determine the preference of each criterion.

To identify and sort the preferences, pairwise comparison of the criteria is used. Each comparison is assigned a value to indicate the extent to which one alternative is preferable to another. The scale varies from 1 to 9, where 1 indicates that the criteria are equally important and 9 indicates that the importance of one of the elements is much greater than the importance of the other. The aim of this process is to establish the relationships of preference between pairs of criteria from the top level. Once the criteria have been compared, the consistency of the judgments must be verified. Finally, the judgments are combined and analyzed to yield the priorities and ranking (Borade et al., 2013).

The AHP has been used extensively in research in recent years. Although it has been applied to multiple fields, it is mainly used in



management decision-making problems (Aragónés-Beltrán et al., 2017) and in studies of environmental problems (Shekhar and Pandey, 2015; Yuan et al., 2015).

Emotion-related factors as well as knowledge of emotions, emotional control, and emotional self-regulation are involved in the way an organization functions (Wagstaff et al., 2012b; Didymus and Fletcher, 2017). In this case, it is a question of observing their importance within sport organizations to rank the emotion-related criteria using the AHP. For this purpose, the criteria that were used in this study are shown in **Figure 1**. As per the method employed by Castrogiovanni et al. (2016), Mas-Tur et al. (2019), and Roig-Tierno et al. (2013), a group of seven experts from sport organizations was selected, that were in the direction and management of sports organizations or were elite athlete or long-term users. In average, the experts were connected with sports organizations over 10 years. Four were men, and three were women.

**Table 1** shows the main results of the study. The most important factor (criterion) to explain commitment within sport organizations is motivation, with a rating of 40.3%. In other words, the drive that leads people to create a plan to achieve goals by balancing short- and long-term aims is the most important criterion for feeling commitment within sport organizations. The next criterion relates to emotional regulation and has a

weight of 25.8%. Together with motivation, people's ability to be aware of their emotions and manage these emotions to reach a balanced emotional state and recover emotionally from situations of psychological distress is particularly important in sport organizations.

Secondly, the results show the most important subcriterion within each criterion. Two subcriteria are particularly important: intrinsic motivation (i.e., involvement in sport combined with satisfaction and enjoyment of work), with a score of 19.0%, and management of emotions (i.e., being aware of emotions and handling them to keep a cool head in situations of fear, stress, and the like), with a weight of 10.50%.

**Table 2** shows the ranking of the subcriteria. The results show that 16 subcriteria explain the commitment of individuals within sport organizations. The first four subcriteria in **Table 2** account for almost 50% of the total weight of all criteria.

Notably, of all the subcriteria, the four with the highest percentage weight relate to emotional regulation and motivation. These two criteria, as mentioned previously, must be emphasized in reference to increasing the individuals' commitment to sports.

In addition, the subcriteria related to evaluating one's own emotions and those of others have little importance in relation to the other subcriteria. This result implies that, according to the experts, these criteria have no further relevance when considering commitment within sport organizations.

**TABLE 1 |** Ranking of criteria and subcriteria.

			Relative weight	Total weight
Emotional self-evaluation	8.9%	Self-assessment	42.3%	3.8%
		Understanding emotions	19.3%	1.7%
		Understanding feelings	38.4%	3.4%
Others' emotions	10.3%	Observation of emotions	15.1%	1.6%
		Sensitivity	54.8%	5.6%
		Understanding	30.1%	3.1%
Use of emotions	14.7%	Improving mood	23.3%	3.4%
		Self-motivation	38.0%	5.6%
		Competence	38.7%	5.7%
Regulation	25.8%	Emotion management	40.8%	10.5%
		Self-control	37.4%	9.7%
		Temperament	21.8%	5.6%
Motivation	40.3%	Intrinsic	47.1%	19.0%
		Work	19.3%	7.8%
		Extrinsic	8.4%	3.4%
		Prosocial	25.2%	10.2%

**TABLE 2 |** Ranking of subcriteria.

Ranking	Subcriteria	Total weight	Sum
1	Intrinsic	19.0%	49.4%
2	Management	10.5%	
3	Prosocial	10.2%	
4	Self-control	9.7%	
5	Work	7.8%	
6	Competence	5.7%	
7	Sensitivity	5.6%	
8	Self-motivation	5.6%	
9	Temperament	5.6%	
10	Self-assessment	3.8%	
11	Understanding feelings	3.4%	
12	Improving mood	3.4%	
13	Extrinsic	3.4%	
14	Understanding	3.1%	
15	Understanding emotions	1.7%	
16	Observation	1.6%	

## DISCUSSION AND CONCLUSION

This study examined the criteria that are most affected by the commitment of athletes to sport organizations. For this purpose, the AHP (Saaty, 1990, 2008) was used to indicate the experts' preference for each criterion. Vaidya and Kumar (2006) reported that the AHP has been applied in a number of scientific areas, including education, politics, and industry. In addition, the number of applications of the AHP has increased in the areas of organizational management, knowledge, and entrepreneurship in

recent years (Roig-Tierno et al., 2013; Castrogiovanni et al., 2016; Tur-Porcar et al., 2018; Mas-Tur et al., 2019).

## Theoretical and Practical Implications

The results have several implications. First, motivation, especially intrinsic motivation, and seems to be fundamental in sport organizations. The experts indicate that organizations must be sensitive to foster the intrinsic motivation of their members to boost athletes' training, engage athletes in improving sports skills, and achieve a positive emotional and social climate (Casey et al., 2012; Wagstaff et al., 2012b). People who are committed to sport and who gain a sense of satisfaction from doing sport have an internal drive. Therefore, the strength to continue doing sport comes from within. They embark on a process of self-determination, improvement, and orientation of their activity, which has positive consequences for sport organizations (Deci and Ryan, 2000; Deci and Ryan, 2008).

Furthermore, in sport organizations, prosocial motivation is also highly accepted by experts. In team sports, individual effort makes no sense if it does not benefit others. In sport, it is essential to think of the benefit to others and not only one's own benefit. The ability to think of others and be empathetic by showing concern for others is an important aspect in sport organizations (Meglino and Korsgaard, 2004; Grant, 2008). Furthermore, prosocial motivation is linked to intrinsic motivation in such a way that it is difficult for prosocial motivation to exist without intrinsic motivation (Grant, 2008), although each form of motivation has its own nuances.

Also on the theme of motivation, the results show that extrinsic motivation plays only a minor role. Sport and the internal atmosphere of sport organizations depend only slightly on this type of motivation. The contribution of external motivations such as financial incentives or winning competitions is of relatively little importance in the experts' opinion. However, the different forms of motivation might encourage one another (Deci and Ryan, 2000; Grant, 2008). One example of this is when efforts made to improve well-being are accompanied by excellent team results and a competitive victory.

Second, in addition to motivation, emotion regulation is an especially relevant criterion. Emotion regulation is the capacity of the members of the sports organization to know and manage their emotions effectively (Wagstaff et al., 2012b; Didymus and Fletcher, 2017). Identifying, processing, and managing one's own as well as others' emotions effectively can help members of sport organizations control impulses in conflictive or stressful situations (Wagstaff et al., 2012b). An environment where most members display emotional regulation is more likely to spread to the rest of the members of the organization, thereby creating a social climate that is conducive to emotional control and regulation in the macro-functional dimension (Fredrickson and Dutton, 2008; Wagstaff et al., 2012b).

Thus, sport organizations that are able to instill the management of emotion in their members can deal more effectively with stressful situations, which frequently arise in sport (Groves et al., 2008; Kerdijk et al., 2016; Lu and Kuo, 2016), either to pursue excellence or to promote good health (Casey et al., 2012; Wagstaff et al., 2012b).

Third, the self-evaluation of one's own emotions and those of others is of little importance in the functioning of sport organizations. Although emotional intelligence enables more suitable thoughts about one's own and others' emotions and feelings, which aids clearer thinking (Mayer et al., 2008), it seems that this criterion is not relevant to the way sport organizations function. Nevertheless, emotional knowledge of oneself and others is conducive to the management of emotions in stressful situations, which is especially important in sport (Groves et al., 2008; Lu and Kuo, 2016).

## Research Limitations and Directions for Future Research

This study has some limitations. First, it is based on experts' opinions regarding certain criteria. The opinion of these experts may have biases because of their own sports background or the specific sport being considered. This limitation offers an opportunity for future research based on determining which criteria are most relevant in different sports disciplines. This weakness can just as well be viewed from another angle as a strength because the method is based on the judgments of experienced people. This basis makes this research relevant as a

preliminary work on which to develop the theme of emotions as key factors of commitment in organizations. This issue has not yet been studied, despite its growing importance (Wagstaff et al., 2012b; Didymus and Fletcher, 2017). Another limitation derives from the definition of the terms. These linguistic terms are subject to changes and nuances in their definitions. They were therefore defined and presented in the questionnaire so that the respondents had a clear definition of each criterion and subcriterion before responding.

## DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/supplementary material, further inquiries can be directed to the corresponding author.

## AUTHOR CONTRIBUTIONS

AT-P and DR-S designed and performed the experiments, analyzed the data and wrote the manuscript.

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# Football Fans' Emotions: Uncertainty Against Brand Perception

*Elena Shakina, Thadeu Gasparetto and Angel Barajas\**

*National Research University Higher School of Economics, Saint Petersburg, Russia*

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### \*Correspondence:

Angel Barajas  
balonso@hse.ru

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Football is an industry driven by emotions. Fans experience many different emotions related to their teams. This paper aims to inspect how emotions impact attendance at football matches, examining whether football fans prefer to watch highly competitive matches or matches between good teams with star-players. The paper also considers behavioral and emotional differences of match spectators when brand-teams play away or at home. Importantly, we are also looking for the effects that the expectations of these emotions have on the tickets' price mechanism. We use data from three seasons of the Brazilian State championship with information on more than 1,100 matches. The OLS estimator with the moderation marginal effects allows for analysis of a brand-team playing with different levels of uncertainty over the outcomes measured by the relative level of the divisions of rivals. We look for the difference between the marginal contribution of the brand-team and the uncertainty of outcomes that might change under some conditions. The analysis is performed later using two subsamples and, finally, we address the problem of endogeneity in price using an instrumental variable. From our results, the main findings are: first, that the price of tickets does not much affect the demand when a brand-team is playing. In case of competitive matches between non-brand-teams, price behavior correlates to the rationality of the demand curve having a negative impact. The fact that price is not relevant for matches with the brand-team comes to corroborate the idea that fans are driven more by emotions than by economic reasoning; second, the phenomena of highly competitive matches does not work when a brand-team is playing against a small one; and third, the effect of a brand-team playing is relatively more important than the uncertainty of outcome. The last two findings mean that the satisfaction of watching star-players or big-teams is stronger than the emotion brought by a competitive match.

**Keywords:** brand-teams, Brazilian football, emotions, fans, instrumental variables, professional football, uncertainty of outcome

## INTRODUCTION

Football is an industry driven by emotions. This industry is attracting interest from different arenas and brings not only popularity but also substantial revenues from fans, corporations, and advertisers. Fans experience many different emotions related to their teams, especially on match-days. For instance, the excitement after a remarkable win or the act of hiring a star player drastically differs from the frustration of a championship lost. Therefore, emotions shape fan behavior, influencing participation, engagement, consumption of merchandising, and match attendance.

This last point – match attendance – is analyzed in this work. The focus of our paper is to examine fan behavior patterns under specific conditions: whether they prefer to experience the emotion of a high competitive match or to watch well-known teams playing. We also inspect how attendance change when a brand-team – a well-known football club which habitually attracts a higher number of fans – plays at home or away.

We carry out our study on the data of very specific championships at state level. These championships are traditional football tournaments in Brazil and do not have close analogs worldwide. The key distinction of the Brazilian State Championships is that they are structured according to geographic criteria (the Brazilian states and the Federal District are used to organize tournaments) and as a consequence there are matches between very strong brand-teams and local small teams from the same regions. This unique structure – tournaments where only clubs from the same state can play against them – provides an atypical characteristic not found worldwide: matches between clubs with *theoretically* huge sportive differences. Although one would say that it may happen in several Domestic Cups around the world (i.e., *Copa del Rey* in Spain or *FA Cup* in the United Kingdom), it occurs every season in the State Championships. This setting reflects information regarding different kinds of emotions that spectators can experience as the surprise of an underdog beating a 'big' brand-team or the expectation generated for a derby match. Evidently, this specific setting may allow us to discover sport-related emotional factors and behavioral biases of spectators which occur only when highly imbalanced matches take place.

Our hypothesis is that match attendance to such events might be affected by a number of specific factors that cannot be observed in conventional football matches. Having said that, we can consider Brazilian state championships as a good laboratory to study specific fans' preferences and inspect whether the effect of uncertainty in sport outcomes might be weakened by the brand perception.

We use data from three seasons of the Brazilian state championship, selecting three of the most important states: *Minas Gerais*, *Rio de Janeiro*, and *Sao Paulo*. The dataset comprises information on more than 1100 matches, specifically, match attendance, ticket price, scores, venue, day of the matches, teams playing, and their main characteristics: level of division in Brazilian league, previous titles, and brand power.

The econometric strategy follows two steps. The first step utilizes the OLS estimator with the moderation marginal effects. This reduced form specification allows the analysis of brand-team playing with different levels of uncertainty over outcomes measured by relative level of the divisions of opponents. We look for the difference between the marginal contribution of the brand-team and uncertainty of outcomes that might change under some conditions. The second step treats separately two cases of matches with brand-teams and those which involve only non-brand-teams. By using instrumental variables, this step allows for going deeper into the price mechanism affected by irrational emotions of spectators, which may create distortions for normal demand function.

The remainder of this paper is organized in a conventional manner presenting both state of the art sports economic and sports psychology literature. The discovered gap in the literature is studied on specific data which presumably track irrational attitudes of football fans when it comes to highly imbalanced matches. The methodological and empirical findings are presented in the Research Design and Results sections respectively.

## LITERATURE REVIEW

Previous literature addresses emotional elements in the behavior of football fans. Funk et al. (2000) offer a broad review regarding the attitudes of sport fans. The authors discuss the importance of social, cognitive, and psychological elements (i.e., experiences, preferences, identification, etc.) in the involvement of fans in sports. Vallerand et al. (2008) examines passion among football fans, showing that harmonious passion is associated with some positive experiences like identity as a club fan, celebration on the streets, and life satisfaction. On the other hand, they also identify that an obsessive passion would drive maladaptive behaviors by football fans. Martin et al. (2008) offer evidence that emotionally based satisfaction (i.e., happiness, excitement, surprise) positively drives future intention among football fans, increasing their commitment with the club and increasing the likelihood of future attendances. Biscaia et al. (2012) corroborate with these findings, evidencing that pleasant emotions positively influence future behavioral intentions among football fans as well.

Recent research also inspects the relationship between sport fans' emotions and (sport) product quality and services satisfaction. Foroughi et al. (2016) indicate that anxiety, excitement, and happiness are significantly associated with good players' performance. They also emphasize that happiness and excitement can positively impact behavioral intentions, driving higher attendances. This last finding is similar to what Madrigal (1995) and Kuenzel and Yassim (2007) earlier observed. Moreover, Yim and Byon (2018) show evidence that sport fans' emotions differ based on match outcome, where positive sport results are associated with higher game and service satisfaction, leading to positive behavioral intentions, but negative outcomes do not impact service perception. Therefore, they suggest that sport decision-makers have to provide high quality services in order to handle the negative impact of adverse sport outcomes on fans' emotions.

Some other emotional elements impacting football consumption have been tested recently: suspense, surprise, and shock. Pawlowski et al. (2018) show that perceived suspense strongly encourages fans to watch a football match on TV, while Buraimo et al. (2019) empirically indicate that minute-by-minute broadcast demand is driven by all three of these emotional elements.

Since the seminal papers of Rottenberg (1956) and Neale (1964), the uncertainty of outcome hypothesis (UOH) has been one of the most relevant topics in the economic analysis of sports. However, during this time, empirical research has not been able to provide a clear evidence for the importance of competitive



balance (CB) on attendance (Pawlowski and Budzinski, 2013; Sacheti et al., 2014). There is evidence that UOH apply to the Korean Professional Baseball League (Cha et al., 2015), Australian Football League using structural time-series model (Lenten, 2017), Japanese professional soccer (Watanabe, 2012), and Major League Baseball (Soebbing, 2008). However, we cannot say that the increasing balance in soccer brings a risk of fall in consumer demand (Pawlowski, 2013).

Some studies focus on the uncertainty of outcomes considering short-run (match), medium-run (reaching the knock-out stages) and long-run (season) with different outputs. Hogan et al. (2017), analyzing rugby, found that short-run uncertainty has little effect on attendance, but medium-run has a significant impact. Something similar was found by Jane (2014b) in the NBA where the long-run uncertainty had a significant impact on attendance but not at a game level. On the contrary, Sacheti et al. (2014) discovered that short-run uncertainty in cricket had a significant impact on attendance. In the same line, Lee et al. (2016) sustain that only match uncertainty is statistically significant in Korean Professional Baseball League. Game importance, a measure of game uncertainty, is an influential factor in attendance consistent with the UOH (Lei and Humphreys, 2013). However, Paul et al. (2011) studied hockey attendance in Russia, Sweden, and Finland. They found that in the two first countries, fans present strong preferences for uncertainty of outcome, but this does not happen for Finish fans.

Other studies have found that other factors have a greater influence than the uncertainty of outcome. That is the case of the paper by Serrano et al. (2015). They affirm that match day demand is more related to the expected quality of the contestant teams, approximated by the market value of the players, than the uncertainty of outcome hypothesis. The strength of the home team (Paul et al., 2011; Hogan et al., 2017) and absolute team strength (Sacheti et al., 2014) have a significant effect on attendance. However, Coates and Humphreys (2010) found a weak evidence that attendance increases when a victory of the home team is expected, and a strong evidence that attendance falls when the home team is expected to lose.

There are other factors that may influence the attendance. The league standing effect, earlier described by Neale (1964), also drives football fans attention. Indeed, Andreff and Scelles (2015) empirically confirm its importance, as well as some other papers – analyzing it as competitive intensity – showing its positive effect on both tickets and TV demand (Scelles et al., 2011a,b, 2013a,b; Bond and Addesa, 2019, 2020). Similarly, if the team still is in the fight to win the championship, attendance is higher (Pawlowski and Nalbantis, 2015). Closer wins by the competing teams and larger gaps in points spread between two teams also drive higher attendance (Jane, 2014b). The impact provided by star-players effect is also found. The appearance of star-players increases home and away match attendance (Jane, 2014a), and television audiences as well (Buraimo and Simmons, 2015; Scelles, 2017).

Schreyer et al. (2016) found support to UOH in league, but not in knockout tournament games when analyzing television audiences. However, Alavy et al. (2010) show evidence that

in a minute-by-minute analysis uncertainty matters, but the progression of the match drives viewership.

Finally, the participation of a brand-team in the match is also an important element driving higher attendance rates. Gasparetto et al. (2018) define brand-teams as historical clubs with a successful sportive record which attract higher attention from fans – similar terms as big clubs, strong brand clubs, well-known teams, or famous clubs are also used in the literature with identical meaning. Pérez et al. (2015) indicate larger television audiences on matches played by Real Madrid and Barcelona in Spain. Pawlowski and Anders (2012) evidence that a strong brand of the away team increases attendance in the Bundesliga as well. Therefore, the present paper aims to inspect how emotions impact attendance rates, examining whether football fans prefer to attend high competitive matches or matches when good teams are playing.

## RESEARCH DESIGN

This study seeks to relatively examine and compare the effects of brand-teams and uncertainty of outcomes, placing special emphasis on emotional factors which can bring distortions to the traditional understanding of rationality of spectators' incentives. Furthermore, bridging the gap between psychological and economic literature, we expect to explore a price mechanism affected by irrational bias in football fans' behavior.

To test the uncertainty of outcomes hypothesis against brand-team effect, this paper uses the way of measuring uncertainty of outcome introduced by Gasparetto et al. (2018). This measure of uncertainty of outcome is applied because the analysis includes teams from different divisions in the same competition. As contribution, this work introduces the moderation effect of brand-team on the uncertainty of outcome. For that we have to split the effect of being a brand-team and the effect of uncertainty and then we will compare both effects under different conditions.

The research question in this study is specific as we seek not just to reveal the marginal effect of UO and brands, but to compare these effects applying difference-in-difference technique. Moreover, we challenge the endogenous price effect using the instrumental variable (IV) approach.

As it has been pointed out, this study addresses the issue of separating out two effects that both lead to popularity of football matches: uncertainty of outcomes and the effect of strong game provided by well-known brand team. In order to test these phenomena, we design our study in the following steps (**Figure 1**):

1. Identification of brand-team effect:
  - a. Brand-team are selected according to the following criteria: a club has to have at least 20 State Championship titles and at least one Brazilian League title. Moreover, this club must be one of the *Clube dos 13*' founders.
2. Identification of uncertainty effect:
  - a. Uncertainty is measured by relative difference of league tiers in which teams are presented in one match.

- b. U-shape relationship of uncertainty is introduced in the specification of the model.

3. Comparison of two effects under different conditions:

The difference in moderation effects is measured by the interaction of variables of uncertainty and a dummy of the brand-team playing at home or away.

4. Comparison of a subsample-specific effect of price: with or without brand-teams matches:

The difference in the marginal price effect on different subsamples explicitly demonstrates the endogenous nature of the price. Moreover, the fact that prices of matches with a brand-team is substantially higher, shows that it includes fans' intentions to attend these matches.

5. Estimation of the exogenous price effect by using instrumental variable technique:

For the instrument, the attendance of the identical match from the previous seasons is taken. It is asserted to validate this instrument that the previous attendance doesn't have a direct influence on the decision of each particular spectator to attend a current match. Meanwhile, organizers of the matches consider previous attendance as a reference to set price for a current match, since that is a good predictor for their revenues.

Following these steps, we identify the model where attendance of matches (*attendance*) is driven by uncertainty of outcomes in quadratic functional form ( $Unc$  and  $Unc^2$ ), interaction of uncertainty multiplied by a dummy variable of brand-teams ( $BT$ ), controlled by brand-team effect playing home or away and remained control variables ( $CV$ ) such as price for tickets, seasons, level of the match, and region. The specification is introduced in the formula 1.

$$\begin{aligned} \text{Log}(\text{attendance})_{it} &= \beta_0 + \beta_1 \cdot Unc_{it} + \beta_2 \cdot Unc_{it}^2 + \\ &\quad \beta_3 \cdot Unc_{it} \cdot BT_{it} + \beta_4 \cdot BT_{it} + \beta_5 \cdot CV_{it} + \varepsilon_{it} \end{aligned}$$

We use the OLS estimator to find out and compare two effects. The algorithm of this estimation requires step-by-step performing of examined effects in regression. Four models

are presented to demonstrate how effects are changing when an additional significant relationship is introduced. The first model is estimated by ignoring interaction of brand-team effect and uncertainty. The second model covers all possible effects both for brand-team playing home and away. The third model imbeds just brand-team effect and its moderation no matter if they play home or away. And the last model considers just the brand-team playing at home. By exploring a dynamical modification of effects, it enables interpretation of results to draw hypothesis testing.

Notably, the exogeneity of all variables of our interest is driven by rules set up in the Brazilian State Championship. Apparently, these rules are not influenced by expectation of attendance and originate from the idea to bring together all possible combinations of teams from the same Brazilian state based on toss-up. That makes these variables random and, as a result, exogenous for our explained phenomenon. Meanwhile, the key control factor of the model – price for ticket – might be endogenous and requires very precise consideration.

Our research involves classical metrics of matches' and teams' diversity. The only one non-conventional metric is related to uncertainty, and is specifically designed for cases studied, although it has been used in Gasparetto et al. (2018). Since different levels of leagues are brought together in matches of the State Championship, that might be a proper base to estimate uncertainty of game outcome. Our assumption is – the greater difference of tiers the lower uncertainty is associated with a corresponded match. Meanwhile, the same high uncertainty is generated when two strong teams from the first division are playing or two non-league teams are opponents in the same game.

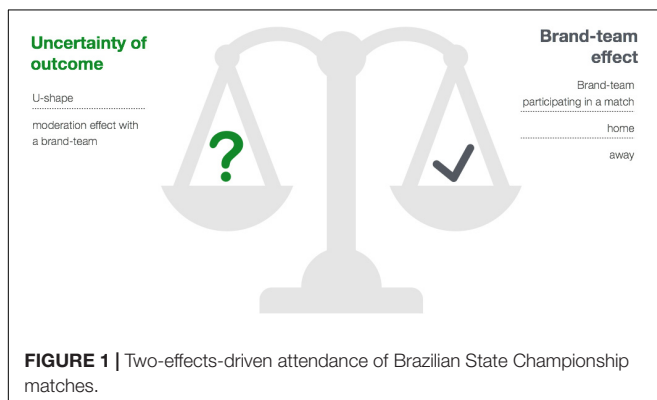
The next section introduces the data involved in our analysis and gives a brief statistical overview of their distribution.

## DATA

The sample comprises three of the most important Brazilian States Championships: *Carioca*, *Mineiro*, and *Paulista* – in Rio de Janeiro, Minas Gerais, and São Paulo states, respectively. The financial data was gathered from the websites of each State Federation.

The classification of clubs as Brand-team in Brazil was accomplished in two parts. Firstly, we have selected all founder clubs of the *Clube dos 13*, a group created in 1987 by the Brazilian elite teams. The objective of this group was to develop the Brazilian football market (Silva et al., 2014). Moreover, a second criterion was included: Only teams with more than 20 State Championships' titles and at least one title of the *Campeonato Brasileiro* were selected. Thus, the following clubs are considered brand-teams: Botafogo, Flamengo, Fluminense, and Vasco in the Carioca Championship; Atlético-MG and Cruzeiro in the Mineiro Championship; and Corinthians, Palmeiras, Santos, and São Paulo in the Paulista Championship.

The data set consists of all 1,114 matches over 2013, 2014, and 2015 seasons – 216 of them from Mineiro Championship, 380 from Carioca, and 518 from Paulista. Each



State Federation has autonomy in defining the competitive format of its championship. The number of competitors, number of matches, as well as the promotion and relegation system is a decision of the State Federations and of the associated clubs. A detailed description of these championships can be found in Gasparetto et al. (2018).

It is worth pointing out that for the three researched State Championships over the whole period, the average attendance is evidently low in all of the tournaments. Moreover, there is no trend about growing or decreasing – they are slightly similar over the seasons with each championship. On the other hand, the huge standard deviations indicate heterogeneous samples with almost empty stadiums as well as others that are quite crowded – the minimum and maximum values come to confirm it as well.

The overall distribution of attendance as well as its logarithmic smoothening is demonstrated in **Figure 2**. As seen from the distribution histograms, original variable is skewed to the left having the biggest number of matches with a very low attendance. Meanwhile, after logarithmic transformation multi-modal distribution is observed. That might be driven by heterogeneity of matches clustered according to effects that we seek to test in our model. We can hypothesize that at least four different clusters may be distinguished.

To cope with possible heteroskedasticity, we have used an estimator robust regression. Moreover, the exploratory variable attendance and one of the predictors –price- have been smoothed out by logarithmic transformation (see **Figure 2**).

## RESULTS AND FINDINGS

The results are split into two groups according to the steps of the research design. The first group of the empirical tests are presented in **Table 1**. The specification describes a demand function which includes a part of price effect factors which point to the rationality of the uncertainty of outcome hypothesis

**TABLE 1** | Descriptive statistics of the main variables.

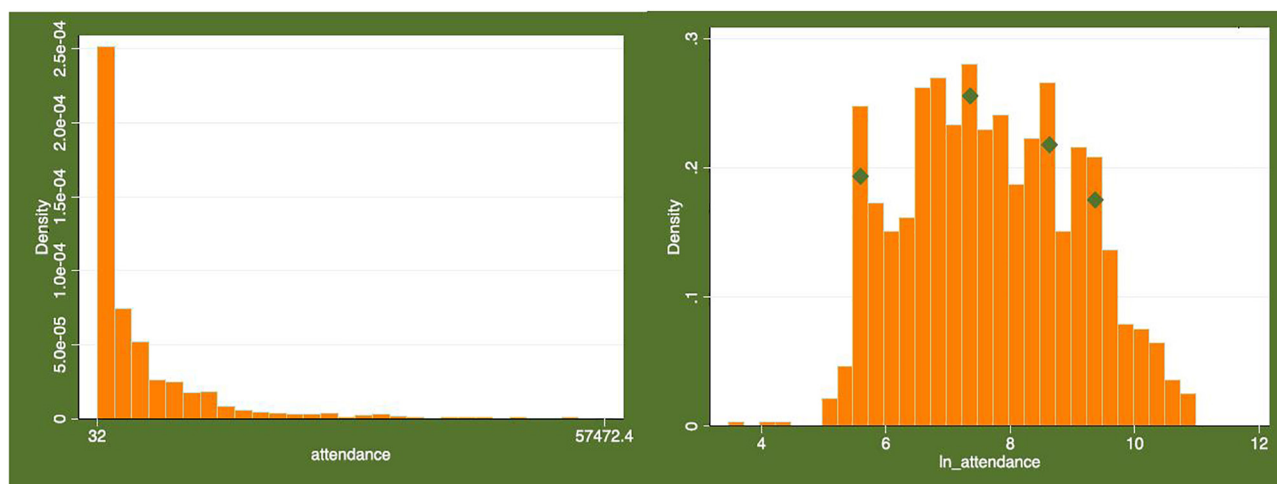
Variable	Obs	Mean	SD	Min	Max
Attendance	1,047	4,406.24	6,416.53	32	52,989
Brand-team playing at home	1,049	0.22	0.41	0	1
Brand-team playing away	1,049	0.2	0.4	0	1
Price for ticket	1,047	21.46	11.73	3.01	91.69

and irrational emotional factors which refer to brand-teams and star-players.

**Table 2** shows the outputs of four models' estimations. As has been discussed in the research design, we gradually introduce variables of our interest. Some factors previously tested in the literature and mentioned above (i.e., competitive intensity, quality of venue, specific star players, etc.) are not included in our model due to the lack of data. However, the omission of such variables does not constitute an issue – as observed in several other demand-based papers in the literature. With a benchmark of the first basic model, which is conditioned just by parabolic function of uncertainty, we test how interaction effect with brand-team dummies might change outputs of estimations and sought coefficients.

The first notable result of the estimations refers to insignificant relationship between attendance and ticket price. Recalling that we suspected price to be endogenous we find this output important. The interpretation may be driven by a real relative insignificance of price compared to the rest of drivers: uncertainty and brand-team phenomena. Ticket price in the Brazilian State Championship is relatively low, does not influence decision to attend a game, and as a result does not bring substantial variety to the explained variable of our model. However, this factor is treated in our study as a control variable.

We have to focus on uncertainty together with brand-team interaction. We have found a U-shape behavior of uncertainty of match outcome. Taking that the metric of uncertainty is a discrete variable as measured in this research we have to look more



**FIGURE 2** | The distribution of attendance on matches in Brazilian State Championship presented in the dataset.

**TABLE 2 |** Results of models estimation.

Variables	(1) ln_attendance	(2) ln_attendance	(3) ln_attendance	(4) ln_attendance
ln_price	−0.0129 (0.0573)	−0.0235 (0.0558)	0.00498 (0.0570)	−0.0562 (0.0553)
Uncertainty	−1.581*** (0.604)	−1.118** (0.529)	−0.831 (0.532)	−0.846 (0.528)
Uncertainty <sup>2</sup>	1.242*** (0.426)	0.911** (0.386)	0.740* (0.390)	0.770** (0.382)
Uncert_Brand_h	–	1.015*** (0.200)	–	−0.217 (0.267)
Brand	1.414*** (0.149)	1.491*** (0.0964)	1.967*** (0.0957)	–
Brand_h	–	0.231** (0.104)	–	2.077*** (0.145)
Playoff	0.792*** (0.106)	0.689*** (0.103)	0.773*** (0.105)	0.547*** (0.102)
Uncert_Brand	1.113*** (0.213)	–	–	–
Uncert_Brand_a	–	–	1.285*** (0.205)	−0.770*** (0.266)
Brand_a	–	–	−0.705*** (0.109)	1.783*** (0.148)
Constant	7.740*** (0.252)	7.641*** (0.229)	7.450*** (0.229)	7.650*** (0.227)
Season FE	Yes	Yes	Yes	Yes
State FE	Yes	Yes	Yes	Yes
Observations	1,112	1,112	1,112	1,112
R-squared	0.696	0.714	0.701	0.723

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

precisely at the outputs of the model (**Figure 3**). The minimum value of uncertainty equals 0.39. This means that only 0.2, 0.25, and 0.33 is on the left part of the parabola, which corresponds to a very low value of attendance that is close to 2,500. As suspected, great attendance on the left and right part of the revealed parabola is driven by joint influence of two effects that we need to separate in the following models.

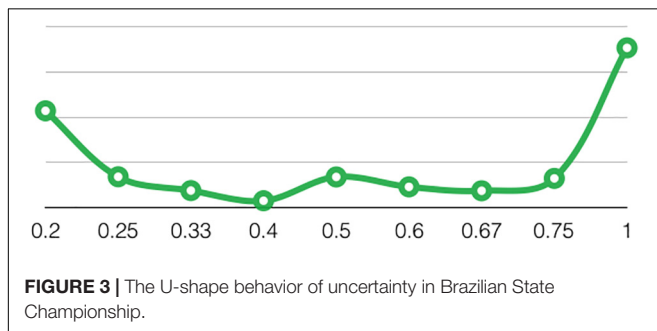
All moderation effects of brand-team on uncertainty are significantly positive and weaken the isolated uncertainty effect. If we compare these influences with pure brand-team effect, we can see that brand-team is relatively more important and brings greater contribution for attendance. This finding shows that emotional drivers and perceptions might be treated as a more important factor with football spectators. This result is robust, as demonstrated in all estimated models. As has been expected, this effect has to be relatively greater for the brand-team playing away. We hypothesized that spectators prefer to attend matches to take advantage of watching a strong team playing. Nevertheless, we failed to find evidence for that. On contrary, the brand-team playing at home provides a more substantial effect on match attendance according to the outputs of our estimations. This is reasonable as those teams have larger fan bases than small clubs. The overall effect is

significant and positive for matches with the participation of brand-team. In other words, separating the additional effect of brand-team on uncertainty we have found out an interesting phenomenon that contradicts a classical theory of uncertainty-driven attendance – football fans prefer to attend matches with a strong team as an opponent even though a prediction of match outcome is high. This effect is stronger when the brand-team plays in its city. This happens as these matches constitute derby games (brand-team vs. brand-team) that usually drive greater emotions.

**TABLE 3 |** Results of the model in the two subsamples.

Variables	Without brand-teams (1) ln_attendance	With brand-teams (2) ln_attendance
ln_price	−0.299*** (0.0704)	0.578*** (0.104)
Uncertainty	−2.527*** (0.742)	1.118* (0.645)
Uncertainty*Brand_a	–	−1.336** (0.604)
Uncertainty*Brand_h	–	−0.000326 (0.613)
Uncertainty <sup>2</sup>	2.044*** (0.538)	−0.287 (0.766)
CV	Included	–
Constant	8.213*** (0.325)	6.652*** (0.384)
Observations	644	403
R-squared	0.447	0.561
Average price	15.84 (6.48)	30.43 (12.62)

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .





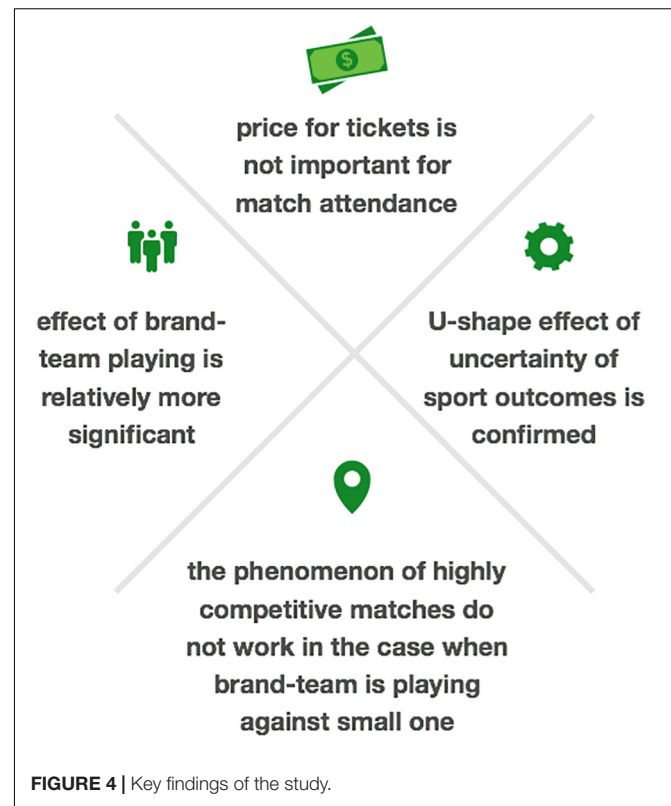
**TABLE 4 |** Results of the analysis with IV.

Variables	With brand-teams (1)	IV (2)
	ATTENDANCE_In	PRICE_In
ln_price_hat	0.613 (0.707)	–
Uncertainty	0.0364 (1.947)	
Uncertainty*Brand_a	–2.553*** (0.899)	
Uncertainty*Brand_h	–0.450 (0.883)	
Uncertainty <sup>2</sup>	1.234 (1.978)	
CV	Included	
Lagged_In_Attendance	–	0.204*** (0.0267)
Constant	6.912** (2.767)	1.419*** (0.201)
Observations	71	180
R-squared	0.566	0.247

Standard errors in parentheses. \*\*\* $p < 0.01$ , \*\* $p < 0.05$ , \* $p < 0.1$ .

In order to understand better the effect of the participation of a brand-team in the matches, we split the sample into two subsamples. **Table 3** presents the results of both subsamples. We can observe how the price turns to be significant in both and, at the same time, when there is not a brand-team in the match the sign the effect of price in attendance is negative but when there is a brand team the effect becomes positive. This is an interesting result because, in the first case, the result follows the economic logic as the demand decreased with an increase of price. At the same time, a more attractive team simultaneously creates an increase in the price and in the demand. Regarding UO, when there are not brand-teams involved, we have found a U-shape relationship. That means that if there are not brand-teams, fans prefer witnessing a secure victory of their team over a stronger opponent. However, in the case of the subsample with brand-teams, the effect of UO is linear but is compensated by the moderation effect of the presence of a brand-team as visitor. It is worth remarking that the average price is almost two times when we are talking about brand-teams in the match.

The second group of the results refers to a price mechanism affected by emotional irrationality which might contradict conventional demand function. Looking at the regression estimated on the entire sample, we observe no significant effect of the ticket price to the match attendance. However, this can be sensitive to the subsamples which represent substantially different spectators' behavior. We hypothesize, leaning on the previous sports psychological literature, that emotional factors may distort the decision-making process and make spectators less sensitive to price level when brand-teams play on a pitch. To test that, we split our setting to two different subsamples and estimate the same specification, excluding only not relevant controls.



As one can observe, the findings appear to draw a very interesting interpretation. We discover a normal demand function only for non-brand-team matches. Importantly, we have shown that price is negative and significant when presumably no dominance of irrational emotions takes place. However, the second model, estimated on the subsample of matches with brand-team participation, shows the price has a positive significant effect. We would avoid direct interpretation of this result addressing possible endogeneity brought by irrational factors of price mechanism which covariate with error term.

In trying to cope with this empirical problem we propose an instrumental variable with an argument that prices are set by match organizers who are aware of the emotions of spectators who demonstrate specific demand for matches with brand-teams. This reasoning allows us to propose the following variable which appears to be exogenous to a price having no direct covariation with the attendance of a match. We presume that match organizers must look at the previous attendance of similar matches in the past establishing prices for further events. Spectators, meanwhile, are unlikely to be directly influenced by the demand of similar matches in the historical period. In other words, when deciding whether it is worth attending a match, one is not interested in how many spectators have watched similar matches before. This interpretation is a sufficient condition to use attendance of the matches with the same opponents in the previous seasons to instrument price for the current season. Certainly, this solution significantly restricts our subsample.

For this subsample, we select cases matching games of the three seasons of the Brazilian State Championship with the same combination of home- and away-team playing. We instrument the ticket price by the attendance in the previous season, controlling for all possible factors. The results are shown in **Table 4**. As it can be observed, again the price becomes not significant and, at the same time, the moderation effect of a visiting brand-team in UO results significant and negative. Thus, a strong emotional component has been discovered again – with a brand-team visiting the fans will attend the match even when they probably expect a victory of the away-team.

## DISCUSSION OF KEY FINDINGS

This paper addressed the impact of two different sources of emotions attracting fans to live football matches: uncertainty of outcome and brand perception. We set rational factors of spectators' behavior against emotional irrationality and studied how their balance can influence demand for football matches. Our findings show evidence that price for tickets is not important for match attendance in any specification with brand-team effect. We interpret that other drivers have substantially higher relevance than price. The fact that price is not relevant comes to corroborate the idea that fans are driven more by emotions than by economic reasoning. Looking for marginal effects of uncertainty jointly with an imbalanced game, we have discovered that the effect of brand-team playing is relatively more significant. That means that traditional models with the phenomenon of highly competitive matches do not work in the case when in Brazilian championships the brand-team is playing against a small one. Moreover, this result is robust and more significant when the brand-team is playing at home.

A peculiarity of the Brazilian State Championship is that it imposes regional opponents' assignments. This breaks the connection between brand-team participation and high uncertainty of outcome. That happens because there is a significant number of matches when the team from the first division is playing against a team from lower divisions. The statistics during the two observed seasons say that about 47% of matches with brand-team participation were played against a relatively weak opponent, which means a very low uncertainty of outcome. The technical level of correlation is around -0.53. However, theoretical correlation does not exist. The interaction term between uncertainty of outcome and brand-team participation identifies the potential marginal effect on attendance with highly competitive matches between strong teams. Moreover, by introducing these effects by non-linear functional form, we can identify the local minimum of uncertainty for both cases (with brand-teams or just ordinary matches). This allows us to disentangle emotional and rational

phenomena of attendance. Importantly, it shows that the coefficients have a significant difference in all specifications.

Clubs can use the fact of the presence of brand-teams to raise the price for tickets. In that sense, if clubs are looking for profits, fans can pay a higher price for the tickets. Considering the emotional behavior of the fans, the governing bodies of football should take care of them by maybe limiting maximum prices that can be charged. Sharing the revenues for tickets can help to keep the prices lower when a brand-team is playing away. With this, local fans can enjoy the presence of brand-teams in their own stadiums without a great increase of price, as the club knows that part of the revenues in the venue of the brand-team will end in its pocket. This kind of competition provides a 'cross-subsidy' for small clubs. This should be considered by the National Federation when considering whether to close this competition. Some other National Federations worldwide could consider the opportunity of implementing this kind of championship.

However, when two subsamples based on a presumably higher relevance of irrational factors are created – one with brand-teams and other without brand-teams – we find that in the matches without brand-teams the effect of the price becomes negative as should be expected for normal demand curve. Meanwhile, when a brand-team is playing, the effect turns to be positive indicating significantly higher levels of endogeneity of the price when a strong team is one of the opponents. By introducing instrumental variable for the entire sample, we discovered that a price effect is not significant anymore and shows that all other included drivers of attendance pulls the variation of attendance. This finding is coherent with the literature and shows that demand for tickets in football has a very low elasticity which is in line with the idea of emotions as the main driver for attendance. A summary of the key findings is depicted on **Figure 4**.

## DATA AVAILABILITY STATEMENT

All data used in this research are freely available and can be found at <http://www.srgooool.com.br>. Dataset prepared by the authors from that source is available on request.

## AUTHOR CONTRIBUTIONS

ES, TG, and AB have contributed equally to this work.

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# Portrait of Boredom Among Athletes and Its Implications in Sports Management: A Multi-Method Approach

Franklin Velasco\* and Rafael Jorda

Department of Marketing, Universidad San Francisco de Quito, Quito, Ecuador

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### \*Correspondence:

Franklin Velasco  
fvelasco@usfq.edu.ec

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There is a common misconception that elite athletes enjoy their sports activities so much that they cannot feel bored. However, this research reveals that boredom is a prevalent emotion among professional, amateur, and college athletes that impacts their performance, brand preferences, and overconsumption behaviors. This investigation relies on a multi-method approach. Qualitative data were collected through interviewing athletes ( $n = 123$ ), and the critical incident technique was used to record factual boredom incidents. Quantitative data were collected through a survey and analyzed using hierarchical regression models. The purpose of the survey was to evaluate athletes' proneness to boredom and then present a typical sports consumption scenario in which athletes' brand preferences and overconsumption behaviors were captured. Overall findings from this research indicate that episodes of boredom are common among athletes when they engage in repetitive tasks (34.8%); negative mood is anticipated (16.9%); teammates show a lack of interest and seriousness (15.7%); they must endure periods of waiting (13.5%); there is a lack of competitiveness and goal-setting (10.1%); there is a lack of participation in activities (4.5%); there is a lack of empathy with teammates and coaches (3.3%); and there are infrastructure issues (1.1%). Furthermore, this study presents evidence that boredom negatively impacts athletes' performance ( $\beta = -0.41$ ). Then, in a specific sports consumption scenario that uses sports drinks, this study finds that a more boredom-prone athlete has a higher chance of purchasing different brands of the same product ( $\beta = 0.37$ ) and engaging in overconsumption behaviors ( $\beta = 0.44$ ). The relationships among boredom, performance, variety seeking, and impulse buying are congruent with previous research on boredom. This research discusses several sports management implications and presents recommendations from coaches on how to cope with athletes' boredom.

**Keywords:** boredom, sports management, athlete performance, overconsumption, brand loyalty, emotions

## INTRODUCTION

Boredom has usually been described as a negative emotion experienced in relation to monotonous types of activities (Halbesleben and Buckley, 2004). Fisher (1993) depicted boredom as a universal emotion that nearly everyone experiences, irrespective of the nature of their job. Since elite athletes can be described as having a full-time job and are considered employees of their respective teams,

institutions, and leagues (Tainsky and Babiak, 2011), it is reasonable to expect that they experience boredom. Sports managers and fans might see this as counterintuitive, as they might perceive athletes' jobs as simple tasks in which competitiveness, playfulness, and excitement are more prevalent emotions than boredom.

Although research interest in boredom is increasing, there is much more to be explored about this influential negative emotion (Tze et al., 2016). Undeniably, a shortcoming of boredom studies in a sports context is that it reports mixed findings. For example, Chin et al. (2017) reported that adults consider practicing sports one of their least boring activities. However, other studies have argued that boredom undermines school athletes' motivation to practice sports (Duda and Nicholls, 1992) and decreases the intention to persist with physical activity (Pulido et al., 2014). Because boredom in society is incremental (Mael and Jex, 2015), and it seems that boredom is more prevalent in professional athletes (Atousa and Sheykhabani, 2012), it is critical to explore athletes' experiences with boredom and evaluate its consequences from a sports management perspective. The present research fills this gap by presenting a series of boredom incidents in elite athletes, a classification of these incidents into substantive categories, and a report on the consequences of boredom in sports consumption scenarios.

Organizational behavior literature has identified boredom as a relevant stressor variable present in different types of jobs and activities (Loukidou et al., 2009; Bruursema et al., 2011; Schaufeli and Salanova, 2014; Harju et al., 2018). Boredom refers to an unpleasant feeling during individuals that causes a lack of interest in a current activity, pensiveness, and difficulty concentrating on a task (Game, 2007). Pekrun (2006) conceptualized boredom as a multi-dimension negative emotion that includes several components: affective components (i.e., unpleasantness and negative attitude toward an activity), cognitive components (i.e., time distortion perceptions, reduced attention, and constraint), physiological components (i.e., low arousal), non-verbal communication components (i.e., pensiveness and facial and postural expressions), and motivational components (i.e., strong efforts to overcome the low arousal state). The state of boredom "makes people feel like they are emotionally trapped and at the same time contributes to senses of loss of value, significance, and meaning" (Elpidorou, 2014, p. 2).

Bored individuals have been found to be less persistent and more gregarious (Leong and Schneller, 1993), impulsive (Leong and Schneller, 1993; Moynihan et al., 2017), and attracted to sensation seeking (Kass and Vodanovich, 1990). Following these findings, it is possible to anticipate that when athletes feel bored, the sensations of being restless, inattentive, and distant might harm their performance. Moreover, because the state of boredom makes people feel under-stimulated, athletes might cope with boredom by engaging in behaviors such as overconsumption (i.e., buying more sport products than needed) and variety seeking (e.g., changing their loyalty among sports drink brands). In this research we have focused on investigating these effects of boredom and on trying to

identify with detail athletes' boredom incidents using a multi-method approach.

This research presents two studies that aimed to expand the understanding of boredom in a sports management context. The first study presented a taxonomy of boredom episodes. Findings from this study reveal that boredom is prevalent among athletes. The second study investigated more deeply boredom's influence on athletes' performance, brand preferences, and overconsumption behaviors. Findings from this study reveal that boredom negatively influences athletes' performance and shapes their brand choices (variety seeking) and consumption behaviors (overconsumption).

The present research aimed to examine what aspects of being an elite athlete at the professional, amateur, or college level trigger boredom and how this negative emotion influences athletes' performance, attitudes, and behaviors. Furthermore, the purpose of this investigation was the identification of boredom incidents among elite athletes. In addition, this research discusses several practical implications for coaches and sports managers about dealing with athletes' boredom. Our findings allow sports management institutions to rethink their tactics and psychological approaches to help athletes cope with boredom episodes. In addition to this, our findings provide insight for brand managers in terms of designing promotional strategies.

## MATERIALS AND METHODS

The research approach of our investigation combined qualitative and quantitative methods. Since this paper aimed to expand the understanding of boredom in a sports management context, Study 1 used the critical incident technique (CIT; Flanagan, 1954; Gremler, 2004) as a tool to detail boredom experiences in athletes. Study 2 relied on survey data to examine boredom's influence on athletes' performance, brand preferences, and overconsumption behaviors. Next, we have presented the sample characteristics, measures, procedures, and data analysis descriptions of our studies.

### Participants

The sample strategy included several rules and criteria to recruit participants. First, we invited a list of coaches ( $n = 16$ ;  $Mean_{age} = 43.58$ ,  $SD = 9.58$ ;  $Mean_{tenure} = 17.65$ ,  $SD = 9.64$ ) to share their player rosters and participate in a study about athletes' emotions.

A total sample of 134 elite athletes from Ecuador participated in this study. The participants were between 16 and 66 years old ( $Mean_{age} = 22.56$ ,  $SD = 6.05$ ). In terms of sex, 64.2% were males ( $Mean_{age} = 23.26$ ,  $SD = 7.19$ ) and 35.8% were females ( $Mean_{age} = 21.31$ ,  $SD = 2.79$ ). In terms of athletes' level, 80.5% compete at college level and 19.5% at professional level.

The distribution of the sample by sport discipline was men's soccer (29.1%); volleyball (9.7%); basketball (9.0%); aerobics (8.2%); women's soccer (7.5%); taekwondo (6.7%); jiu-jitsu (6%); table tennis (6.0%); tennis (4.5%); track and field (3.7%); triathlon (3.7%); gymnastics (3.0%); and weightlifting (3.0%). This diverse sample of sport disciplines was intentionally planned to achieve

a higher degree of external validity for the study's findings and to use as a control variable in the regression analysis.

## Measures

Because the purpose of this research was to identify how boredom manifests in athletes and to understand the consequences of episodes of boredom in athletes' consumption behaviors, we relied on a multi-method research approach.

For Study 1, which focused on the identification of boredom episodes, we relied on the CIT<sup>1</sup> to collect actual incidents and classify them into categories. For the purpose of this study, these critical incidents were defined as events or series of events when athletes started feeling bored when practicing or competing. The interview started by asking athletes to recall the last time they felt bored when they were either practicing or competing in their sport. We further asked them to describe this situation with as many details as possible. For example, "What were your thoughts and feelings at that particular moment?"; "What do you think was the root cause for you feeling bored?"; "To what do you attribute this feeling?"; and "To you what kind of context generated feeling bored?" The average time per interview for the boredom's CIT was 16.38 min.

The second part of the study, Study 2, consisted of collecting quantitative data via a survey after the interview. The instrument included measures about boredom proneness and consumption scenarios in which we measured brand preferences for sports drinks and overconsumption behaviors. We used Beaton et al.'s (2000) backtranslation technique to translate the survey from English to Spanish. A professional translator translated the survey from Spanish to English. The two authors then simultaneously translated the survey. Then, one academic back translated the survey to English and solved discrepancies by comparing the original items with the new set of items. Authors pilot tested the questionnaire with a sample of undergraduate students. In the next paragraphs we have presented in detail each of the measures included in the instrument.

*Athletes' boredom proneness* was measured with five items adapted from the short version of the boredom proneness scales developed by Struk et al. (2017). The initial eight-item scale was adapted by including in the original wording a few words referring to sports (e.g., practices and training). This scale was validated by the group of coaches that shared their players roster and participated in our study. Coaches decided that some items were not applicable to all sports disciplines or difficult to understand in a sports context. We have listed some examples of items that were excluded: "I often find myself in practices at loose ends, not knowing what to do"; "I find it hard to entertain myself at practices"; "In most situations, it is hard for me to find something to do or see to keep me interested"; "Much of the time, I just sit doing nothing"; and "Unless I am doing something exciting, even dangerous, I feel half-dead and dull." The final scale resulted in five items. Participants expressed with a seven-point scale how much they agreed or disagreed with various statements: "It is difficult for me to concentrate

on my training activities"; "Time always passes very slowly when I attend practices"; "Many things I have to do during practices are repetitive and monotonous"; "It takes more stimulation to get me going than most players"; and "At practices, I am bad at waiting patiently" ( $\alpha = 0.70$ ). The scale was validated with exploratory factor analysis (EFA) using principal components method. Varimax rotation was used since evidence suggests that this rotation method is preferred over other types of rotations for identifying a simple structure (Tabachnick et al., 2007; DeVellis, 2016). The analysis indicate a one-factor solution that include all final five items of the scale and showing loadings higher than 0.4. Appendix A in the **Supplementary Material** report the factor loadings.

*Overall performance* was measured by a single item. This measure follows a scheme designed by the coaches included in our sample who created an overall measure of athletes' performance. Future performance was defined as likelihood of achieving international success. In this way, the scale conceptualizes top performers as those athletes' that have strong probabilities of achieving international success versus low performers conceptualized as athletes' demonstrating irregular performance levels that will not achieve even local success. Therefore, coaches responded to the question, "Overall, how would you evaluate this player in terms of his/her future performance?" using a six-point scale: "5 = the player has the potential to obtain, in the near future, an international achievement"; "4 = the player has the potential to obtain, in the near future, a local achievement"; "3 = the player will maintain having an outstanding performance at the team and personal levels"; "2 = the player will demonstrate greater effort and will distinguish from other teammates"; "1 = the player will maintain a regular performance"; and "0 = the player will demonstrate an irregular performance with highs and lows."

*Brand preference* was measured by the athletes' number of brand choices in a sports drinks' consumption scenario. This operationalization allowed us to capture athletes' variety-seeking behaviors, as a greater number of brands selected signaled lower brand loyalty and stronger variety seeking. Athletes were asked to imagine they were planning to buy 10 sports drinks for their weekly training activities based on a free choice of brands. Five options of brands familiar to athletes were presented in a list (i.e., Gatorade<sup>TM</sup>, Powerade<sup>TM</sup>, Spode<sup>TM</sup>, and Profit<sup>TM</sup>), including an option for participants to write in a brand that was not on the list. With this they were presented a statement that brands did not differ as to price. Athletes answered this question by entering the number of bottles of each brand they wanted to purchase. The number of different brands they chose became our second dependent variable.

The *overconsumption* variable was operationalized as a measurement within the same consumption context described above. After athletes completed their brand preferences for sports drinks, they were asked to imagine there was a promotion going on at the time of purchase. Since they just bought 10 bottles,

athletes would receive a “big discount” if they opted to buy more. Athletes then entered the number of additional sports drinks they wanted to add to their purchase in a range between 0 and 10. This number became our third dependent variable.

## Procedure

The Institutional Review Board approved this study's procedure. All participants voluntarily agreed to participate in the study and registered their consent. Before the data collection took place, a meeting with managers and coaches was held to inform them about the study's procedure and purposes. Further, coaches and athletes were guaranteed the confidentiality of their data and personal information.

First, we asked coaches to share their player rosters and asked them to provide an overall performance score for each of their players, a measure that served as one of our dependent variables. Second, coaches were invited to fill out a short online survey prompting them to describe an episode of boredom they had experienced recently when working with their athletes. This question tracked the CIT by collecting factual boredom incidents from coaches. Its purpose was twofold: (1) to examine and categorize boredom incidents among athletes and (2) to present a list of coaches' recommendations as to the tactics sports managers could implement to reduce athletes' boredom. Appendix B in the **Supplementary Material** presents the illustrative quotes from coaches describing boredom incidents.

Third, using the list of athletes that the coaches provided, we randomly invited players to participate in an interview in which we applied the CIT (e.g., record boredom incidents) and to complete a short survey that included our set of dependent measures and some demographic information. Four research assistants who were trained with the CIT and the instrument designed for this study helped in the data collection process over a period of 2 months.

## Data Analysis

The authors and three independent judges completed the CIT content analysis by coding the incidents into categories. The process consisted of repeated reading of the data and identifying similarities among the athletes' responses. Disagreements were resolved through discussions, and final inter-judge reliability was 92%.

The second part of the data analysis was the assessment of the survey data. To understand how boredom influences athletes' performance, brand preferences, and overconsumption behaviors, we relied on multiple linear regression analysis using SPSS software (IBM SPSS, Version 24.0). Hierarchical linear regressions, with athletes' boredom proneness scores as predictors, were performed for each of the three dependent variables. Through a second step, the control variables (i.e., athletes' gender, age, sport discipline type, and tenure) were entered into each regression model to observe differences in the effects. The statistical tests of each predictor were two-tailed at an alpha level of 0.05. To control for a type 1 error, we reported standardized regression coefficients and

*p*-values calculated for the non-parametric correlation analysis ensuing the sequential Bonferroni–Holm practice (Holm, 1979). Descriptive statistics for the variables included in each of the models and correlations were calculated. **Table 1** shows these calculations.

## RESULTS

### Study 1 Boredom Incidents Among Elite Athletes

The contribution of Study 1 involves identifying boredom incidents among athletes and classifying them into theoretical categories. As discussed before, the authors followed a systematic process to perform the content analysis of the incidents reported by the athletes. This systematic process incorporated an extensive literature review into the psychological determinants of boredom. During the content analysis, commonalities were found between boredom incidents in the study and theoretical categories from previous boredom literature. **Table 2** illustrates the results of the content analysis.

The first category of boredom incidents among athletes is monotonous/repetitive activities, which make up 34.8% of the total incidents. Athletes feel bored during practices when they are forced to do repetitive workouts and exercises that are similar to recent past experiences and when routines do not vary. Quotes related to this category included, “What happens is that some workouts are similar and repetitive, which is why sometimes it is a bit boring” and “Sometimes I start thinking that I could be doing other activities or even taking a nap when the coach asked us to repeat the exercises.”

According to the content analysis of boredom incidents, the second category of boredom incidents represent 16.9% of the total incidents. These boredom episodes are related to anticipated negative mood. When athletes feel frustrated, apathetic, depressed, or pessimistic, feelings of boredom are activated. There are several examples of athletes' responses related to this category: “There are times that due to university's workload, like homework and projects, I do not feel excitement to train and everything seems boring to me” and “Boredom happens when I feel frustrated about the other things I have to do related to homework, my job, and upcoming exams.”

The third category is related to circumstances when athletes believe their teammates are not involved or simply are absent from practices, feelings of boredom appear. A noteworthy amount of boredom incidents (15.7%) are related to athletes' perceptions regarding teammates' lack of motivation/seriousness. This is an example of a quote that belongs to this category: “I felt bored when my colleagues showed no interest in the workout, and they do not take it seriously.”

In this study, 13.5% of boredom incidents fell into the fourth category of waiting experiences. The following quote exemplifies statements in this category: “The other day I felt bored when the trainer was focused on certain players working on their mistakes, while the others were just watching them. Because my



**TABLE 1** | Descriptive statistics and correlations.

Variable	Mean	SD	1	2	3	4
1. Athletes' boredom proneness	3.32	1.33				
2. Overall performance	3.07	1.57	−0.40**			
3. Brand preferences	2.28	1.25	0.38**	−0.08 <sup>ns</sup>		
4. Overconsumption	4.91	3.33	0.47**	−0.17*	0.14	

\* $p < 0.10$ ; \*\* $p < 0.01$ . *ns*, not statistically significant.

teammates continued doing mistakes, we just had to lay down and keep waiting.”

The CIT content analysis identified that 10.1% of boredom incidents are linked to a lack of competitiveness and challenges. Elite athletes develop their skills within a competitive context. One athlete mentioned that “the last time I felt bored was about 8 months ago because at that time I did not have a goal in mind. I felt there was no direction, or something to aim for. I could not find myself, as if everything was against me. I questioned what I was doing. Then, I started to have a clear mind with specific goals and my performance started to improve.”

Several of the boredom incidents (4.5%) that athletes reported include instances when they are not actively participating in sports activities. These activities include tasks in which they slow down or cool down and activities they perceive as unmeaningful. Examples include when a team is winning easily, when one group of athletes is more actively participating while others are not, or when they engage in secondary activities (e.g., picking up balls or warming up). The following quote refers to a secondary activity: “The last time I felt bored was when I had to pick up balls for a long time and I started to cool down. The moment I begin to cool down, I do not have the same motivation. I feel that cooling down is not good because it takes time to warm up again and the excitement goes away.”

Athletes' boredom incidents in the study reveal a lack of empathy with teammates and coaches is a distinctive cause of boredom. This category corresponds to 3.3% of the total boredom incidents and reflects athletes' subjective feelings on comfort with or distance from others. An example within this category is the following quote: “Yesterday we were in a game, but I just stopped playing because I did not feel comfortable with the people I was playing against and started feeling bored.”

The last category is associated with how sports infrastructure issues generate boredom in athletes. In the study, 1.1% of the total number of incidents are associated with *sportscape* issues. Sportscape is related to the physical environment and the facility management (e.g., facility aesthetics, equipment maintenance, facility comfort, etc.) of sports institutions or teams. In essence, the role of the sportscape is to provide a pleasant atmosphere for both, customers, and employees. When athletes perceive that the sports organization does not adequately maintain fields, equipment, and infrastructure, they develop a sense of frustration, which in turn triggers boredom. A quote that exemplifies what athletes said in relation to the sportscape and its link with boredom is the following: “I felt bored while training when the university courts are in very bad condition and you

could not play at high level. The ball bounced and went anywhere. That bores me.”

## Study 2 Athletes' Boredom Proneness Effects in Athletes' Performance, Brand Preferences, and Overconsumption Behaviors

In this section, we have presented the results of the collection of survey data from athletes. The purpose of Study 2 is to provide a deeper understanding of boredom's influence on athletes' performance, brand preferences, and overconsumption behaviors. In addition, the findings of Study 2 present initial evidence on how boredom affects relevant variables related to sport management. Therefore, three multiple regression models were constructed. Each regression model utilized athletes' boredom proneness as predictor. In the second step, control variables were entered into the model. Multicollinearity was not a factor on any of the regression models. None of the variables presented a variance inflation factor greater than 1.24.

**Table 3a** presents the results of the hierarchical regression model that tests the influence of athletes' boredom proneness on athletes' overall performance. The final model, model 2, explains 23% of the variance of athletes' performance and produced a significant  $F$ -score ( $df_{2=4}$ ) = 7.48. This result demonstrates that boredom impacts athletes' performance. The standardized regression coefficient for athletes' boredom proneness,  $\beta = -0.41$ , was statistically significant ( $t = -5.11$ ;  $p < 0.001$ ), confirming that boredom negatively influences athletes' performance.

Considering the relationship between athletes' boredom proneness and brand preferences, the results from the second regression model support the notion that when athletes feel bored, they will seek variety in the brands they choose. **Table 3b** presents the regression results that indicate that boredom leads to the extension of brand preferences.

The regression model shows that 18% of the variance in brand preference is explained by athletes' boredom proneness. The final model, Model 2, produced a significant  $F$ -score ( $df_{2=4}$ ) = 5.72. The standardized regression coefficient for athletes' boredom,  $\beta = 0.37$ , was statistically significant ( $t = 4.57$ ;  $p < 0.001$ ), suggesting that boredom increases athletes' likeliness of choosing different brands among a product category.

On a separate note, the regression model also indicated that how much experience the athlete has in practicing a sport plays a significant role in brand preferences. Tenure shows a negative and significant regression coefficient. Thus, the more experienced

**TABLE 2 |** Percentage of athletes' boredom incidents falling into each content category.

Category name	Illustrative quotes	Percentage of total
1. Monotonous and repetitive activities	The last time I felt bored in training was when the workouts were very repetitive, doing the same tasks every Monday of every week, even the next days. <b>taekwondo athlete</b> I felt bored in training because the workout and routine did not vary, and everything was very repetitive. This often tires me because doing the same thing does not help much. <b>basketball player</b>	34.8
2. Anticipated negative mood	Currently I am feeling very tired and sleepy when attending the morning training sessions. That is why I feel bored. <b>soccer player</b>  I was working out with four other girls in a series of exercises we needed to complete, but I was mad. So, I wanted to leave the practice because I was feeling frustrated and bored at the same time. <b>gymnastics athlete</b>	16.9
3. Teammates' lack of motivation seriousness	I feel bored when no one shows up to train or start doing other things the coach assigns to us. <b>volleyball player</b>	15.7
4. Waiting	Basically, I get bored because there are no people at my same level. <b>tennis player</b> I was waiting for the next game, and since I did not have anything to do until the game starts, I was feeling bored and lazy. <b>tennis table player</b> I am always bored when our coach had us sitting down doing nothing while training other girls from another category. <b>women's soccer player</b>	13.5
5. Lack of competitiveness and challenges	I am used to getting bored when there is no upcoming competition. The last time was during summertime in which I was in great physical and mental condition, but there was no budget to compete and training without competing is frustrating especially in contact type of sports. <b>jiu-jitsu athlete</b> The last time I was bored was because I could not understand the function of the exercises, they were too simple, and just thought about when practice ends. <b>gymnastics athlete</b>	10.1
6. Lack of participation in activities	The truth is that I really like practices, but I get bored when one group of girls is more actively involved in training while the others are just passing the balls. If we were having a more active task, the training would be more pleasant. <b>women's soccer player</b> I am bored at games that I am not playing, and the team is winning easily. My teammates play very well, and we were ahead on the scoreboard by several points, so I was just watching the game. <b>volleyball player</b>	4.5
7. Lack of empathy with teammates and coaches	We recently switch to a new coach, but I do not like him. I still miss my old coach, so I felt frustrated and bored at the same time. <b>triathlon athlete</b>  When other players do not show a good attitude and respect, I start thinking about other things I have to do or listen to music to entertain myself while playing. <b>men's soccer player</b>	3.3
8. Infrastructure issues	The last time I was bored was about a year ago. We had workouts without the necessary equipment and uniforms. In those moments, it felt like I simply did not want to continue being part of the team. This caused the whole season to become boring. <b>tennis table player</b>	1.1

**TABLE 3a** | Athletes' performance regression analysis.

Model	Predictor	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i> -value	VIF
1	Constant	4.81	0.35		13.78	0.00	
	Athletes' boredom proneness	−0.51	0.09	−0.42	−5.27	0.00	1.00
2	Constant	−95.49	45.63		−2.09	0.00	
	Athletes' boredom proneness	−0.49	0.09	−0.41	−5.11	0.00	1.03
	Athletes' gender	0.06	0.26	0.02	0.24	0.81	1.06
	Tenure	0.02	0.02	0.05	0.58	0.56	1.23
	Age	0.05	0.02	0.19	2.19	0.03	1.24
	Type of sport discipline	0.04	0.03	0.13	1.58	0.12	1.05

Model 1:  $R^2 = 0.18$ ;  $R$ -square change = 0.18;  $F$ -value = 27.76,  $p < 0.001$ . Model 2:  $R^2 = 0.23$ ;  $R^2$  change = 0.05;  $F$ -value = 7.48,  $p < 0.001$ .

**TABLE 3b** | Brand preferences regression analysis.

Model	Predictor	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i> -value	VIF
1	Constant	1.12	0.28		3.95	0.00	
	Athletes' boredom proneness	0.35	0.08	0.36	4.41	0.00	1.00
2	Constant	42.62	37.07		1.15	0.25	
	Athletes' boredom proneness	0.36	0.08	0.37	4.57	0.00	1.03
	Athletes' gender	0.29	0.21	0.11	1.34	0.18	1.06
	Tenure	−0.04	0.02	−0.19	−2.18	0.03	1.23
	Age	−0.02	0.02	−0.10	−1.12	0.26	1.24
	Type of sport discipline	0.03	0.02	0.12	1.51	0.13	1.05

Model 1:  $R^2 = 0.13$ ;  $R^2$  change = 0.13;  $F$ -value = 19.46,  $p < 0.001$ . Model 2:  $R^2 = 0.18$ ;  $R^2$  change = 0.05;  $F$ -value = 5.72,  $p < 0.001$ .

**TABLE 3c** | Overconsumption regression analysis.

Model	Predictor	<i>b</i>	SE	$\beta$	<i>t</i>	<i>p</i> -value	VIF
1	Constant	1.26	0.72		1.75	0.08	
	Athletes' boredom proneness	1.11	0.19	0.44	5.63	0.00	1.00
2	Constant	−130.35	93.79		−1.39	0.16	
	Athletes' boredom proneness	1.17	0.19	0.47	5.94	0.00	1.03
	Athletes' gender	−0.63	0.54	−0.09	−1.17	0.24	1.06
	Tenure	0.09	0.05	0.16	1.84	0.07	1.23
	Age	0.06	0.04	0.12	1.39	0.16	1.24
	Type of sport discipline	0.10	0.05	0.15	1.85	0.07	1.05

Model 1:  $R^2 = 0.20$ ;  $R^2$  change = 0.20;  $F$ -value = 31.66,  $p < 0.001$ . Model 2:  $R^2 = 0.25$ ;  $R^2$  change = 0.05;  $F$ -value = 8.35,  $p < 0.001$ .

athletes demonstrate lower variety-seeking behaviors in their brand choices for sports drinks.

The third regression model included athletes' boredom proneness as a predictor of overconsumption. For this study's purposes, overconsumption was operationalized as how many extra bottles of a sports drink participants chose to purchase after they were granted a discount due to the 10 bottles they previously purchased. This consumption context and measure allowed us to capture athletes' overconsumption behavior as a consequence of feeling bored.

**Table 3c** presents the regression results. The regression model, Model 2, produced a significant  $F$ -score<sub>(df2=4)</sub> = 8.35. In this case, athletes' boredom proneness explains 25% of the variance in overconsumption decisions made by athletes. The standardized regression coefficient for athletes' boredom,  $\beta = 0.47$ , was statistically significant ( $t = 5.94$ ;  $p < 0.001$ ), suggesting that

boredom increased athletes' likelihood of engaging in impulse buying (e.g., overconsumption).

## DISCUSSION

Although most people think that elite athletes are privileged because they have managed to make their passion their profession, the reality is different. The aim of the present research was to record incidents of boredom from athletes and examine how boredom affects athletes' performance, attitudes, and behaviors. In doing so, this study identifies that in more than 80% of cases athletes have suffered or suffer from boredom. Results from this study include a set of psychological factors or categories that are related to incidents of boredom. Therefore, we have concluded that boredom is a prevalent emotion in elite athletes.



Moreover, this study has presented evidence that boredom negatively influences athletes' performance, increases the chances athletes engage in variety seeking behaviors, and increases the chances athletes engage in overconsumption behavioral patterns. Next, we have discussed these feelings in more depth.

## Categories of Boredom Incidents and Implications to Sports Management

Insights from the CIT highlight that feelings of boredom among athletes are triggered when: (a) they engage in monotonous tasks; (b) they feel frustration or anticipate negative moods; (c) they perceive a lack of motivation and lack of teammate involvement; (d) they must endure periods of waiting; (e) there is an absence of clean-cut sports objectives or awareness of forthcoming competitions; (f) they are not participating in the team's activities; (g) there is a lack of empathy with coaches and other teammates; and (h) sports' infrastructure issues cause delays or problems. These categories can be cataloged as psychological determinants for boredom in a sports context.

The abovementioned phenomena represent challenges for sports managers because they not only have to recruit and train the best athletes to increase the team's performance, but they also must train coaches and players on how to cope with boredom in order to keep the athletes' morale and motivation at high levels.

The most important category to consider in relation to boredom, due to the high incidence rate, is monotony and repetitive activities. Illustrative quotes from athletes suggest that coaches should vary the activities they perform in training. It is also necessary to have a flexible plan of activities with a declared working objective to avoid monotony. Monotony and boredom are very closely related (Smith, 1955). Monotony causes psychological distress (Melamed et al., 1995), results in decrements in vigilance and task performance (Cummings et al., 2016), and can be so unpleasant that people seek out pain if it is their only alternative (Bench and Lench, 2019).

Second, in order of incidence, is the anticipated negative mood of the athletes. Negative mood is caused by external factors that result in distractions, frustration, and concern in athletes. This could be related to how athletes interpret their emotions. The appraisal theory of emotions (Ellsworth and Smith, 1988; Scherer et al., 2001; Moors et al., 2013) underscores that subjective emotions are interconnected, and emotions are driven by appraisals. When an athlete is in a bad mood, negative appraisals about practices and workouts create other negative valence emotions, including boredom. According to Plutchik (2001), contempt, disgust, and anger are emotions that share components (i.e., having high control and common physiological responses) with boredom. Moreover, our study finds that certain aspects of anticipated negative mood manifest as boredom symptoms: an increase in pressure and stress levels related to exams or academic projects; problems arising from the personal life of each athlete; or physical fatigue after intense periods of training. Findings from Chin et al. (2017) support our findings from this category as boredom is more

likely to co-occur with negative emotions. Sports managers and coaches must show a more personal and direct involvement with athletes. Emotional intelligence is a relevant skill to develop in both sports managers and coaches. It seems valuable to follow each athlete on an individual basis and to identify how they feel emotionally at the various stages of the periodic training cycle to prevent emotional imbalances that may affect their performance and diet.

Lack of motivation or seriousness among peers is another psychological determinant of boredom in athletes. The third category links boredom in athletes with their perceptions that their teammates do not show commitment. Involvement level in a task refers to how much importance a person assigns to a task and how much they identify psychologically with that task (Lodahl and Kejnar, 1965). Personal involvement in a task is construed as a motivational factor within the social system of an organization (i.e., professional, amateur, and college teams) in which social norms and values (e.g., lack of seriousness and involvement) play an important role (Dubin and Dubin, 1974; Carter, 2017). Furthermore, Vodanovich and Watt (2016) proposed that boredom proneness is negatively correlated with task involvement. In order to avoid this situation, it is very important that coaches have the ability to identify boredom among athletes. On the other hand, coaches must decide if athletes who show a lack of commitment should leave the team, as it seems that boredom becomes toxic and contagious to the rest of the teammates.

The fourth category is representative of the relationship between waiting periods and boredom in athletes. In situations where people must wait, boredom occurs (Darden, 1999). Wait-related boredom generates stress and dissatisfaction (Pruyn and Smidts, 1998), enables meta-cognition systems as people allocate additional cognitive resources, and demonstrates self-monitoring behaviors into prospective timing (Zakay, 2014), and results in contextual assessments of the situation to identify the causes of boredom (Van den Bergh and Vrana, 1998). The waiting time between exercises is a critical point in the planning of training activities because it is a major reason why athletes feel bored. Generally, training plans focus on the exercises to be performed, but they do not take into account what happens to athletes during periods of waiting and during transitions from one exercise to another. Garn et al. (2017) proposed that, in physical education classes, waiting produces boredom. Athletes in our sample confirmed this argument. Coaches should consider assigning sub-activities or dynamic games to combat boredom during these waiting and transitional periods.

The absence of declared objectives or lack of competition is an aspect that significantly affects the levels of boredom in athletes. The fifth category shows that athletes' episodes of feeling bored are connected to their perceptions that they are not being challenged enough. When athletes perceive that there are no forthcoming competitions, coaches do not set goals, and they are not being challenged by teammates or other athletes, they feel bored. Previous research by Cervelló and Santos-Rosa (2001) revealed that there is a positive

correlation between boredom and athletes being competitive and ego-oriented. Perceptions of challenges, goal orientation, and competitiveness in athletes are influenced by the nature of social relationships with their colleagues and teammates (Smith et al., 2006). This is evident in athletes' responses. It is a challenge for coaches to achieve a high level of motivation in their athletes when the athletes feel that there is no goal to achieve in the near future. It is recommended that coaches and team managers plan an unofficial tournament schedule to maintain the motivation of athletes in periods when there is no official competition. If sports competitions follow a seasonality variance, sports managers need to find new ways to challenge athletes.

Lack of participation in training activities also causes boredom in athletes. In line with category six findings, Velasco (2017) reported that boredom is a consequence of people perceiving their tasks as insignificant or artless, and it occurs in situations where specific skills are not necessary. Additionally, when individuals subjectively perceive that they have too much time available or too little to do, they engage in leisure boredom (see Iso-Ahola and Weissinger, 1990). As this category validates, leisure boredom in athletes happens as a consequence of them perceiving they have not reached an optimal discretionary time for what they consider "productive" sports activities. Although the level of incidence of this category is relatively low, sports managers must also pay attention to specific tasks that generate boredom. For example, concentrating athletes' work on auxiliary activities during training sessions, such as picking up balls, setting up the field, preparing the training equipment, and other similar actions necessary to carry out practices, can cause a lack of motivation and engagement, thus triggering boredom. Therefore, it is necessary for coaches to plan auxiliary activities to be carried out by all players proportionally in order to maintain a sense of fairness and involvement within the group.

The lack of empathy with coaches and teammates is also a social aspect to consider. Category seven reflects that when athletes establish social distance with others, or simply develop interpersonal conflict, feeling of boredom appear. Evidence from Van Tilburg and Igou (2011) suggested that boredom increases affiliation with the in-group (i.e., like-minded teammates) as well as psychological distance from the out-group (i.e., a new coach or a teammate who others consider too competitive). In any work environment it is necessary for the group leaders to make an effort to improve interpersonal relationships and increase harmony among the team members. In the realm of sports management, coaches are the ones to carry out this work, as they fulfill the role of formal group leaders. To foster empathy, it is recommended that coaches and athletes engage in leisure and recreation activities outside the field related to their sport discipline.

The last category involves boredom incidents in relation to sports infrastructure issues. Since the *servicescape* produces cognitive, affective, and physiological responses in both employees (i.e., coaches) and customers (i.e., athletes; Bitner, 1992), it is not surprising that issues arising from

the *sportscape* produce boredom. Since this category indicates facilities maintenance and sports equipment can have this effect, sports managers need to plan budgets to address infrastructural issues.

## Boredom Predicting Athletes' Performance, Brand Preferences, and Overconsumption Behaviors

This research also provides evidence that boredom can influence athletes' brand preferences and overconsumption behaviors. Boredom-prone athletes are more susceptible to decreases in their performance, are more inclined to vary their brand preferences (demonstrating variety seeking), and engage in impulse buying by purchasing additional products even when they do not need them.

Study 2 identifies that boredom negatively affects athlete's performance. In sum, the higher the level of boredom proneness in athletes, the more likely it is that their performance will be diminished. This result is in line with previous organizational psychology research identifying that boredom diminishes productivity, task engagement, and performance (Drory, 1982; Kass et al., 2001; Watt and Hargis, 2010; Harju et al., 2014; Wan et al., 2014). Among the control variables included in the first regression model, only age demonstrates a positive and statistically significant effect on athletes' performance. Thus, older elite athletes perform better than younger ones.

Findings from Study 2 also highlight that athletes prone to feeling bored engage in variety-seeking behaviors, as they demonstrate preferences for a greater number of sport drink brands. Past research shows that variety-seeking behaviors can manifest in brand preference (Trijp et al., 1996). Zandstra et al. (2004) advised that consumers might change their *repertoire* of food purchases due to boredom. Ha and Jang (2013) found evidence that boredom leads to variety-seeking behaviors in food choices. And Steenkamp and Baumgartner (1992) suggested that variety seeking provides relief from feeling bored. Thus, our results are in accordance with previous boredom literature.

In addition to the abovementioned findings, Study 2 provides evidence that boredom-prone athletes engage in overconsumption behaviors. In the presence of sales promotions, athletes with higher boredom proneness are inclined to purchase more products when they do not need them. Previous studies describe that when consumers feel bored, they seek rewards and engage in impulse buying to avoid their negative mood (Gardner and Rook, 1988). This phenomenon is common in environments like online shopping (Sundström et al., 2019), at airports when traveling (Crawford and Melewar, 2003), and in retail shopping (Sharma et al., 2010).

In the next section, for each of the categories of boredom, we have analyzed the level of incidence and discuss the implications for sports management.

## Other Implications for Sports Management

It is evident in the study that boredom shapes athletes' buying behaviors. If athletes are boredom prone, they might

alter their strict diets and make unhealthy, reward-seeking choices (e.g., consuming alcohol, drugs, high-level sugar products, etc.). Additionally, when boredom exists, impulse buying behavior and conspicuous consumption happen. Since boredom leads to a greater search for stimulation, athletes could engage in overconsumption. Therefore, it is recommended that coaches observe the consumption patterns of their athletes to prevent situations that could affect their emotional balance or even their personal finances and health.

Interestingly, applying CIT to both sets of data showed that sources of boredom for coaches and athletes fall into similar categories. Appendix B in the **Supplementary Material** illustrates the categories associated with boredom incidents, including lack of athletes' motivation or involvement (35.3% of the total incidents), monotonous or repetitive tasks (29.4%), anticipated negative mood (17.6%), and lack of competitions and forthcoming tournaments/goals (11.8%). Although the sample size is small, this exercise replicates our findings and extends the generalizability of the categories related to boredom incidents.

We interviewed coaches who train elite athletes to get their perspectives on how sports management can help them cope with athletes' boredom. This feedback helped us identify the ways that sports managers can reduce the impact of athletes' boredom (e.g., by using technological and infrastructure resources; administration of inter-group relationships; and motivational factors, planning skills, and other capabilities). Coaches rely on new technologies, materials, and equipment as institutional resources to reduce episodes of boredom in athletes. Some of these feedback items suggest that creating a sense of novelty and

interacting with technology can help in the quest to reduce boredom. Additionally, coaches refer to their need to develop social skills (i.e., inter-group relationships) and introduce motivational factors to cope with athletes' boredom. The role of sports management in both dimensions is crucial. Coaches identify that management needs to be in constant contact with athletes to motivate them. Moreover, creative solutions, such as inviting the press to cover athletes' stories, spending more money for teams to participate in competitions, and simply letting players play music at practices, serve as tools to reduce boredom incidents. Finally, coaches strongly suggest that sports managers plan according to the type of teams and players they manage. Planning skills in terms of designing practices are relevant. **Table 4** provides a summary of coaches' feedback on how to deal with athletes' boredom episodes.

## Limitations and Future Research

The results of this research should be seen in the light of some limitations. First of all, our study had a cross-sectional design, which restricted our ability to generalize the findings. Second, we had decided to use a single-item measure to capture athletes' performance. Because each coach who participated in this study uses different performance indicators, it was difficult for us to extrapolate additional items to evaluate athletes' performance. However, the measure we used was a result of a joint effort between the coaches and the authors to develop a measure that is capable of identifying both the top performers and the irregular performers. Third, we used a short version of the boredom proneness scale due to the time limitations of our sample of athletes. Future studies should use longer versions

**TABLE 4 |** Coaches feedback on how to deal with athletes' boredom.

Institutional capabilities	Illustrative quotes from coaches on how to cope with athletes' boredom
1. Technology/infrastructure	<p>The team needs new materials like videos and analytics software. <b>soccer and weightlifting coaches</b></p> <p>We need new equipment that fulfills safety standards for athletes to practice more difficult and risky exercises. <b>gymnastics coach</b></p> <p>I have asked several times not to use the coliseum for other events that are not sport related. <b>basketball coach</b></p> <p>A game room. <b>track and field coach</b></p> <p>New equipment. <b>all coaches</b></p>
2. Inter-group relationships	<p>I need to develop skills in integrating players, motivating them, and making them all to participate in our practices. <b>men's soccer coach</b></p> <p>More presence at practices of the management team in order for players to perceive their interest and support. <b>taekwondo coach</b></p> <p>We should have a social event. <b>women's soccer coach</b></p>
3. Motivational factors (e.g., competitions)	<p>For me, it is necessary to invite the press to our facilities for them to cover our stories. <b>jiu-jitsu coach</b></p> <p>Increase the number of scholarships or fellowships due to athletes' high performance. <b>basketballcoach</b></p> <p>Playing music at practices using selected playlists. <b>volleyball coach</b></p> <p>Register our team in additional national or international tournaments. <b>jiu-jitsuandtenniscoach</b></p>
4. Planning	<p>I would like to spend more time with the high-end athletes that compete for our university than coaching non-experienced teams. <b>gymnastics coach</b></p> <p>It will be great to consider a pause in the activities, but we cannot stop the rhythm. <b>aerobics instructor</b></p> <p>Funding availability to register in conferences, symposia, and training. <b>triathlon coach</b></p>
5. Other	<p>I bet the players will like to listen to other experienced players, so guest speakers might work. <b>jiu-jitsu coach</b></p>

<sup>1</sup>For a review about the CIT check Butterfield et al. (2005); to check its appropriateness to examine human emotions see Buckley (2016); and to check how the CIT was previously utilized to study boredom see Velasco (2017).

of the boredom proneness scales, such as the ones developed by Farmer and Sundberg (1986) and Vodanovich et al. (2005), as a way to test the reliability of our results. In addition, the findings from Study 2 might need careful consideration as we unfortunately did not control for mood when examining the relationships among the variables included in our regression models. Finally, one individual included in our sample is a 66-year-old triathlon athlete. Evidence from Vondanovich and Kass (1990) shows that age influences boredom, as older individuals are ought to be less prone to boredom. That is why age was included as a control variable in our regression models.

Finally, taking into consideration our findings, we suggest a venue of topics for future studies that will allow for a greater understanding of the prevalence of boredom in athletes and its effects. In particular, these recommendations include further investigation of the role of boredom in athletes' nutritional diets, online shopping behaviors, and advertising persuasiveness.

## DATA AVAILABILITY STATEMENT

The datasets generated for this study are available on request to the corresponding author.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the USFQ Comité de Ética. The patients/participants provided their written informed consent to participate in this study.

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## AUTHOR CONTRIBUTIONS

Both authors contributed equally to the investigation. Content analysis of boredom incidents was equality distributed among the authors and independent judges. In the data collection process, a team of research assistants helped the authors with the interviews and the survey data collection.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2020.00831/full#supplementary-material>

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# Financial Awards and Their Effect on Football Players' Anxiety and Coping Skills

Adriana Kaplánová\*

*Faculty of Physical Education and Sports, Comenius University, Bratislava, Slovakia*

**Objective:** Financial awards can be an important factor affecting athletes' mental preparation and various skills to manage stress. Since such a link has not yet been studied, the study has been designed to evaluate the moderation effect of financial awards in relation to football players' anxiety and coping skills.

**Methods:** The study consists of 110 male football players aged 18–32 years old (mean  $\pm$  SD: 23.98  $\pm$  3.01 years) who were divided into two groups: financial awarded ( $n = 48$ ) and financial unawarded for sports performance ( $n = 62$ ). The anxiety of football players was measured by the Sport Anxiety Scale SAS-2. Coping strategies to manage stress were assessed by the Athletic Coping Skills Inventory ACSI-28. The effect of financial awards in relation to football players' anxiety and coping skills was evaluated by the mediators' model using the PROCESS software (Hayes, 2018).

**Results:** The results suggest that financial awards are important factors that influence football players' anxiety and coping skills. The financial awards increase the motivation of football players to better prepare for sports performance, which has been proven, through better setting of performance goals and more careful mental preparation. Financially awarded football players seem to respect the coach and follow his instructions to a greater extent than unawarded football players, which may be due to the financial benefits and the commitment they have confirmed by signing to the football club. In another aspect, the financial awards are likely to increase the cognitive trait of the anxiety of football players. It seems that financial players are more concerned about the failure of the match, which increases their anxiety, especially since it is a cognitive part and affects their sports performance.

**Conclusion:** For this reason, we encourage sports organizations to focus more on the mental preparation of football players. It is important to provide football players the opportunity to graduate from short- or long-term mental training conducted by a trained sports psychologist not only at the time of the athlete's failure but also as a preventive measure against increasing cognitive anxiety. We recommend sports organizations to train coaches in the field of mental training, preferably through annual short training sessions with a sports psychologist, to influence the development of desirable athletes' coping skills.

**Keywords:** emotions, mental preparation, stress management, salary, mediation analysis, sports performance, sports psychology

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University of Murcia, Spain

### \*Correspondence:

Adriana Kaplánová  
kaplanova8@uniba.sk

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## INTRODUCTION

Sports performance is associated with a multitude of various feelings. Sometimes athletes feel the excitement and believe in achieving valued goals that bring them coveted happiness and satisfaction. In another aspect, they can feel also scared due to which they become nervous, their muscles get tense, their stomach pains, the body becomes tight, the hands become clammy, and negative thoughts predominate them and hence they start believing that they will never win (Hanin, 2000; Skinner and Brewer, 2004; Bhambri et al., 2005; Bali, 2015; Kaplánová, 2019a,b).

During the competition, athletes' emotions are very intense and in some cases may grow into anxiety (Cisler et al., 2010; Ford et al., 2017; Kaplánová, 2019c; Rice et al., 2019). Anxiety is an unpleasant mental state accompanied by a premonition of threat. It usually binds to an object that is non-specific, unnecessary, scattered, or vague (Martens et al., 1990; Rice et al., 2019). According to psychoanalysts, the stressor may be conscious or unconscious conflicts (Connolly, 2018). Some athletes tend to attach deeper importance to conflicts and therefore experience a stressful situation more often than others (Kaplánová, 2019a,b,c). Moreover, not every stressful situation that an athlete experiences is real and the stressor is present. This is due to a phenomenon that is related to the complexity of the human psyche and is also closely related to self-concept (Sapolský, 2012; Kaplánová and Gregor, 2018). Stressors according to the type of threat can be divided into real and potential stressors. While real stressors really threaten and impair the quality of life of a person, potential stressors relate to the ability to visualize the stressors in such quality and intensity that they produce the same physiological response as real stressors (Godoy et al., 2018).

In a sports context, anxiety is defined as an athlete's tendency to perceive competition as a threat to the organism (Grupe and Nitschke, 2014). While cognitive trait anxiety is associated with negative thinking and fear of sports performance, emotional trait anxiety is associated with the perception of one's own physiological signs of activation, such as rapid heartbeat, shortness of breath, shaking hands or feet, sweating, muscle stiffness, and others (Martens et al., 1990; Kaplánová, 2019a,c; Rice et al., 2019; Gallegos et al., 2020). Athletes' emotions are therefore divided into precompetitive, competitive, and postcompetitive (Cerin and Barnett, 2011; Pellizzari et al., 2011). They have the character of circular feedback, of varying intensity, taking place over time and interacting with each other (Paul and Garg, 2012; Gregor, 2013). They are influenced by factors such as the athletes' mental resilience, their skills to cope with stress, previous experience of a similar situation, expected or unexpected running sports performance, as well as high or low support of fans (Karamousalidis et al., 2006; Kimbrough et al., 2007; Daroglou, 2011; Jooste et al., 2014).

The competition is a culmination of the training of athletes during which they make every effort to achieve the best possible physical and mental effort. Coping skills are the ability of a person to meet conditions that currently exceed their adaptive skills (Hanton et al., 2015). It is an effort of behavioral and cognitive character that is aimed at adapting or overcoming requirements

(Folkman and Moskowitz, 2004). Coping skills are generally associated with adaptive, constructive ways of dealing with a stressful situation in which the individual successfully eliminates stress and is able to perform optimally (Géczi et al., 2008; Vidic et al., 2017). The competition is very demanding for the psychological processing of an unexpected result. If athletes are unable to handle it properly, it can lead to various psychological problems. It has been found that there are fragments that consist of fear, tension, or unpleasant experiences that can cumulate and grow into anxiety. Therefore, it makes sense to deal with psychological training of athletes not only when the athletes fail but also as a preventive measure against failure (Kaplánová, 2018; Kaplánová, 2019a,b,c).

Over the past decade, experts have increased research attention to skills to manage stress in various sports (Bebetsos and Antoniou, 2003; Karamousalidis et al., 2006; Daroglou, 2011; Jooste et al., 2013, 2014; Bebetsos, 2015; Kaplánová, 2018, 2019a,b,c; Hernandez et al., 2019). Also, they have increased attention in the field of anxiety research in the context of sports performance (Géczi et al., 2008; Ford et al., 2017; Castro-Sánchez et al., 2019; Kaplánová, 2019a,c; Gallegos et al., 2020). Financial awards can be an important factor affecting athletes' mental preparation and various skills to manage stress. Since such a link has not yet been studied, the study has been designed to evaluate the moderation effect of financial awards in relation to football players' anxiety and coping skills. We have defined a research question "Are the financial awards a moderator of the relationship between football players' anxiety and coping skills?"

## MATERIALS AND METHODS

### Participants

The study involved 110 male football players aged 18–32 years old (mean  $\pm$  SD: 23.98  $\pm$  3.01 years) and of sporting age (mean  $\pm$  SD: 15.25  $\pm$  2.25). At the time of filling in the inventories, all participants were active football players registered in the Slovak Football Association (SFZ). Participants were divided into two groups. The criterion of distribution was the signing of a professional contract with the relevant football club and financial awards for sports performance. The study involved 48 awarded football players aged 18–32 years old (mean  $\pm$  SD: 23.08  $\pm$  2.74 years) playing in the first football league currently known as the Fortuna Ligue, and 62 unawarded football players aged 19–29 years old (mean  $\pm$  SD: 23.08  $\pm$  3.36 years) playing in lower football leagues.

### Measures

#### Athletic Coping Skills Inventory ACSI-28

This inventory is a validated tool commonly used in discovering the level of coping skills among athletes (Smith et al., 1995). ACSI-28 is composed of 28 items and 7 subscales. Each statement in ACSI-28 describes the experiences of other athletes, which prompts the participant to indicate the frequency of similar experiences. Whether athletes are able to remain calm, even when things are going badly, is monitored by the subscale of coping with adversity. The subscale of coachability evaluates openness

and the ability to listen to the coach's instructions. Good sports performance in competition is also dependent on concentration, confidence, and achievement motivation, which evaluates the subscale of concentration and the subscale of confidence and achievement motivation. Athletes should be mentally prepared for performance and have their stress under control during the competition. The level of these skills monitors the subscale of goal setting and mental preparation and the subscale of peaking under pressure. Sometimes it happens that athletes worry about what others will think if they perform poorly. These worries assess the subscale called freedom from worry (Smith et al., 1995). The response format for each item consists of a linear four-point scale ranging from 0 (almost never) to 3 (almost always). Scores range from a low of 0 to a high of 12 on each subscale, with higher scores indicating greater strengths on that subscale. The score for the total scale ranges from a low of 0 to a high of 84, with higher scores signifying greater strength. Cronbach's alpha based on the classical items analysis was from 0.70 to 0.78.

### Sport Anxiety Scale SAS-2

This scale is a measure that assesses the competitive trait anxiety experienced by athletes. It is a multidimensional measure of anxiety in sports performance settings. It is composed of a 15-item scale and includes three subscales: worry, somatics, and concentration disruption. The cognitive trait anxiety involved concerns about performing poorly and the resulting negative consequences. The somatic construct involved various indices of autonomic arousal centered in the stomach and muscles. And the concentration disruption involved difficulties in focusing on task-relevant cues (Smith et al., 2006). The response format for each item consists of a linear four-point scale ranging from 1 (no at all) to 4 (very much). The score for each subscale is calculated as the mean of the scores of subscale items and varies from one to four, with a low score indicating a less intense form of that type of competitive anxiety and a high score indicating a high probability of exhibiting that type of anxiety. Cronbach's alpha based on the classical items analysis was 0.78 for cognitive trait anxiety, 0.91 for somatic trait anxiety, and 0.73 for concentration disruption.

### Procedure

Athletics coping skills inventories ACSI-28 and Sport Anxiety Scale SAS-2 were applied by a sports psychologist (author of the study) with years of experience in the field. The inventories were provided in a single booklet, which was given to football players. In a complementary way, data about sociodemographic aspects, information about contracts with football clubs, and financial awards for sports performance were also collected. In all the cases, the questionnaires were filled anonymously, and participation in the study was entirely voluntary. The study design was approved by the Ethics Committee of Comenius University in Bratislava, Slovakia. All participants were informed about the aims, methods of data collection, and their use for research purposes. In addition, all participants gave written informed consent in accordance with the Declaration of Helsinki.

## Statistical Analyses

We subjected our data to regression moderation analysis focusing on the moderation role of financial awards in the relationship between coping skills and anxiety. Computational macro for path analysis is based on moderation providing coefficient estimations using ordinary least squares regression for continuous variables. The moderation effect was estimated using Process 3.1 developed by Hayes (2018). To reduce the chances of obtaining false-positive results (type I errors), Bonferroni correction was additionally conducted (Bland and Altman, 1995). The data were analyzed by using the PROCESS software (Hayes, 2018) implemented on SPSS IBM SPSS Statistics.

## RESULTS

List of study variables with their possible score ranges, mean scores, and standard deviations separately for a group of awarded and unawarded football players are presented in **Table 1**. The results of moderation analysis with selected coping skills as dependent variables, cognitive trait anxiety as an independent variable, and financial awards as a moderator are presented in **Table 2**. Together, 21 analyses were carried out. The moderation effect of the financial awards was found to be significant in the subscale coachability of football players and their cognitive trait anxiety [ $F(3,106) = 3.24, p < 0.01, R^2 = 0.084$ ]. The moderation effect of financial awards was detected as significant between subscale confidence and achievement motivation and cognitive trait anxiety [ $F(3,106) = 2.91, p < 0.05, R^2 = 0.076$ ], as well as between subscale goal setting and mental preparation of football players and their cognitive trait anxiety [ $F(3,106) = 4.64, p < 0.05, R^2 = 0.116$ ]. The moderation effect of financial awards in the relationship between selected coping skills of football

**TABLE 1** | List of study variables with their possible score ranges, mean scores, and standard deviations separately for a group of awarded and unawarded football players.

Variables	Ranges	Football players ( <i>n</i> = 110)			
		Awarded ( <i>n</i> = 48)		Unawarded ( <i>n</i> = 62)	
		<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Coping with adversity	0–12	7.21	1.87	6.55	1.99
Coachability	0–12	6.33	1.62	6.11	1.63
Concentration	0–12	7.42	1.91	7.29	1.84
Confidence and achievement motivation	0–12	8.46	2.02	7.58	2.23
Goal setting and mental preparation	0–12	6.02	2.33	5.27	2.08
Peaking under pressure	0–12	6.48	2.79	5.42	2.78
Freedom from worry	0–12	4.35	2.11	5.26	2.26
Cognitive trait anxiety	5–20	8.90	2.83	10.52	3.62
Emotional trait anxiety	5–20	8.71	2.34	8.13	2.32
Concentration disruption	5.20	5.54	1.71	5.89	1.45

*n*, sample size; *Range*, possible score range; *M*, mean; *SD*, standard deviation.

**TABLE 2 |** Results of moderation analysis with selected coping skills as dependent variables, cognitive trait anxiety as the independent variable, and financial awards as the moderator.

Predictors	Coefficient	95% Confidence intervals	R <sup>2</sup> whole model	R <sup>2</sup> increase due to interaction
<b>Model 1 – Coachability as dependent variable</b>				
CA	0.109	(−0.020, 0.238)	0.084	0.013**
Financial awards	0.182	(−0.422, 0.787)		
CTA × CA	−0.333	(−0.593, −0.073)		
<b>Model 2 – Confidence and achievement motivation as dependent variables</b>				
CAM	−0.011	(−0.185, 0.163)	0.076	0.046*
Financial awards	0.910	(0.095, 1.725)		
CTA × CAM	−0.357	(−0.707, −0.006)		
<b>Model 3 – Goal setting and mental preparation as dependent variables</b>				
GSMP	0.207	(0.034, 0.380)	0.116	0.028*
Financial awards	0.656	(−0.156, 1.467)		
CTA × GSMP	−0.393	(−0.742, −0.045)		

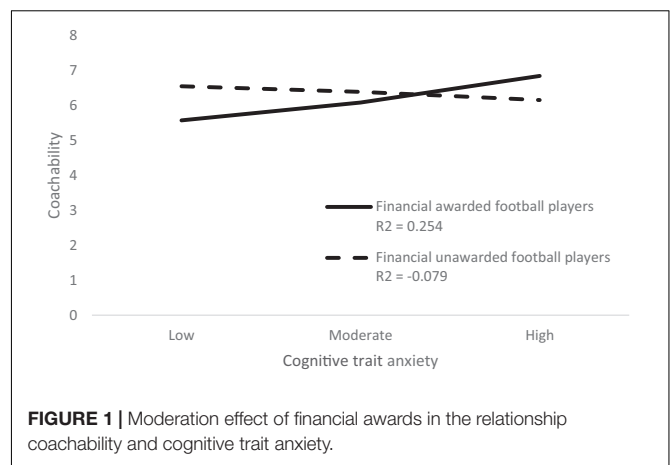
CA, coachability; CAM, confidence and achievement motivation; GSMP, goal setting and mental preparation; CTA, cognitive trait anxiety. \*\* $p \leq 0.01$ , \* $p \leq 0.05$ .

players and their cognitive trait anxiety is graphically presented in Figures 1–3.

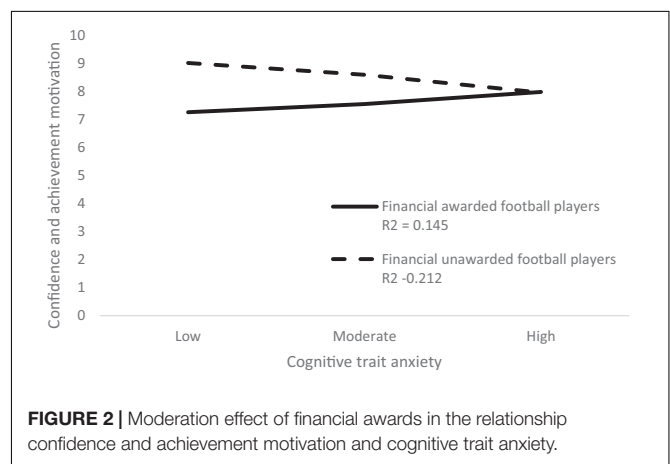
## DISCUSSION

We provide evidence that financial awards are important factors affecting football players' anxiety and coping skills. This result specifies the understanding of the financial award's effect on their cognitive trait anxiety and selected coping skills. The results of our research extend the knowledge of previous researches showing that anxiety is closely related to skills to manage stress (Rahnama et al., 2017; Jung et al., 2019; Kaplánová, 2019a,c; Morales-Rodríguez and Pérez-Mármol, 2019).

In the present study, financially awarded football players outperformed football players without financial awards when they scored higher in the subscale coachability. This is the first evidence to show that financial awards can influence the perception of coach criticism and improve his authority. One of the qualitative studies analyzing strategies to maintain a coach–analyst relationship in professional football using the COMPASS model has demonstrated the dominance of coaching attitude in the case of 66.9% football players (Bateman and Jones, 2019). In our study, we also demonstrated that financially awarded football players are humbler than unawarded football players; they are better at accepting constructive criticism from the coach without taking it personally or becoming upset. It seems that professional football players prefer an authoritative coach approach that increases their mental resilience, which is consistent with partial findings (Géczi et al., 2008). Although the results suggest that funding has a positive impact on the development of players' mental resilience and the coach can be an important facilitator for their improvement, our study also revealed that funding increases the anxiety of football players' cognitive trait anxiety, which is manifested by increased fear of failure and inhibits sports performance (Kaplánová, 2019b).



**FIGURE 1 |** Moderation effect of financial awards in the relationship coachability and cognitive trait anxiety.

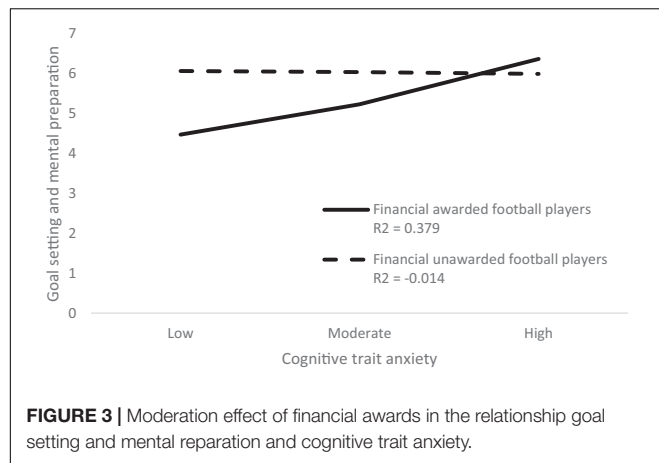


**FIGURE 2 |** Moderation effect of financial awards in the relationship confidence and achievement motivation and cognitive trait anxiety.

There are various techniques used by sports psychologists to reduce cognitive trait anxiety. Perhaps the most effective is a cognitive technique called reframing. Reframing helps coaches transform the negative content in the athlete's mind into a more positive form. It is the framing of negative thoughts that hamper sports performance into a perspective that promotes sports performance. This technique allows athletes to look at the situation from a different perspective, helping to see the wider context; it allows them to recognize and appreciate a positive view even in a seemingly negative situation (Kaplánová and Gregor, 2019). Reframing does not change the athletes' situation; it only changes their emotional experience by pointing out the importance of not giving up (Mattila, 2015). Therefore, we encourage sports organizations to train football coaches under the supervision of sport psychologists with a special focus on developing the relationship between the coach and football players, as well as using effective cognitive techniques, e.g., reframing, to reduce cognitive trait anxiety.

Mental training is an essential part of the complex training of athletes. The correct setting of short- and long-term goals is very important for athletes (Bebetsos and Antoniou, 2003; Daroglou, 2011; Bebetsos, 2015). Athletes feel regret, sadness, and disappointment after a lost match, and according to Higgins' self-discrepancy theory, this can be explained by the





contradiction between the real and the expected self (Bak, 2014; Kaplánová, 2019a,b,c). If an athlete's performances in competition are lower than their aspirational level, it is a form of failure for the athletes, saturated with the emotions of hopelessness, regret, and grief. When there is insufficient satisfaction of the need for success or coping with a critical situation, the athlete experiences frustration (Kaplánová and Gregor, 2019). In our research, it seems that financially awarded football players have achieved higher scores in subscales goal setting and mental preparation compared to football players without financial awards. The gap between expectations and the achievement of goals leads to less frustration and better mental preparation. At the same time, there is a conflict that is likely to increase the cognitive trait anxiety of awarded football players. This conflict can be explained by Dweck's implicit theories (Dweck, 2012; Costa and Faria, 2018). According to these theories, football players have a strong need for growth, self-development, and self-realization, but at the same time, they wish to satisfy the need for safety. On this basis, it can be assumed that the need for self-realization in the context of sport satisfies the excellent sports performance of an individual or a team. However, the need for safety is provided to the audience. Audience's emotions seem to be an important factor for the performance of professional football players (Ribeiro et al., 2017). Therefore, we think that by implementing psychological training for football players, which will also deal with conflicts of needs, we can increase their sports performance while reducing the frustration of the audience from poor team performance.

The moderation effect of financial awards was detected as significant between the subscale confidence and achievement motivation and cognitive trait anxiety. Confidence is made up of self-assessment of one's own activities, the outcome of the social comparison process with others, and a reflection of fan, audience, or media support (Keegan et al., 2010; Harwood et al., 2015; Kaplánová and Gregor, 2018; Bojanić et al., 2019). If the environment is favorable and supportive, it is manifested by increasing confidence and the motivation to achieve success of athletes; if the environment is hostile, it reduces the performance (Hays et al., 2009; Kaplánová, 2019b). The results of our study showed that financially awarded football players have higher

confidence compared to the other unawarded group and that financial awards positively influence achievement motivation. Signing a contract with a football club creates a psychological commitment that can be defined as an internal psychological state of mind that an individual has against an object (Heere and Dickson, 2008). In the context of sport, this may be a football club that expects athletes to have excellent sports performance but also fans and audiences who came to support the preferred football team. Keeping this commitment and avoiding sanctions can increase football players' cognitive trait anxiety, manifested by negative thoughts and fear of losing financial benefits, popularity, or prestige, which extends the findings of previous studies (Kaplánová, 2019b,c). There are studies confirming that a high level of confidence improves athletes' sports performance (Kaplánová and Gregor, 2018; Kaplánová, 2019b), but even those consider that too high a level of confidence may be an obstacle to performance (Hays et al., 2009). Therefore, we recommend that sports organizations also undertake training courses for coaches and football players aimed at developing adequate confidence and achievement motivation, as well as courses aimed at dealing with conflicts caused by pressure from fans, audiences, or media on confidence of football players. The aim of psychological training of athletes should be to ensure adequate psychological adaptation of athletes not only to training but also to competitive conditions in sport. For this reason, in the short term, we recommend that sports psychologists focus their psychological training on regulating the current mental state of football players (precompetitive, competitive, and postcompetitive states) in order to achieve their maximum sports performance. In long-term psychological training, we recommend focusing on increasing the psychological resilience of football players by shaping their personality traits, which is a demonstrable prerequisite for high performance in sports and requires a continuous psychological approach under the guidance of a trained sports psychologist.

The limit of the study is the investigation of the moderating effect of financial awards on the relationship between football players' anxiety and coping skills only in the male gender. For this reason, we recommend expanding the research sample to include female football players in future research or conducting a gender comparison study. Another limit of the study is the different values of salaries of football players, which may have played a different role in experiencing anxiety. Therefore, we recommend extending research to this aspect as well.

## CONCLUSION

The results evidenced the fact that financial awards are important factors affecting the cognitive trait anxiety of football players and their selected coping skills. Financial awards increase confidence, achievement motivation, coachability, goal setting, and mental preparation of football players, which proves them to be supportive of sports performance but also increases cognitive trait anxiety, which ties with negative thoughts inhibiting performance in sports. For this reason, we encourage sports organizations to focus more on the mental preparation of football



players. We recommend football players graduate from short- or long-term mental training conducted by a trained sports psychologist not only at the time of their failure but also as a preventive measure against increasing cognitive anxiety. We recommend sports organizations to train coaches in the field of mental training to influence the development of desirable athletes' coping skills.

## DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation, to any qualified researcher.

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## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Comenius University in Bratislava, Slovakia. The patients/participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

AK contributed conception and design of the study, organized the database, performed the statistical analysis, wrote the first draft of the manuscript, contributed to manuscript revision and, read and approved the submitted version.

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# Emotions and Sport Management: A Bibliometric Overview

Hugo Baier-Fuentes<sup>1\*</sup>, María Huertas González-Serrano<sup>2</sup>, Manuel Alonso-Dos Santos<sup>1,3</sup>, Williams Inzunza-Mendoza<sup>1</sup> and Víctor Pozo-Estrada<sup>1</sup>

<sup>1</sup> Department of Business Administration, Universidad Católica de la Santísima Concepción, Concepción, Chile,

<sup>2</sup> Department of Teaching and Learning of Physical Education, Plastic and Music Education, Universidad Católica

de Valencia, Valencia, Spain, <sup>3</sup> Department of Marketing and Market Research, Facultad de Ciencias Económicas y Empresariales, University of Granada, Granada, Spain

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### \*Correspondence:

Hugo Baier-Fuentes  
hbaier@ucsc.cl

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Emotions are considered a fundamental aspect of sport scenarios, and within sports, consumer behavior is a very popular area of research in the sport management field. Thus, in recent years, there has been a growing interest for sport managers regarding the role that emotions play in sport consumer behavior. Thus, the aim of this paper is to provide an overview of the academic research on emotions in the sport management field using two techniques: a bibliometric performance analysis and a graphic mapping of the references in this field. This analysis focuses on authors, journals, papers, institutions and countries. Bibliometric indicators including the h-index measure, productivity and the number of citations were used to perform the performance analysis. Then, VOSviewer software was used to perform co-citation, bibliographic coupling and co-occurrence of keyword analysis (mapping analysis). The results of both types of analysis are consistent, with the United States being the most influential country in emotions in sport management research because the main authors and institutions in this research field belong to this country. The overall results indicate that the literature on this research topic has grown significantly in recent years in all scientific disciplines; however, the research topic is incipient, and therefore, the number of articles is still limited. Thus, this research presents the key aspects in the topic of emotions in sport management that could be helpful for researchers and policy makers in the field of sport management to make future decisions.

**Keywords:** emotions, sport management, bibliometric analysis, h-index, mapping science

## INTRODUCTION

Emotions are considered an important component of the client's experience (Schmitt, 1999) and have become a fundamental aspect of sport scenarios in recent years (Pedragosa et al., 2015). Numerous studies have pointed out how emotions influence the performance of sportsmen and sportswomen (e.g., Jones, 2003; Campo et al., 2019; van Kleef et al., 2019). Although the literature on the role of emotions in the sport business was very limited until a few years ago (Wolfe et al., 2005), it has currently become the central axis of the sport business in contemporary societies (Rodríguez-Pomeda et al., 2017). In fact, the sport consumer has become a popular area of study for sport management researchers (Funk et al., 2016) in which the importance of consumer satisfaction and emotions to enhance loyalty has been highlighted (Koenig-Lewis and Palmer, 2014). This focus has developed because knowing customers' emotions and the way they express them allows

sport managers to act on these emotions and reproduce them in an efficient way, with the aim of influencing and guiding them for the benefit of the organization (Puig, 2012).

Emotions can be defined as a set of interactions between objective and subjective factors influenced by neuronal and hormonal systems that can generate affective experiences such as feelings of activation and liking or disliking, cognitive processes such as perceptions and evaluations, the activation of physiological processes and behavior that is general (Kleinginna and Kleinginna, 1981). In the same vein, Scherer (Scherer, 1987, p. 7) defines emotions as “a sequence of interrelated, synchronized changes in the states of all five organismic subsystems in response to the evaluation of an external or internal stimulus event as relevant to central concerns of the organism.” However, the definition of emotion is ambiguous (Vallerand and Blanchard, 2000), and despite recognizing the central role of emotions in consumer behavior, there is still no agreement on its definition (Carneiro et al., 2019). However, it can be seen how emotions are a key factor in general human behavior (Lewis et al., 2008) and in sport consumer behavior (Silla et al., 2014; Calabuig et al., 2015; Alonso-Dos Santos et al., 2019).

Therefore, research on the link between emotions and post-purchase reactions is essential to helping club managers develop strategies to increase spectator attendance at sport events and improve customer retention (Biscaia et al., 2012). In fact, emotions are one of the main reasons for attending a sport event (Malchrowicz-Moško and Chlebosz, 2019), and specific studies have been conducted on how specific emotions contribute to the increased satisfaction and behavioral intentions of spectators during sport events (Biscaia et al., 2012; Calabuig et al., 2016; Jang et al., 2019). Likewise, within the theme of sport events, more recent studies have also analyzed the role of volunteers' emotions in their participation in sport events (Gellweiler et al., 2019). This focus has developed because knowing the emotions within the volunteer population is interesting since volunteering has become increasingly important and is an integral part of the successful organization of sport events and activities (e.g., Dickson et al., 2014; Güntert et al., 2015; Benson and Wise, 2017).

On the other hand, emotions have also been studied within both public and private sport services (Silla et al., 2014; Pedragosa et al., 2015; Ong and Yap, 2017; Foroughi et al., 2019). According to various authors (Dubé and Menon, 2000), users experience emotions during the consumption or practice of activities in a sports center, which arise not only from internal or external attributions but also from interaction with employees or monitors, thereby influencing the final outcome of the experience. Therefore, it can be seen that emotions are important in the field of marketing because emotions can generate differentiation between products and brands through experiences and sensations that arouse these emotions in the consumer (Alvarado, 2008). However, no studies have analyzed the evolution of this area of study of sport management.

Bibliometrics or scientometric analysis is the area of research that helps to analyze current trends in the literature within a particular area and provides guidelines and motivation for future research (Muhuri et al., 2019). Bibliometric analysis can provide

more objective and comprehensive results than typical literature reviews (Ramos-Rodríguez and Ruiz-Navarro, 2004). This type of study is common in a wide range of journals, such as *Journal of Knowledge Management* (Gaviria-Marin et al., 2018, 2019), *International Business Review* (Rialp et al., 2019) or *Computers & Industrial Engineering* (Cancino et al., 2019), to name a few. Although they are also usual to study and analyze specific research fields, such as knowledge management (Gaviria-Marin et al., 2019), international entrepreneurship (Baier-Fuentes et al., 2019), sport entrepreneurship (González-Serrano et al., 2019), sport management (Ciomaga, 2013), sport management and educational management (Belfiore et al., 2019), and fitness equipment (Addolorato et al., 2019). However, no studies that focus on emotions within the field of sport management have been found to the best of our knowledge. Therefore, based on the background presented, the main aim of this paper is to provide a broad quantitative and qualitative view of emotions in the sport management field (ESM hereinafter) by using performance analysis and science mapping. Articles from the journals indexed in Scopus will be analyzed because Scopus is considered one of the most complete databases in the social sciences (Mongeon and Paul-Hus, 2016). The analyses are performed considering the following information: years, authors, papers, journals, institutions and countries. The references were obtained considering all the documents published between 1989 and 2019 in the Scopus database.

The results of the bibliometric analysis, both for the performance analysis and the graphic mapping, are consistent among the two techniques and show that Kaplanidou and Madrigal are among the most productive and influential author regarding emotions in the field of sport management research. Other leaders in the field who are also in top positions are Smith, and more recently, Filo, Calabuig and Crespo, who are gaining importance. The journals focused on sport and service management are the most productive and influential. Among them, the *Sport Management Review* was found to be the most influential journal, followed by, the *European Sport Management Quarterly*, *Journal of Services Marketing* and the *Journal of Service Research*. The United States led the research of emotions in sport management (followed by the Australia, United Kingdom, Germany and Canada) because it hosted the most influential authors and institutions in this field of research. However, in the last five years, other countries such as Spain and South Korea, for example, have contributed significantly to the productivity on this topic, although they are still far from the top positions in the field. Finally, it is important to highlight that the consistency of the results obtained from the two bibliometric approaches provides valuable information within the field of emotions and sport management.

Thus, this paper is organized as follows. The relevance of this topic is presented in this section (section “Introduction”). In the following section, the methodology used in this study is presented (section “Materials and Methods”). Then, the results of this study obtained by the performance bibliometric analysis and the bibliometric mapping are presented (section “Results”). Finally, in section “Conclusion,” the main conclusions of this study are presented.



## MATERIALS AND METHODS

Bibliometrics is a field of research that quantitatively studies bibliographical references (Broadus, 1987); it has become a useful and important technique since it provides general information about the various actors that publish in a particular field of research. In this same line, the usefulness of bibliometric studies lies in finding new research gaps, finding influences or following the research path of a particular scientific actor, among other information.

To find the bibliographic references at the intersection of emotions, sport and management, the Scopus database was used. Among others, Scopus is one of the most important databases among the scientific community, since it has been designed both for the search of bibliographic material and for the analysis of citations (Meho and Yang, 2007), thereby offering the same analysis tools as other frequently used databases such as the Web of Science (WoS hereinafter) (Baier-Fuentes et al., 2019). This database is part of the objective of analyzing the main trends in an area of incipient scientific intersection, such as emotions, sports and management. Therefore, Scopus was selected due that includes the majority of journals indexed in WoS and that it has a greater number of journals (and therefore references) compared to this database (Mongeon and Paul-Hus, 2016). In fact, almost 84% of the articles of WoS can be found in Scopus, and the WoS database includes fewer indexed journals than Scopus, so by selecting Scopus the risk of overlooking documents during the search is reduced (Terán-Yépez et al., 2020). Thus, the reference search was limited to publications found in Scopus and made in the last 30 years (i.e., between 1989 and 2019), whose references were obtained after applying the following keyword combination: [("emotion\*") AND ("sport\*") OR ("emotion\*") AND ("athletic\*")] AND [("entrepreneur\*") OR ("sport\* entrepreneur\*") OR ("marketing\*") OR ("sport\* marketing\*") OR ("management\*") OR ("sport\* management") OR ("sport\* event\*") OR ("athleti\* event\*")]. Subsequently, given the objective of this work, references were selected from the areas of business, management, accounting, economics, sociology, psychology, decision sciences and neuroscience. In addition, to analyze only research studies, only the articles, reviews, notes and letters were selected (Merigó et al., 2015), obtaining a total of 353 references. These references were thoroughly reviewed and only those focusing on the intersection of Emotions and Sport Management were selected, namely 153 references.

According to Noyons et al. (1999), bibliometric studies can involve various complementary methodological techniques, such as performance analysis and the graphic mapping of science, which is also known as bibliometric mapping (Cobo et al., 2010). The first of these techniques uses several bibliometric indicators known in the scientific community. However, there is a controversy in the literature about what indicator could better measure scientific production (Podsakoff et al., 2008). Among the most popular indicators are the number of publications and the number of citations, which represent productivity and influence, respectively (Baier-Fuentes et al., 2019). Some researchers, however, criticize the number of articles indicator,

because a large number of publications does not imply a greater impact or quality of academic research. Similarly, the number of citations has also received criticism, since an author with a high number of citations does not imply more or less quality in his or her research (Cancino et al., 2017b). This is due, among other things, to the author's area of study, in which he may receive a greater or lesser number of citations (Bonilla et al., 2015). The h-index was also used, which integrates in a single measure the number of publications with the number of citations (Hirsch, 2005). This indicator is easy to interpret and indicates the number of N studies that have received at least N citations. However, despite its easy interpretation, this index has not been exempting from criticism. In this sense, Ye and Leydesdorff (2014) points out that the h-index only increases with time, allowing the author to rest confident in this indicator. It has also been noted that this index does not take into account highly cited documents; that is, it ignores citations received above the level of the index. Conversely, it has been noted that the index ignores documents that have not reached the number of citations in h-index (Zhang, 2013; Egghe, 2010). These limitations or criticisms have triggered the emergence of several other indicators such as g-index (Egghe, 2006), AR-index (Jin et al., 2007), hg-index (Alonso et al., 2009), p-index (Prathap, 2010), among several others. However, some studies such as Yan et al. (2016), Cancino et al. (2017a), show that there are no major differences between these indicators, with the exception of some that are little used. Also, although any one of them could be used, the fact is that all indicators have limitations in measuring bibliometric performance (Agarwal et al., 2016). Indeed, Ding et al. (2020) point out that the limitations of these indicators complicate the appropriate choice of indicator to assess research performance. Therefore, and in order to use indicators that are easy to interpret, and also known by the scientific community, in this study we used the h-index. Other indicators that are used are the index of citations per article, citation thresholds, which measure the number of articles over a specific number of citations; and temporality analyses, which allow the analyze the publication behavior of the scientific actors, namely, journals, articles, authors, institutions and countries.

On the other hand, the graphic mapping of science focuses on showing the intellectual connections between the scientific actors who work in a specific field and who are thus related to each other. This graphical representation is obtained from a scientific repository that changes frequently over time (Cobo et al., 2011b) and has been strengthened thanks to computer advances in the development of software that allow the analysis of references (Cobo et al., 2011b). Among the most popular software in the scientific community are BibExcel (Persson et al., 2009), CiteSpace II (Chen, 2006), IN-SPIRE (Wise, 1999), Vantage Point (Porter and Cunningham, 2005), and VOSviewer (van Eck and Waltman, 2010). Given the experience of the researchers, this study uses the VOSviewer software, which carries out its analyses based on different indicators, such as co-citations (Small, 1973), co-authorships (Peters and van Raan, 1991), bibliographic coupling (Kessler, 1963) and co-words (Callon et al., 1983). Please note that co-citation analyses documents that receive citations from the same third documents, by mapping the most cited



sources (represented by the size of the circles), and the connection between those cited by the same sources represented by lines (Cancino et al., 2017b; Valenzuela et al., 2017). Co-authorship measures the degree of co-authorship that has developed in the field of study. Bibliographic coupling measures the number of times that two documents cite the same third document represented the most influential documents (represented by size of the circles) and similarity in the reference profile (Kessler, 1963). Finally, co-occurrence of keywords is used to study the conceptual structure of the field of study and to know - given the size of the circles - the keywords most frequently used in documents (Laengle et al., 2017; Martínez-López et al., 2018). This analysis is also used to know the conceptual evolution of the field of study over time. In the figure, the thickness of the lines represents the intensity or the strength of the link between the analyzed elements, hence, the thicker the line is, the higher the number of co-occurrences between these elements (Calabuig-Moreno et al., 2020).

Therefore, based on the developed background, the present article includes a complete performance analysis and the graphic mapping of the field of research in an updated state. However, given the changing dynamics of science, the data presented may change over time, especially for those more recent publications that, naturally and depending on their quality, must improve their indicators.

## RESULTS

### Performance Bibliometric Analysis

This section presents the main results of the bibliometric performance analysis. For this purpose, the series of indicators described above will be taken into account based on the number of articles published, the number of citations received, and the h-index, among others.

First, the general aspects of the research topic are shown. This research analyses the publications related to this topic from 1989 onward. It must be taken into account that the research topic is incipient, and therefore, the number of articles is still limited. In addition, as is logical, the references are distributed throughout different scientific disciplines, as shown in **Table 1**.

Likewise, **Figure 1** shows the growth trend of publications made at the intersection of the above disciplines. Note that the blue bars represent the 709 references that are somehow related to the research topic. These bars include all types of documents, such as articles, conference papers, reviews, book chapters, and books. However, it is part of the bibliometric methodological procedure to analyze only research papers, namely, articles, reviews, notes and letters. Therefore, the red bars in the figure represent these types of documents. The green bars represent the references that converge on the research topics. However, the orange bars represent the references that are the final objective of our study, which is to analyze the literature at the intersection of emotions and sports management.

Another way to analyze the growth and the influence of the literature on this research topic is through the general citation structure of the publications, as presented in **Table 2**.

**TABLE 1** | Research Area in research topic.

R	Area	TP
1	Medicine	240
2	Business, Management, and Accounting	185
3	Social Sciences	140
4	Psychology	121
5	Health Professions	110
6	Computer Science	61
7	Decision Sciences	49
8	Engineering	35
9	Arts and Humanities	33
10	Neuroscience	27
11	Economics, Econometrics and Finance	26
12	Nursing	20
13	Biochemistry, Genetics and Molecular Biology	19
14	Agricultural and Biological Sciences	15
15	Environmental Science	15
16	Mathematics	15
17	Materials Science	11
18	Energy	7
19	Multidisciplinary	7
20	Physics and Astronomy	6
21	Chemical Engineering	3
22	Earth and Planetary Sciences	3
23	Veterinary	3
24	Chemistry	2
25	Pharmacology, Toxicology and Pharmaceutics	2
26	Dentistry	1
27	Immunology and Microbiology	1
28	Undefined	1

Source: Own elaboration based on Scopus 2019. TP, Total Papers.

The publications are ordered according to the thresholds of citations received and the year they were published. Other general indicators corresponding to each year are also included. It can be seen that until 2006, the growth of the literature was slow, and its influence was not significant. Since 2006, the literature has been characterized by slow growth, but some articles are published that, to date, are the most influential on this topic. For example, the year 2008 is important because Martin et al., published his article “The role of emotion in explaining consumer satisfaction and future behavioral intention” in the *Journal of Sport Management*. This article is the most cited on this topic, with 118 citations, and it focuses on the emotions of the match spectators of a football stadium. A time-elapsd three-stage survey was used to evaluate the changes of emotions over time. Finally, these authors highlight the need to use emotional and cognitive measures of satisfaction to measure and evaluate customer satisfaction and future behavioral intention of sport spectators.

In the following decade (2006–2019), 98% of the total articles analyzed in this study were published, of which 30% received at least 10 citations. In summary, given the incipient nature of this research topic, there are still articles to be positioned in order to set trends and influence the research topic. To

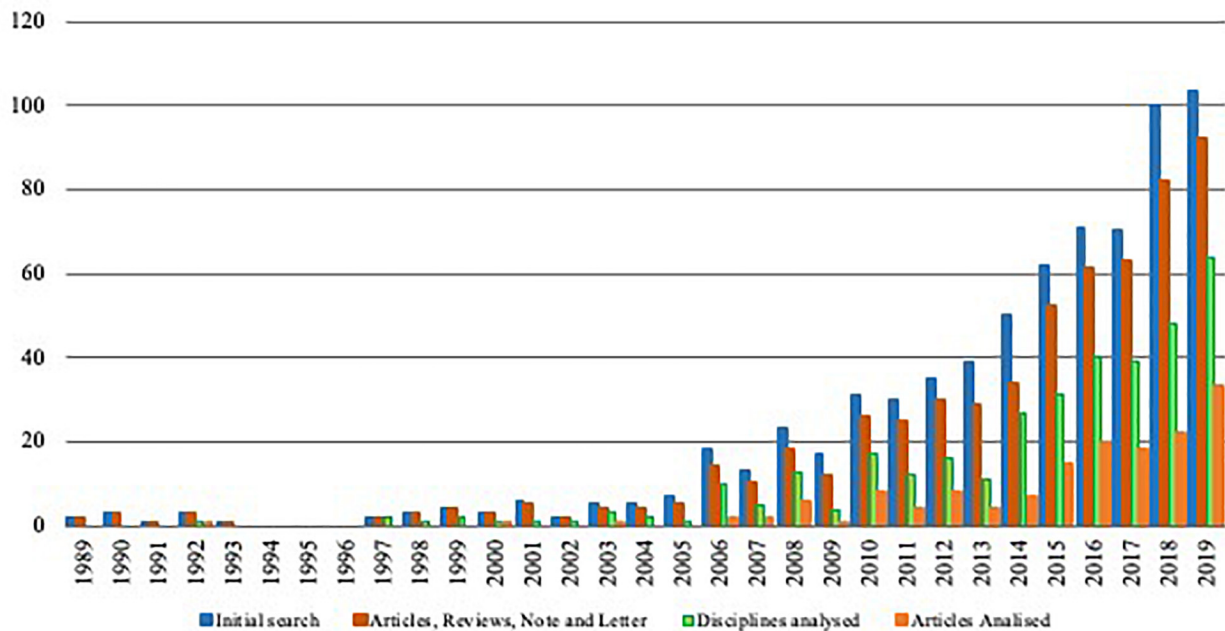


FIGURE 1 | Growth trend in research topic publications.

date, only two articles have received more than 100 citations, but it is hoped that other articles of a theoretical nature will be able to provide influence and mark out clear paths of research in these areas.

### The Most Influential Journal in ESM Research

As mentioned, the articles published at the intersection of emotions and sport management are studied in several disciplines, and logically, a wide range of journals, including some that specialize in this area, have published articles on this topic. **Table 3** shows the classification of the 40 most influential and productive journals in this field. Other indicators concerning the evolution of publications by decade or the citation thresholds of the articles published by each journal have been included in this table. In addition, other general indicators of the journals, such as the total number of articles published, the total citations and the h-index, are also presented. Finally, the journals are ordered according to their influence on the research topic (TCES *hereinafter*). In case of a tie in the number of citations, the total number of publications is considered (TPES *hereinafter*), followed by the h-index (HES *hereinafter*). These three indicators (TCES, TPES and HES) consider only the number of citations, papers and the h-index of each paper in the ESM research topic. Note that general indicators of the journal are presented with respect to the number of citations (TC), number of papers (TP) and the h-index (H).

According to **Table 3**, the most influential journal in the ESM research topic is the *Sport Management Review* (SMR), with 242 citations. Note that 98 of these quotes are those received by the 2010 Smith and Stewart article. Other authors who have contributed to the positioning of this journal are

Lamont, Hing and Vitartas or Doyle, Filo, Funk and McDonald with their 2016 articles which have each received 26 citations. *Sport Management Review* is also the most productive journal, with 20 articles, representing 13.1% of the articles published on this topic. Other influential journals that appear at the top of the ranking are specific journals in the field of Sports Management and the area of Business or Marketing, such as the *European Sport Management Quarterly* or the *Journal of Sport Management*, as well as the *Journal of Service Marketing* or the *Journal of Service Research*. Finally, from a more general perspective, the results show that research on this topic has been progressively published in various journals. In fact, the last decade has been very productive, and almost all journals published at least one paper in this field of research. Even so, it should be noted that despite an increase in research, several journals have stopped publishing on this topic. Therefore, it is expected that other journals will take an interest in this interesting research topic.

### The Most Influential Articles in ESM Research

Another aspect that is interesting to analyze is the most influential publications on this research topic. That is, those that have received the most citations. Note that the number of citations (TC in **Table 4**), is a reflection of the popularity and influence that each article has in the scientific community (Baier-Fuentes et al., 2019). **Table 4** presents the 50 most cited articles in this research topic.

As mentioned previously, the most widely cited research article on this topic was published by Martin et al., 2008 in the *Journal of Sport Management*. Logically, this article is also important for the journal because it has allowed the journal to

**TABLE 2 |** Structure of research topic citations.

Year	TPES	TCES	HES	ACES	%PES	≥100	≥50	≥25	≥10	≥5
1992	1	19	1	19,00	0,01	–	–	–	1	–
1993	–	–	–	–	–	–	–	–	–	–
1994	–	–	–	–	–	–	–	–	–	–
1995	–	–	–	–	–	–	–	–	–	–
1996	–	–	–	–	–	–	–	–	–	–
1997	–	–	–	–	–	–	–	–	–	–
1998	–	–	–	–	–	–	–	–	–	–
1999	–	–	–	–	–	–	–	–	–	–
2000	1	54	1	54,00	0,01	–	1	–	–	–
2001	–	–	–	–	–	–	–	–	–	–
2002	–	–	–	–	–	–	–	–	–	–
2003	1	59	1	59,00	0,01	–	1	–	–	–
2004	–	–	–	–	–	–	–	–	–	–
2005	–	–	–	–	–	–	–	–	–	–
2006	2	70	2	35,00	0,01	–	1	–	1	–
2007	2	98	2	49,00	0,01	–	1	1	–	–
2008	6	301	5	50,17	0,04	1	–	3	–	1
2009	1	25	1	25,00	0,01	–	–	1	–	–
2010	8	258	7	32,25	0,05	–	1	3	2	–
2011	4	85	4	21,25	0,03	–	–	2	1	1
2012	8	294	7	36,75	0,05	–	3	1	2	1
2013	4	44	3	11,00	0,03	–	–	1	1	–
2014	7	26	3	3,71	0,05	–	–	–	1	1
2015	15	196	7	13,07	0,10	–	1	1	4	2
2016	20	181	7	9,05	0,13	–	–	3	3	5
2017	18	95	6	5,28	0,12	–	–	–	4	3
2018	22	72	5	3,27	0,14	–	–	–	–	6
2019	33	37	4	1,12	0,22	–	–	–	1	–

Source: Own elaboration based on Scopus 2019. Abbreviations: R, Ranking; TCES and TPES, total citations and papers only ESM field; HES, h-index only ESM field; ACES, average citations per paper; %PES, percentage of papers compared to the total of papers in the ESM field; ≥100, ≥50, ≥25, ≥10, ≥5 number of paper with more than 100, 50, 25, 10, and 5 citations.

position itself as one of the five most influential journals on this topic. The second most cited article, with 98 citations, is one by Smith and Stewart, which was published in 2010 in the *Sport Management Review*. Note that both articles show a good indicator of citations per year (9.8 Citation/Year). Related to this indicator of citations per year, an article published in 2015 in *Computer in Human Behavior* written by Lim, Hwang, Kim and Biocca stands out. This article, which receives an average of 14.2 citations per year, reveals that viewers who are able to convey their emotions through a TV sports channel's social networks during the transmission of a mega sports event such as the 2014 Sochi Olympic Games increase their commitment and loyalty to the TV channel. It is also important to highlight Kaplanidou as the researcher who dominates this list with 5 articles, of which 4 are among the 20 most-cited articles.

### The Most Productive and Influential Authors in ESM Research

Several authors have contributed to the development of this research topic. In fact, and as is natural, the last few years

have seen the emergence of many authors. **Table 5** lists the 40 most productive and influential authors in this field of research. Please note that the indicator used to classify these researchers is TCES. In the case of a tie, the indicators considered are TPES and HES.

First, note that the first three indicators (TCES, TPES and HES), consider only the number of citations, papers and the h-index of each author regarding their contributions to the ESM research topic. However, the authors often collaborate and contribute to other areas of research, so we present these same indicators (TC, TP and H) that include these contributions at a general level. Overall, these latter indicators show that several prominent authors have impacted science in general. These include, for example, Funk and Anguera, each with over 2000 citations and 100 papers. However, by focusing only on the field analyzed in this study, Kaplanidou clearly stands out as the most influential and productive author since he has the best indicator outcomes for all the indicators of the analysis, that is, in the indicators of influence (TCES), productivity (TPES) and h-index. However, it is also noted that this same author has not contributed in the last five years (Q4). Other influential authors in this field are Madrigal and Smith, both with more than 98 citations each. Following these authors, please note that the citation indicator falls in the range of 50–60 citations, which is applicable to Filo, Breuer and Hallmann. Several authors also stand out for the significant influence they have achieved with the papers they have published in the last five years (Q4), which has allowed them to position themselves in the top 10 positions of influence. This is the case, for example, for Filo or Funk. In relation to the number of articles per author, no great differences are observed between the authors. However, authors such as Hernández-Mendo and Pérez-López occupy the second position for productivity, with 4 articles published in the last five years. To complement this information and therefore provide a more complete view of the authors who publish in this field, other columns have been included in **Table 5** that give general bibliometric information about each author. Since most authors are strongly research oriented, the information presented in these columns represents the productivity and influence that these authors generally have in other fields of research.

When analyzing the evolution over time of publications per author, between the first and second five-year periods (Q1 and Q2, respectively), one author appear who are assumed to have begun to focus on this field of research. In the Q1 period, for example, Madrigal, with his article published in the *Journal of Leisure Research*, appears in the field. In the Q2 period, Madrigal and other authors such as Kaplanidou and Anthonissen each publish an article. In the third period (Q3), several authors appear, but among them, without a doubt, Kaplanidou stands out with the publication of 5 of his 6 articles. The fourth period (Q4) is the period in which most of the authors appear in the field. Among them, Hernández-Mendo and Pérez-López are the most productive authors of the period.

Another interesting aspect to observe is the productivity of the authors in the productive core of the research field. To this end,

**TABLE 3 |** Most influential journal in ESM research.

R	Journal	TCES	TPES	HES	%PES	≥100	≥50	≥25	≥10	≥5	D1	D2	D3	2019	TP	TC	SJR	T50	H
1	SMR	242	20	8	13,07	–	1	3	2	3	–	1	10	9	620	11.185	1.769	6	50
2	ESMQ	155	7	4	4,58	–	2	1	1	–	–	–	4	3	327	3.281	1.280	4	29
3	JSMk	134	2	2	1,31	1	–	1	–	–	–	1	1	–	1.316	45.397	1.021	2	102
4	JSR	122	3	3	1,96	–	1	1	1	–	–	2	1	–	621	49.660	3.340	3	113
5	JSM	99	6	5	3,92	–	1	–	3	1	–	–	6	–	684	15.711	1.469	2	61
6	EM	93	6	3	3,92	–	1	–	1	–	–	1	3	2	502	3.876	0.488	2	30
7	JLR	84	1	1	0,65	–	1	–	–	–	–	1	–	–	852	24.957	0.53	1	74
8	CHB	81	2	2	1,31	–	1	–	1	–	–	–	1	1	6.382	149.856	1.711	2	137
9	AMA	80	1	1	0,65	–	1	–	–	–	–	–	1	–	182	15.463	12.7	1	66
10	IJSMS	78	4	3	2,61	–	–	2	1	–	–	–	3	1	326	1.725	0.419	3	20
11	JST	55	6	3	3,92	–	–	1	2	–	–	–	3	2	425	6.002	0.581	3	40
12	JBR	32	3	2	1,96	–	–	1	–	–	–	–	2	1	6.741	180.021	1.684	1	158
13	JCP	32	1	1	0,65	–	–	1	–	–	–	1	–	–	1.172	51.671	2.98	1	113
14	IJHM	31	1	1	0,65	–	–	1	–	–	–	–	1	–	4.866	13.257	2	1	93
15	JN	29	1	1	0,65	–	–	1	–	–	–	–	1	–	36.695	635.006	4.21	1	422
16	S&S	25	3	3	1,96	–	–	–	2	–	–	–	3	–	711	3.399	0.403	2	24
17	APJML	25	3	3	1,96	–	–	–	1	1	–	–	3	–	986	9.604	0.333	1	41
18	ETP	24	1	1	0,65	–	–	–	1	–	–	–	1	–	943	72.450	5.07	1	146
19	CPD	20	3	3	1,96	–	–	–	1	–	–	–	3	–	462	1.560	0.379	1	14
20	IJESB	20	1	1	0,65	–	–	–	1	–	–	–	1	–	1.419	11.205	0.4	1	39
21	HBR	19	1	1	0,65	–	–	–	1	–	1	–	–	–	4.268	20.153	0.22	1	161
22	C&S	16	4	3	2,61	–	–	–	–	2	–	–	4	–	210	821	0.721	–	14
23	IJEFM	15	2	1	1,31	–	–	–	1	–	–	–	1	1	206	1.758	0.445	1	22
24	SMQ	10	2	2	1,31	–	–	–	–	1	–	–	2	–	43	93	0.2	–	5
25	SBMJ	9	3	2	1,96	–	–	–	–	1	–	–	3	–	207	844	0.278	–	14
26	IJSMM	7	5	2	3,27	–	–	–	–	–	–	1	4	–	384	2.119	0.263	–	21
27	SBP	7	3	2	1,96	–	–	–	–	–	–	–	3	–	2.580	3.731	0.279	–	47
28	JVM	7	1	1	0,65	–	–	–	–	1	–	–	1	–	741	16.362	0.99	–	62
29	JCET	6	2	1	1,31	–	–	–	–	1	–	–	1	1	299	2.420	0.266	–	24
30	EE	6	1	1	0,65	–	–	–	–	1	–	–	1	–	651	4.777	0.288	–	27
31	INN	6	1	1	0,65	–	–	–	–	1	–	1	–	–	583	1.036	0.16	–	10
32	LS	6	1	1	0,65	–	–	–	–	1	–	–	1	–	1.126	20.854	0.74	–	69
33	SARSPER	5	2	1	1,31	–	–	–	–	1	–	–	2	–	401	1.034	0.19	–	13
34	JHTM	5	1	1	0,65	–	–	–	–	1	–	–	1	–	451	4.289	0.82	–	30
35	JPBM	5	1	1	0,65	–	–	–	–	1	–	–	1	–	815	12.891	0.86	–	82
36	FP	4	1	1	0,65	–	–	–	–	–	–	–	1	–	14.252	117.161	0.977	–	94
37	SiS	3	2	1	1,31	–	–	–	–	–	–	–	1	1	1.602	9.965	0.55	–	37
38	JFMM	3	1	1	0,65	–	–	–	–	–	–	–	1	–	762	10.577	0.653	–	47
39	JGFM	3	1	1	0,65	–	–	–	–	–	–	–	1	–	225	1.494	0.21	–	18
40	JGSM	2	2	1	1,30719	–	–	–	–	–	–	–	2	–	133	209	—	–	6

R, Ranking; TCES and TPES, total citations and papers only ESM field; HES, h-index only ESM field; %PES, percentage of ESM papers in the journal; T50, number of papers in the top 50 list shown in **Table 4**; ≥100, ≥50, ≥25, ≥10, ≥5 number of paper with more than 100, 50, 25, 10, and 5 citations; D1: 1989–1998; D2: 1999–2008; D3: 2009–2018. H, h-index of journal; TP and TC, total papers and citations; SJR, SCImago Journal Rank measures – Scopus 2019. SMR, Sport Management Review; ESMQ, European Sport Management Quarterly; JSMk, Journal Of Services Marketing; JSR, Journal Of Service Research; JSM, Journal Of Sport Management; EM, Event Management; JLR, Journal of Leisure Research; CHB, Computers In Human Behavior; AMA, Academy Of Management Annals; IJSMS, International Journal Of Sports Marketing And Sponsorship; JST, Journal Of Sport And Tourism; JBR, Journal Of Business Research; JCP, Journal Of Consumer Psychology; IJHM, International Journal of Hospitality Management; JN, Journal Of Neuroscience; S&S, Soccer And Society; APJML, Asia Pacific Journal Of Marketing And Logistics; ETP, Entrepreneurship: Theory and Practice; CDP, Cuadernos De Psicologia Del Deporte; IJESB, International Journal of Entrepreneurship and Small Business; HBR, Harvard Business Review; C&S, Communication And Sport; IJEFM, International Journal Of Event And Festival Management; SMQ, Sport Marketing Quarterly; IJSMM, International Journal Of Sport Management And Marketing; SBP, Social Behavior And Personality; JVM, Journal of Vacation Marketing; JCET, Journal Of Convention And Event Tourism; EE, Engineering Economics; INN, Innovar; LS, Leisure Studies; SARSPER, South African Journal For Research In Sport Physical Education And Recreation; JHTM, Journal of Hospitality and Tourism Management; JPBM, Journal of Product and Brand Management; FPs, Frontiers In Psychology; SiS, Sport in Society; JFMM, Journal Of Fashion Marketing And Management; JGFM, Journal of Global Fashion Marketing; JGSM, Journal Of Global Sport Management.

**Table 6** presents a classification of the 40 main authors in relation to the number of documents they have published in the fifteen most productive journals in the field. Note that the journals

presented in the table are ordered from left to right according to their productivity. Likewise, the authors presented in **Table 6** are ordered in the same way as those in **Table 5**.

**TABLE 4 |** The most cited papers in topic research.

R	Title	Authors	Year	Journal	TCES	C/Y
1	The role of emotion in explaining consumer satisfaction and future behavioral intention	Martin, D., O'Neill, M., Hubbard, S., Palmer, A.	2008	JSM	118	9,8
2	The special features of sport: A critical revisit	Smith, A. C. T., Stewart, B.	2010	SMR	98	9,8
3	Investigating an evolving leisure experience: Antecedents and consequences of spectator affect during a live sporting event	Madrigal, R.	2003	JLR	84	4,9
4	The Sporting Life: Exploring Organizations through the Lens of Sport	Day, D. V., Gordon, S., Fink, C.	2012	AMA	80	10,0
5	How social media engagement leads to sports channel loyalty: Mediating roles of social presence and channel commitment	Lim, J. S., Hwang, Y., Kim, S., Biocca, F. A.	2015	CHB	71	14,2
6	Affective event and destination image: Their influence on olympic traveler behavioral intentions	Kaplanidou, K.	2007	EM	71	5,5
7	Consumer orientation toward sporting events: Scale development and validation	Pons, F., Mourali, M., Nyeck, S.	2006	JSR	59	4,2
8	The effects of emotions on football spectators' satisfaction and behavioral intentions	Biscaia, R., Correia, A., Rosado, A., Maroco, J., Ross, S.	2012	ESMQ	56	7,0
9	The importance of legacy outcomes for Olympic Games four summer host cities residents' quality of life: 1996–2008	Kaplanidou, K.	2012	ESMQ	55	6,9
10	The meaning and measurement of a sport event experience among active sport tourists	Kaplanidou, K., Vogt, C.	2010	JSM	54	5,4
11	Addressing participation constraint: A case study of potential skiers	Williams, P., Fidgeon, P. R.	2000	TM	54	2,7
12	Gendered managerial discourses in sport organizations: Multiplicity and complexity	Knoppers, A., Anthonissen, A.	2008	SR	49	4,1
13	The dynamics underlying service firm-customer relationships: Insights from a study of English Premier League soccer fans	Harris, L. C., Ogbonna, E.	2008	JSR	41	3,4
14	Examining the relationship between brand emotion and brand extension among supporters of professional football clubs	Abosag, I., Roper, S., Hind, D.	2012	EJM	40	5,0
15	Event image perceptions among active and passive sports tourists at marathon races	Hallmann, K., Kaplanidou, K., Breuer, C.	2006	IJSMS	37	2,6
16	Hot vs. cold cognitions and consumers' reactions to sporting event outcomes	Madrigal, R.	2008	JCP	32	2,7
17	An empirical model of attendance factors at major sporting events	Hall, J., O'Mahony, B., Vieceli, J.	2010	IJHM	31	3,1
18	Mental hoop diaries: Emotional memories of a college basketball game in rival fans	Botzung, A., Rubin, D. C., Miles, A., Cabeza, R., LaBar, K. S.	2010	JN	29	2,9
19	Affective response to gambling promotions during televised sport: A qualitative analysis	Lamont, M., Hing, N., Vitartas, P.	2016	SMR	28	7,0
20	Spectator emotions: Effects on quality, satisfaction, value, and future intentions	Calabuig, F., Prado-Gascó, V., Crespo, J., Núñez-Pomar, J., Añó, V.	2015	JBR	28	5,6
21	Exploring the role of emotions on sport consumers' behavioral and cognitive responses to marketing stimuli	Dae, H. K., Yu, K. K., Hirt, E. R.	2011	ESMQ	28	3,1
22	The effect of joy on the behavior of cricket spectators: The mediating role of satisfaction	Kuenzel, S., Yassim, M.	2007	ML	27	2,1
23	Exploring PERMA in spectator sport: Applying positive psychology to examine the individual-level benefits of sport consumption	Doyle, J. P., Filo, K., Lock, D., Funk, D. C., McDonald, H.	2016	SMR	26	6,5
24	Retrospective: the importance of servicescapes in leisure service settings	Wakefield, K. L., Blodgett, J.	2016	JSM	26	6,5
25	Analyzing gender dynamics in sport governance: A new regimes-based approach	Adriaanse, J. A., Schofield, T.	2013	SMR	25	3,6

(Continued)



TABLE 4 | Continued

R	Title	Authors	Year	Journal	TCES	C/Y
26	A (mis)guided adventure tourism experience: An autoethnographic analysis of mountaineering in Bolivia	Houge Mackenzie, S., Kerr, J. H.	2012	JST	25	3,1
27	Effects of atmosphere at major sports events: A perspective from environmental psychology	Uhrich, S., Koenigstorfer, J.	2009	IJSMS	25	2,3
28	"Bouncing Back" From a Loss: Entrepreneurial Orientation, Emotions, and Failure Narratives	Wolfe, M. T., Shepherd, D. A.	2015	ETP	24	4,8
29	Spectator Rage as the Dark Side of Engaging Sport Fans: Implications for Services Marketers	Grove, S. J., Pickett, G. M., Jones, S. A., Dorsch, M. J.	2016	JSR	22	5,5
30	Active sport tourists: Sport event image considerations	Kaplanidou, K.	2010	TA	21	2,1
31	Athletes as entrepreneurs: The role of social capital and leadership ability	Ratten, V.	2015	IJESB	20	4,0
32	High-performance marketing: an interview with Nike's Phil Knight. Interview by Geraldine E. Willigan	Knight, P.	1992	HBR	19	0,7
33	Passion and pride in professional sports: Investigating the role of workplace emotion	Swanson, S., Kent, A.	2017	SMR	18	6,0
34	Impact of core product quality on sport fans' emotions and behavioral intentions	Foroughi, B., Nikbin, D., Hyun, S. S., Iranmanesh, M.	2016	IJSMS	16	4,0
35	Exploring the positive psychology domains of well-being activated through charity sport event experiences	Filo, K., Coghlán, A.	2016	EM	16	4,0
36	Emotion and memory in nostalgia sport tourism: examining the attraction to postmodern ballparks through an interdisciplinary lens	Gordon, K. O.	2013	JST	15	2,1
37	Images of rural destinations hosting small-scale sport events	Hallmann, K., Breuer, C.	2011	IJEF	15	1,7
38	Sport spectatorship and life satisfaction: A multicountry investigation	Inoue, Y., Sato, M., Filo, K., Du, J., Funk, D. C.	2017	JSM	14	4,7
39	Existence of mixed emotions during consumption of a sporting event: A real-time measure approach	Kim, J. W., Magnussen, M., Lee, H.-W.	2017	JSM	14	4,7
40	Understanding cycle tourism experiences at the Tour Down Under	Shipway, R., King, K., Lee, I. S., Brown, G.	2016	JST	13	3,3
41	Emotions and sponsorship: A key to global effectiveness? A comparative study of Australia and France	Bal, C., Quester, P., Plewa, C.	2010	APJML	13	1,3
42	Evaluation of total quality in sports municipal services geared to children: Contributions from the qualitative analysis ATLAS.ti	Pérez-López, R., Morales-Sánchez, V., Teresa Anguera, M., Hernández-Mendo, A.	2015	CPD	12	2,4
43	Toward emotional quality service oriented sports organizations child population: A qualitative analysis	Pérez-López, R., Morales-Sánchez, V., Teresa Anguera, M., Hernández-Mendo, A.	2015	RIPED	11	2,2
44	Managing dive centers: SCUBA divers' behavioral intentions	Palau-Saumell, R., Forgas-Coll, S., Sánchez-García, J., Prats-Planagumà, L.	2014	ESMQ	11	1,8
45	Governing by fun: EURO 2008 and the appealing power of fan zones	Lauss, G., Szigetvari, A.	2010	S&S	11	1,1
46	Dropping Out: Why Male and Female Leaders in German Sports Federations Break Off Their Careers	Pfister, G., Radtke, S.	2006	SMR	11	0,8
47	User sentiment analysis based on social network information and its application in consumer reconstruction intention	Zhou, Q., Xu, Z., Yen, N. Y.	2019	CHB	10	10,0
48	Consumers' perceived value of sport team games-a multidimensional approach	Kunkel, T., Doyle, J. P., Berlin, A.	2017	JSM	10	3,3
49	Fragments of us, fragments of them: social media, nationality and US perceptions of the 2014 FIFA World Cup	Billings, A. C., Burch, L. M., Zimmerman, M. H.	2015	S&S	10	2,00
50	It's not whether you win or lose; It's how the game is played:The influence of suspenseful sports programming on advertising	Bee, C., Madrigal, R.	2012	JA	10	1,25

R, Ranking; Journal abbreviations are available in **Table 3**; TCES, Total citation of article; C/Y, Citations per year indicator.

**TABLE 5 |** The most productive and influential authors in ESM research.

R	Name	Country	TCES	TPES	HES	ACP	Q1	Q2	Q3	Q4	TC	TP	H	TP50
1	Kaplanidou, K	USA	240	6	5	40,0	–	1	5	–	1733	58	24	5
2	Madrigal, R	USA	126	3	3	42,0	1	1	1	–	1449	31	15	3
3	Smith, Aaron C. T.	UK	98	2	1	49,0	–	–	1	1	1063	65	19	1
4	Filo, Kevin R.	AUS	56	3	3	18,7	–	–	–	3	708	35	16	–
5	Breuer, C	GER	52	2	2	26,0	–	–	2	–	1424	116	21	2
6	Hallmann, K	GER	52	2	2	26,0	–	–	2	–	904	57	17	2
7	Anthonissen, A	NLD	49	1	1	49,0	–	1	–	–	126	4	4	1
8	Funk, DC.	USA	40	2	2	20,0	–	–	–	2	3570	107	35	2
9	Abosag, I	UK	40	1	1	40,0	–	–	1	–	269	23	9	1
10	Doyle, JP	AUS	36	2	2	18,0	–	–	–	2	177	10	9	2
11	Calabuig-Moreno, F	ESP	34	2	2	17,0	–	–	–	2	391	68	10	1
12	Núñez-Pomar, JM	ESP	34	2	2	17,0	–	–	–	2	139	23	6	1
13	Crespo-Hervás, J	ESP	34	2	2	17,0	–	–	–	2	111	18	6	1
14	Hernández-Mendo, A	ESP	31	4	4	7,8	–	–	–	4	1238	115	19	2
15	Pérez-López, R	ESP	31	4	4	7,8	–	–	–	4	46	5	4	2
16	Lamont, M	AUS	28	2	1	14,0	–	–	–	2	680	43	16	1
17	Anguera-Argilaga, MT	ESP	27	3	3	9,0	–	–	–	3	2319	153	27	2
18	Morales-Sánchez, V	ESP	27	3	3	9,0	–	–	–	3	420	65	13	2
19	Adriaanse, J. A.	AUS	25	1	1	25,0	–	–	1	–	87	10	5	1
20	Kim, JW	USA	18	2	2	9,0	–	–	–	2	58	10	4	2
21	Kent, A	USA	18	2	1	9,0	–	–	–	2	665	26	15	1
22	Swanson, S	UK	18	2	1	9,0	–	–	–	2	66	10	5	1
23	Bee, C	USA	14	2	2	7,0	–	–	1	1	142	12	7	1
24	Kunkel, T	USA	13	2	2	6,5	–	–	–	2	198	19	9	1
25	Ko, Y. J	USA	9	2	2	4,5	–	–	–	2	1397	72	20	–
26	Mutz, M	CHN	8	2	2	4,0	–	–	–	2	187	40	7	–
27	Won, D	USA	8	2	1	4,0	–	–	–	2	238	49	8	–
28	Chiu, W	GER	8	2	1	4,0	–	–	–	2	171	32	7	–
29	Heere, B	USA	7	3	2	2,3	–	–	–	3	761	41	14	–
30	Lee, S	KOR	7	2	2	3,5	–	–	–	2	65	7	3	–
31	Tyler, B.D	USA	6	2	1	3,0	–	–	–	2	111	13	6	1
32	Apostolopoulou, A	USA	6	1	1	6,0	–	–	–	1	216	14	8	–
33	Agha, N	USA	6	1	1	6,0	–	–	–	1	116	12	4	–
34	Byon, K	USA	5	3	1	1,7	–	–	–	3	290	34	7	–
35	Akhoondnejad, A	NZL	5	1	1	5,0	–	–	–	1	57	3	3	–
36	Sato, S	USA	4	2	2	2,0	–	–	–	2	56	14	4	1
37	Alonso-Almeida, MdM	ESP	4	1	1	4,0	–	–	–	1	1604	68	22	–
38	Aiken, Kirk Damon	USA	4	1	1	4,0	–	–	–	1	233	12	6	–
39	Hur, Y	KOR	3	2	1	1,5	–	–	–	2	120	11	4	–
40	Yim, B. H.	USA	1	2	1	0,5	–	–	–	2	28	7	3	–

R, ranking; TCES, TPES and HES, total citation, papers and H-index in ESM field; ACP, average citations per author paper in ESM field; Q1: 2002–2004; Q2: 2005–2009; Q3: 2010–2014; Q4: 2015–2019; TC and TP, total citations and papers received by each author (includes papers in other research fields); H, H-index of each author (includes documents in other research fields); TP50 number of papers in the Top 50 list shown in **Table 4**.

According to **Table 6**, most authors have published in one of the journals. The results indicate that Kaplanidou is the most published author in these journals, with 5 articles. Please note that the second place is occupied by Filo, with 3 articles. Hernández-Mendo and Pérez-López continue with 3 articles each, and so on. Similarly, Hernández-Mendo and Pérez-López stand out as the most published authors in CPD, with 3 articles each. In global terms, it is interesting to note that these authors tend to publish their articles in four journals, such as SMR, CPD, JBR and JSM in the same order of importance. However, the ten authors with

the most citations in the field generally publish in JSM, IJMS or SMR among others.

### The Most Productive and Influential Institutions in ESM Research

Research related to emotions and sport management has attracted the attention of important research groups that usually work in several universities around the world. In recent years, several universities have managed to contribute to the research associated with the management of emotions and sport.

**TABLE 6 |** Total papers authors classified by most productive journals.

R	Name	Country	TCES	TPES	HES	SMR	ESMQ	EM	JST	JSM	IJSMM	C&S	IJSMS	APJMS	CPD	JBR	JSR	S&S	SBP	SBIJ	TP15	OJ
1	Kaplanidou, K	USA	240	6	5	–	1	1	–	1	–	–	2	–	–	–	–	–	–	–	5	1
2	Madrigal, R	USA	126	3	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	3
3	Smith, Aaron C. T.	UK	98	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	2
4	Filo, KR.	AUS	56	3	3	1	–	1	–	1	–	–	–	–	–	–	–	–	–	–	3	0
5	Breuer, C	GER	52	2	2	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1	1
6	Hallmann, K	GER	52	2	2	–	–	–	–	–	–	–	1	–	–	–	–	–	–	–	1	1
7	Anthonissen, A	NLD	49	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	1
8	Funk, DC.	USA	40	2	2	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	2	0
9	Abosag, I	UK	40	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	1
10	Doyle, JP	AUS	36	2	2	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	0	2
11	Calabuig-Moreno, F	ESP	34	2	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	1
12	Núñez-Pomar, JM	ESP	34	2	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	1
13	Crespo-Hervás, J	ESP	34	2	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	1
14	Hernández-Mendo, A	ESP	31	4	4	–	–	–	–	–	–	–	–	–	3	–	–	–	–	–	3	1
15	Pérez-López, R	ESP	31	4	4	–	–	–	–	–	–	–	–	–	3	–	–	–	–	–	3	1
16	Lamont, M	AUS	28	2	1	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	2	0
17	Anguera-Argilaga, MT	ESP	27	3	3	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2	1
18	Morales-Sánchez, V	ESP	27	3	3	–	–	–	–	–	–	–	–	–	2	–	–	–	–	–	2	1
19	Adriaanse, J. A.	AUS	25	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0
20	Kim, JW	USA	18	2	2	–	–	–	–	1	–	–	–	–	–	–	–	–	1	–	2	0
21	Kent, A	USA	18	2	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	0
22	Swanson, S	UK	18	2	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	0
23	Bee, C	USA	14	2	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	1
24	Kunkel, T	USA	13	2	2	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	2	0
25	Ko, Y. J	USA	9	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	2
26	Mutz, M	CHN	8	2	2	–	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	1
27	Won, D	USA	8	2	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	1
28	Chiu, W	GER	8	2	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	1	1
29	Heere, B	USA	7	3	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	1
30	Lee, S	KOR	7	2	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
31	Tyler, B. D	USA	6	2	1	1	–	–	–	–	–	–	–	–	–	1	–	–	–	–	2	0
32	Apostolopoulou, A	USA	6	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	1
33	Agha, N	USA	6	1	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	0
34	Byon, K	USA	5	3	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2
35	Akhoondnejad, A	NZL	5	1	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	1
36	Sato, S	USA	4	2	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1	1
37	Alonso-Almeida, MdM	ESP	4	1	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1	0
38	Aiken, K. D	USA	4	1	1	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	0
39	Hur, Y	KOR	3	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	2	0
40	Yim, B. H.	USA	1	2	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1

Journal Abbreviations are available in **Table 3**. TP15, Amount of paper in major journals; OJ, Other journals available in **Table 3**. TCES, TPES and HES, Total citations, papers and h-index in ESM Research.

**TABLE 7 |** The most influential and productive institution in ESM research.

R	Organization Name	Country	TCES	TPES	HES	ACP	≥50	≥25	≥10	≥5	Q1	Q2	Q3	Q4
1	University of Florida	USA	192	10	6	19,2	2	1	1	3	–	–	5	5
2	Victoria U. Melbourne	AUS	132	3	3	44,0	1	1	–	–	–	–	2	1
3	University of Oregon	USA	128	4	3	32,0	1	1	1	1	1	1	1	1
4	Auburn University	USA	128	2	2	64,0	1	–	1	–	–	1	–	1
5	RMIT University	AUS	98	2	1	49,0	1	–	–	–	–	–	1	1
6	Temple University	USA	78	7	5	11,1	–	1	3	1	–	–	–	7
7	U. of Minnesota	USA	71	3	2	23,7	1	–	1	–	–	–	1	2
8	University of Windsor	CAN	70	3	2	23,3	1	–	–	–	–	–	1	3
9	Griffith University	AUS	66	5	4	13,2	–	1	2	–	–	–	–	5
10	Indiana University	USA	58	6	3	9,7	–	–	2	–	–	–	1	5
11	La Trobe University	USA	55	4	3	13,8	–	1	1	–	–	–	–	4
12	Florida State University	USA	42	2	2	21,0	–	1	1	–	–	–	1	1
13	University of Valencia	ESP	41	4	3	10,3	–	1	2	–	–	1	–	3
14	Bournemouth University	GBR	40	3	2	13,3	–	1	1	–	–	–	–	3
15	Baylor University	USA	40	2	2	20,0	–	1	1	–	–	–	–	2
16	Universitat de Barcelona	ESP	38	4	4	9,5	–	–	3	–	–	–	1	3
17	Universidad de Malaga	ESP	31	4	4	7,8	–	–	2	–	–	–	–	4
18	Southern Cross University	AUS	28	2	1	14,0	–	1	–	–	–	–	–	2
19	Clemson University	USA	24	2	2	12,0	–	–	1	–	–	–	1	1
20	U. of South Australia	AUS	18	2	2	9,0	–	–	1	1	–	–	1	1
21	Loughborough U.	GBR	18	1	1	18,0	–	–	1	–	–	–	–	1
22	Seoul National University	KOR	17	4	3	4,3	–	–	–	2	–	–	–	4
23	Georgia Southern University	USA	16	3	2	5,3	–	–	–	1	–	–	–	3
24	James Madison University	USA	15	2	1	7,5	–	–	1	–	–	–	–	2
25	U. of Illinois at Urbana-Champaign	USA	13	2	2	6,5	–	–	–	2	–	–	–	2
26	University of Johannesburg	ZAF	11	3	2	3,7	–	–	–	2	–	–	2	1
27	Texas A&M University	USA	11	3	2	3,7	–	–	–	1	–	–	–	3
28	Brock University	CAN	11	2	2	5,5	–	–	–	1	–	–	–	2
29	U. of North Alabama	USA	10	2	2	5,0	–	–	–	1	–	–	–	2
30	Liverpool John Moores U.	GBR	9	2	1	4,5	–	–	–	1	–	–	–	2
31	U. of Massachusetts Amherst	USA	7	2	2	3,5	–	–	–	–	–	–	–	2
32	Oregon State University	USA	7	2	2	3,5	–	–	–	–	–	–	1	1
33	Kookmin University	KOR	7	2	2	3,5	–	–	–	–	–	–	–	2
34	Lithuanian Sports U.	LTU	7	2	1	3,5	–	–	–	1	–	–	–	2
35	U. of South Carolina	USA	6	3	2	2,0	–	–	–	–	–	–	–	3
36	Western Carolina University	USA	6	2	1	3,0	–	–	–	1	–	–	–	2
37	Universiti Teknologi MARA	MAL	5	2	1	2,5	–	–	–	1	–	–	1	1
38	Montclair State University	USA	4	2	2	2,0	–	–	–	–	–	–	–	2
39	Konkuk University	KOR	3	2	1	1,5	–	–	–	–	–	–	–	–
40	U. Europea de Madrid	ESP	2	2	1	1,0	–	–	–	–	–	–	–	2

R, rank; TCES, TPES and HES, total citation, papers and H-index in ESM field; ACP, average citations per paper from each university in ESM field; Q1: 2002–2004; Q2: 2005–2009; Q3: 2010–2014; Q4: 2015–2019; ≥50, ≥25, ≥10, ≥5 number of paper with more than 50, 25, 10 and 5 citations.

**Table 7** shows the 40 most productive and influential research institutions in this field.

To achieve a complete perspective of the research carried out in these institutions, TCES and TPES are considered. Similar to the analysis by author, different indicators such as the HES, the citation/paper ratio (PCES *hereinafter*) and citation thresholds are also included. Another interesting issue that has been included in this table is the number of publications per university in relation to the time periods. Please note that these data are presented in periods of five years. Finally, please note

that this list is ordered according to TCES, although in case of a tie, TPES indicator will be the one that makes the difference, which in this case is HES.

The results indicate that the University of Florida is the leading institution for research on this topic. Please note that this university has managed to position itself in the last 10 years as the most influential (TCES = 192) and the most productive (TPES = 10) institution in the field. The Victoria University of Melbourne is the second most influential, while Temple University is the second most productive with 7 articles. It should



be noted that several universities around the world have begun publishing in the field in the last five years (Q4). As usual, United States universities have a strong presence and therefore lead in research. Note that 50% of the universities are located in the United States. Other countries well represented by their universities are Australia, the United Kingdom and Spain. In short, it can be observed that most of the universities that publish on this topic come from North American, European or Oceanic countries, i.e., those countries that have a fairly developed sport industry and generally have outstanding participation in different sport competitions in the world, such as the Olympic Games. Although there is research coming from universities in other parts of the world, it could be pointed out that the research developed in this topic is strongly influenced by the sport development of the countries.

Another aspect related to universities is the analysis of their productivity as it is related to the core of the research on this topic. **Table 8** presents 15 journals that publish more on these topics and therefore can be considered the productive nucleus of the research that has been produced in this field.

In general, 28.6% of the articles produced by these universities have been published in this group of 15 journals. Note that these universities tend to publish in leading journals such as *Sport Management Review*, *Journal of Sport Management* and *European Sport Management Quarterly*, in which they have published 27, 12 and 9 articles, respectively. Of the institutions in this ranking, University of Florida stands out as the most productive in these journals, with 6 articles. Even so, it is expected that these and other universities will start looking for opportunities to publish more in the journals that are considered to be at the core of the research in this topic.

### Analysis by Country

Finally, to complete the analysis of bibliometric performance, productivity by country is analyzed. This analysis is always interesting, knowing that countries invest in research to foster their development and economic growth. In this study, the analysis is performed to obtain a more complete view of the countries that are paying more attention to this research topic. Please note that researchers can be very mobile internationally, particularly those without language barriers. Therefore, it is likely that these authors may present publications affiliated with different countries. A clear example in this study is that of Kaplanidou, who until 2007 was affiliated with the University of Windsor in Canada and later changed her affiliation to the University of Florida in the United States. In this study, the country declared by the author at the time of publication is taken into account. **Table 9** presents a ranking of the top 50 countries in the research topic, which are ordered by their influence (TCES). In the case of a tie, TPES indicator is taken into account, which in this case is HES.

The data presented clearly show that the United States is the leading country in all dimensions. That is, the United States is the most influential and the most productive country, with 982 citations and 70 papers, respectively. These results are reasonable considering the size of the country and its high investment in Research and Development (R&D). Furthermore,

it should be taken into account that an important portion of the universities presented in **Table 7** are North American. Please note that the results for the United States are more than double those for the Australia, which has received 389 citations for its 21 published papers. The third country in this ranking is United Kingdom, with 367 citations and 20 papers. Consider that North America leads in productivity and influence with 79 documents totaling 1,158 citations. Europe, while close to North American productivity, has not yet reached the impact of publications produced in this region. Another region that stands out is Oceania, which has achieved a good level of citation for far fewer documents. Asian countries also have a good rate of participation in research on this topic, with South Korea standing out among the top 10 countries. Latin American and African countries, although they appear with some documents, must continue to encourage research in this and other scientific areas.

When the temporal evolution of publications per country is analyzed, it is observed that research on this topic from 20 years ago was concentrated in Anglo-Saxon countries, that is, the United States, the United Kingdom and Canada. The rest of the countries began to show interest in this topic between 2005 and 2014. The last 5 years (2015–2019) represent the period in which almost all the countries began to be interested and to publish on this topic. It is worth noting that some countries are attracting attention due to the rapid growth in their publications. Such is the case of Australia, which without publications in Q1 and Q2, published 21 articles in the following 10 years (Q3 y Q4).

Another aspect that is interesting to analyze is the productivity of the countries as it is related to the core of the research in this topic. For this purpose, the productivity of these countries in the 15 main journals will be taken into account. The results are shown in **Table 10**.

The results show that the United States publishes in almost all major journals, except *Cuadernos de Psicología del Deporte*, a journal of Spanish origin, but which also publishes articles in English. Still, the United States outcome are logical given the number of researchers and the productivity within the country. Please note that SMR is the journal in which most American researchers publish. It also seems interesting and anecdotal that the United States publishes the most in ESMQ, even more than all the European countries. Finally, one can observe a general relative presence of the 5 main countries (United States, Australia, United Kingdom, Germany and Canada) in these 15 journals.

### Scientific Mapping Analysis

The following section discusses the graphic mapping of this research topic. This analysis is important because it strengthens and complements the performance analysis. A graphic mapping has the objective of showing the structural aspects of a research field (Gaviria-Marin et al., 2019), in addition to identifying the most representative relationships between the main actors in this research topic. Please note that these analyses are performed on the basis of co-citations (Small, 1973), co-authorships (Peters and van Raan, 1991), bibliographic coupling (Kessler, 1963) and co-words (Callon et al., 1983).

**TABLE 8 |** Total papers of institutions classified by most productive journals.

R	Name	Country	TCES	TPES	HES	SMR	ESMQ	EM	JST	JSM	IJSMM	C&S	IJSMS	APJMS	CPD	JBR	JSR	S&S	SBP	SBIJ	TP15	OJ
1	University of Florida	USA	192	10	6	–	1	–	–	2	1	–	1	–	–	–	–	–	1	–	6	4
2	Victoria U. Melbourne	AUS	132	3	3	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2
3	University of Oregon	USA	128	4	3	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1	3
4	Auburn University	USA	128	2	2	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	1	1
5	RMIT University	AUS	98	2	1	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
6	Temple University	USA	78	7	5	4	1	–	–	2	–	–	–	–	–	–	–	–	–	–	–	–
7	U. of Minnesota	USA	71	3	2	1	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–
8	University of Windsor	CAN	70	3	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	2	1
9	Griffith University	AUS	66	5	4	1	–	1	1	2	–	–	–	–	–	–	–	–	–	–	–	–
10	Indiana University	USA	58	6	3	–	3	–	–	–	–	–	–	–	–	–	–	–	–	–	3	3
11	La Trobe University	USA	55	4	3	1	–	1	–	–	–	–	–	–	–	–	–	–	–	–	2	2
12	Florida State University	USA	42	2	2	–	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–
13	University of Valencia	ESP	41	4	3	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	3
14	Bournemouth University	GBR	40	3	2	2	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
15	Baylor University	USA	40	2	2	–	–	–	–	1	–	–	–	–	–	–	–	–	–	–	1	1
16	Universitat de Barcelona	ESP	38	4	4	–	1	–	–	–	–	–	–	–	2	–	–	–	–	–	3	1
17	Universidad de Malaga	ESP	31	4	4	–	–	–	–	–	–	–	–	–	3	–	–	–	–	–	3	1
18	Southern Cross University	AUS	28	2	1	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–
19	Clemson University	USA	24	2	2	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1	1
20	U. of South Australia	AUS	18	2	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1	1
21	Loughborough U.	GBR	18	1	1	3	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
22	Seoul National University	KOR	17	4	3	1	–	–	–	–	–	–	–	–	–	–	–	–	1	–	2	2
23	Georgia Southern University	USA	16	3	2	1	–	–	1	1	–	–	–	–	–	–	–	–	–	–	–	–
24	James Madison University	USA	15	2	1	–	–	–	–	1	–	1	–	–	–	–	–	–	–	–	–	–
25	U. of Illinois at Urbana-Champaign	USA	13	2	2	1	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	–
26	University of Johannesburg	ZAF	11	3	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	2
27	Texas A&M University	USA	11	3	2	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
28	Brock University	CAN	11	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
29	U. of North Alabama	USA	10	2	2	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
30	Liverpool John Moores U.	GBR	9	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
31	U. of Massachusetts Amherst	USA	7	2	2	1	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–
32	Oregon State University	USA	7	2	2	–	–	–	–	–	–	–	–	–	–	1	–	–	–	–	1	1
33	Kookmin University	KOR	7	2	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
34	Lithuanian Sports U.	LTU	7	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
35	U. of South Carolina	USA	6	3	2	1	–	–	1	–	–	–	–	–	–	–	–	–	–	–	2	1
36	Western Carolina University	USA	6	2	1	1	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	–
37	Universiti Teknologi MARA	MAL	5	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2
38	Montclair State University	USA	4	2	2	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1	1
39	Konkuk University	KOR	3	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	2	–	–	–
40	U. Europea de Madrid	ESP	2	2	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2

Journal Abbreviations are available in **Table 3**. TP15, Amount of paper in major journals; OJ, Oteher journals available in **Table 3**. TCES, TPES and HES, Total citations, papers and h-index of countries in ESM field.

**TABLE 9 |** The most productive and influential countries in ESM research.

R	Country	TCES	TPES	HES	ACP	≥100	≥50	≥25	≥10	≥5	Q1	Q2	Q3	Q4
1	United States	982	70	18	14,0	1	6	7	9	10	1	3	16	50
2	Australia	389	21	11	18,5	–	2	4	5	1	–	–	6	15
3	United Kingdom	367	20	8	18,4	1	1	4	1	2	1	4	1	14
4	Germany	184	9	6	20,4	–	1	2	2	2	–	1	3	5
5	Canada	166	7	4	23,7	–	2	1	–	1	1	1	1	4
6	South Korea	125	11	5	11,4	–	1	–	1	3	–	–	–	11
7	Spain	89	12	6	7,4	–	–	1	3	2	–	1	1	10
8	France	65	2	2	32,5	–	1	–	–	1	–	1	–	1
9	Portugal	56	1	1	56,0	–	1	–	–	–	–	–	1	–
10	Netherlands	49	1	1	49,0	–	–	1	–	–	–	1	–	–
11	Malasya	22	4	2	5,5	–	–	–	1	1	–	–	1	3
12	Austria	18	3	2	6,0	–	–	–	1	1	–	–	1	2
13	China	14	3	2	4,7	–	–	–	1	–	–	–	–	3
14	Denmark	13	2	2	6,5	–	–	–	1	–	–	1	1	–
15	Japan	12	2	2	6,0	–	–	–	1	–	–	–	–	2
16	South Africa	11	5	2	2,2	–	–	–	–	1	–	–	2	3
17	Greece	11	3	2	3,7	–	–	–	–	1	–	1	–	2
18	Mexico	10	2	2	5,0	–	–	–	–	1	–	1	–	1
19	Hong Kong	9	3	1	3,0	–	–	–	–	1	–	–	–	3
20	Taiwan	8	3	2	2,7	–	–	–	–	–	–	–	1	2
21	Lithuania	6	2	1	3,0	–	–	–	–	1	–	–	–	2
22	Ecuador	5	1	1	5,0	–	–	–	–	1	–	–	–	1
23	New Zealand	5	1	1	5,0	–	–	–	–	1	–	–	–	1
24	Israel	4	1	1	4,0	–	–	–	–	–	–	–	–	1
25	Italy	2	2	1	1,0	–	–	–	–	–	–	–	–	2
26	Peru	1	1	1	1,0	–	–	–	–	–	–	–	–	1
27	Romania	1	1	1	1,0	–	–	–	–	–	–	–	1	–
28	Slovenia	1	1	1	1,0	–	–	–	–	–	–	–	–	1
29	Sweden	1	1	1	1,0	–	–	–	–	–	–	–	–	1
30	Russia	0	2	0	0,0	–	–	–	–	–	–	–	–	2
31	Argentina	0	1	0	0,0	–	–	–	–	–	–	–	–	1
32	India	0	1	0	0,0	–	–	–	–	–	–	–	–	1
33	Montenegro	0	1	0	0,0	–	–	–	–	–	–	–	–	1
34	Norway	0	1	0	0,0	–	–	–	–	–	–	–	–	1
35	Pakistan	0	1	0	0,0	–	–	–	–	–	–	–	–	1
36	Poland	0	1	0	0,0	–	–	–	–	–	–	–	–	1
37	Singapore	0	1	0	0,0	–	–	–	–	–	–	–	–	1
38	Switzerland	0	1	0	0,0	–	–	–	–	–	–	–	–	1

R, rank; TCES, TPES and HES, total citation, papers and H-index in ESM field; ACP, average citations per paper from each country in ESM field; ≥100, ≥50, ≥25, ≥10, ≥5 number of paper with more than 100, 50, 25, 10 and 5 citations; Q1: 2002–2004; Q2: 2005–2009; Q3: 2010–2014; Q4: 2015–2019.

The graphic mapping of this research topic begins with a graphic analysis of the co-citations or shared journal citations. In other words, this analysis seeks to identify the relationships among journals based on shared citations. **Figure 2** presents these relationships, using a threshold of 20 citations and 80 more representative connections.

Please note that in the analysis of the co-citation display, the distance between the journals indicates the relationship of these journals in terms of co-citation. Therefore, it can be seen in **Figure 2** that the journals of SMR and JSM are quite related. In addition, given their central location and size, it could be concluded that they are two of the leading journals in this

research topic. Please note also that the clusters observed in the figure indicate the relationship between the clustered journals. As is logical, the clustering of these journals also indicates their relationship to specific thematic areas within the research topic. Note, for example, that the red cluster groups journals from the Business and Marketing area mainly. Similar occurs with the journals of the disciplines associated with Tourism and Sport (blue and green clusters). Journals that appear in the periphery are generally emerging in the subject matter and therefore are strongly linked to the main journals that appear in the center of the figure or clusters. Finally, please note that these results are complementary and consistent with the data presented in **Table 3**.

**TABLE 10 |** Total papers of countries classified by most productive journals.

R	Name	SMR	ESMQ	EM	JST	JSM	IJSMM	C&S	IJSMS	APJMS	CPD	JBR	JSR	S&S	SBP	SBIJ	OJ	TP
1	United States	11	6	2	3	6	2	3	2	1	–	2	2	1	2	2	25	70
2	Australia	7	–	3	2	2	–	–	–	1	–	–	–	–	–	1	6	21
3	United Kingdom	5	–	2	1	–	1	–	–	1	–	–	1	–	–	–	9	20
4	Germany	–	–	–	–	2	–	1	2	–	–	–	–	–	–	–	4	9
5	Canada	–	–	1	1	–	1	–	–	–	–	–	–	–	–	1	3	7
6	South Korea	1	–	–	–	–	–	–	1	1	–	–	–	–	3	–	8	11
7	Spain	–	1	–	–	–	–	–	–	–	3	1	–	1	–	–	6	12
8	France	–	–	–	–	–	–	–	–	–	–	–	1	–	–	–	1	2
9	Portugal	–	1	–	–	–	–	–	–	–	–	–	–	–	–	–	0	1
10	Netherlands	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
11	Malasya	–	–	–	–	–	–	–	1	–	–	–	–	–	–	1	3	4
12	Austria	–	–	–	–	–	–	–	–	–	–	–	–	1	–	–	2	3
13	China	2	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	3
14	Denmark	1	–	–	–	–	1	–	–	–	–	–	–	–	–	–	0	2
15	Japan	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	1	2
16	South Africa	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	5	5
17	Greece	–	–	–	–	–	1	–	–	–	–	–	–	–	–	1	2	3
18	Mexico	–	–	–	–	–	–	–	–	–	1	–	–	–	–	–	1	2
19	Hong Kong	–	–	1	–	–	–	–	–	1	–	–	–	–	–	–	1	3
20	Taiwan	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	3
21	Lithuania	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
22	Ecuador	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
23	New Zealand	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
24	Israel	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
25	Italy	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
26	Peru	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
27	Romania	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
28	Slovenia	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
29	Sweden	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
30	Russia	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	2	2
31	Argentina	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
32	India	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
33	Montenegro	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
34	Norway	–	–	–	1	–	–	–	–	–	–	–	–	–	–	–	0	1
35	Pakistan	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1
36	Poland	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1	1
37	Singapore	1	–	–	–	–	–	–	–	–	–	–	–	–	–	–	0	1
38	Switzerland	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	1	1

Journal Abbreviations are available in **Table 3**. TP15, Amount of paper in major journals; OJ, Oteher journals available in **Table 3**. TPES Total papers of countries in ESM Research.

Another aspect that is analyzed is the co-citation of authors, as presented in **Figure 3**. Please note that the co-citation of authors represents those most cited among the references analyzed. It also represents the networks or connections that exist between the researchers who publish on this topic. **Figure 3** presents these relationships using a threshold of 20 citations and the 100 most-representative connections.

Remember that the co-citation link occurs between two elements that are cited by the same document. In this sense, the visualization of **Figure 3** shows several relevant authors who are quite often cited among the references analyzed in this study. Note, for example, that Funk and Wann are relevant authors among the references that have been analyzed. Logically,

the closeness of these authors in the graph indicates a strong relationship between them in terms of co-citation. As in the previous figure, please note that several clusters appear that indicate the co-citation relationship between them. An example of this is that Kaplanidou—a relevant author in this study—is co-cited with authors such as Hallmann, Chalip, Gibson, Green, and Breuer, among others. Finally, please note that many of the authors in the figure do not necessarily have to appear among the references analyzed in this study but are rather authors who are co-cited among the references analyzed in this study.

The most productive authors and how they are connected according to their bibliographic linkages are analyzed below (Kessler, 1963). Please note that this analysis refers to the articles



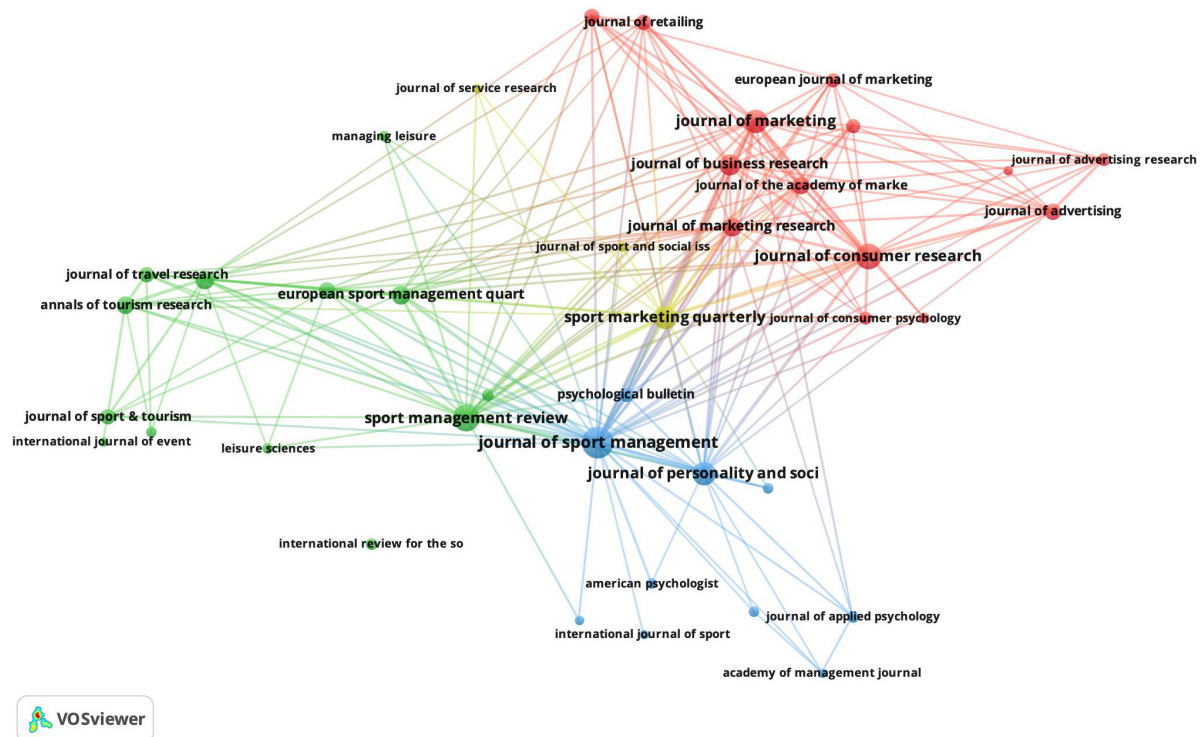


FIGURE 2 | Mapping of co-citation journals.

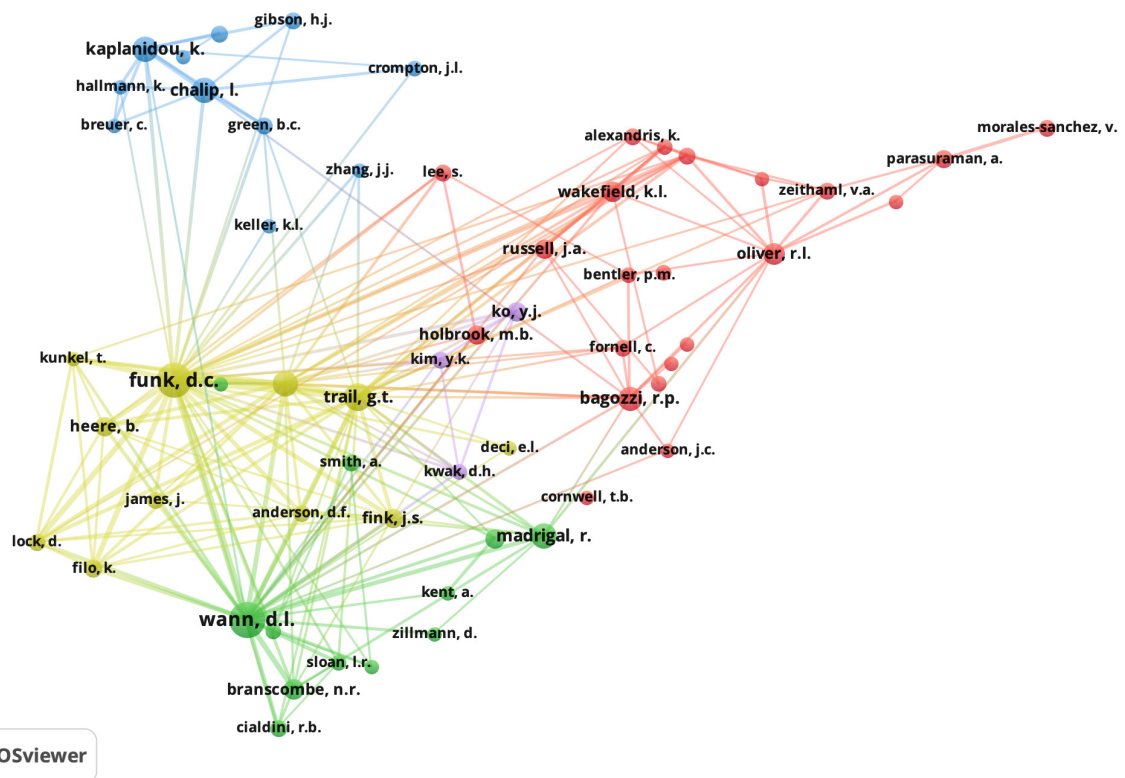
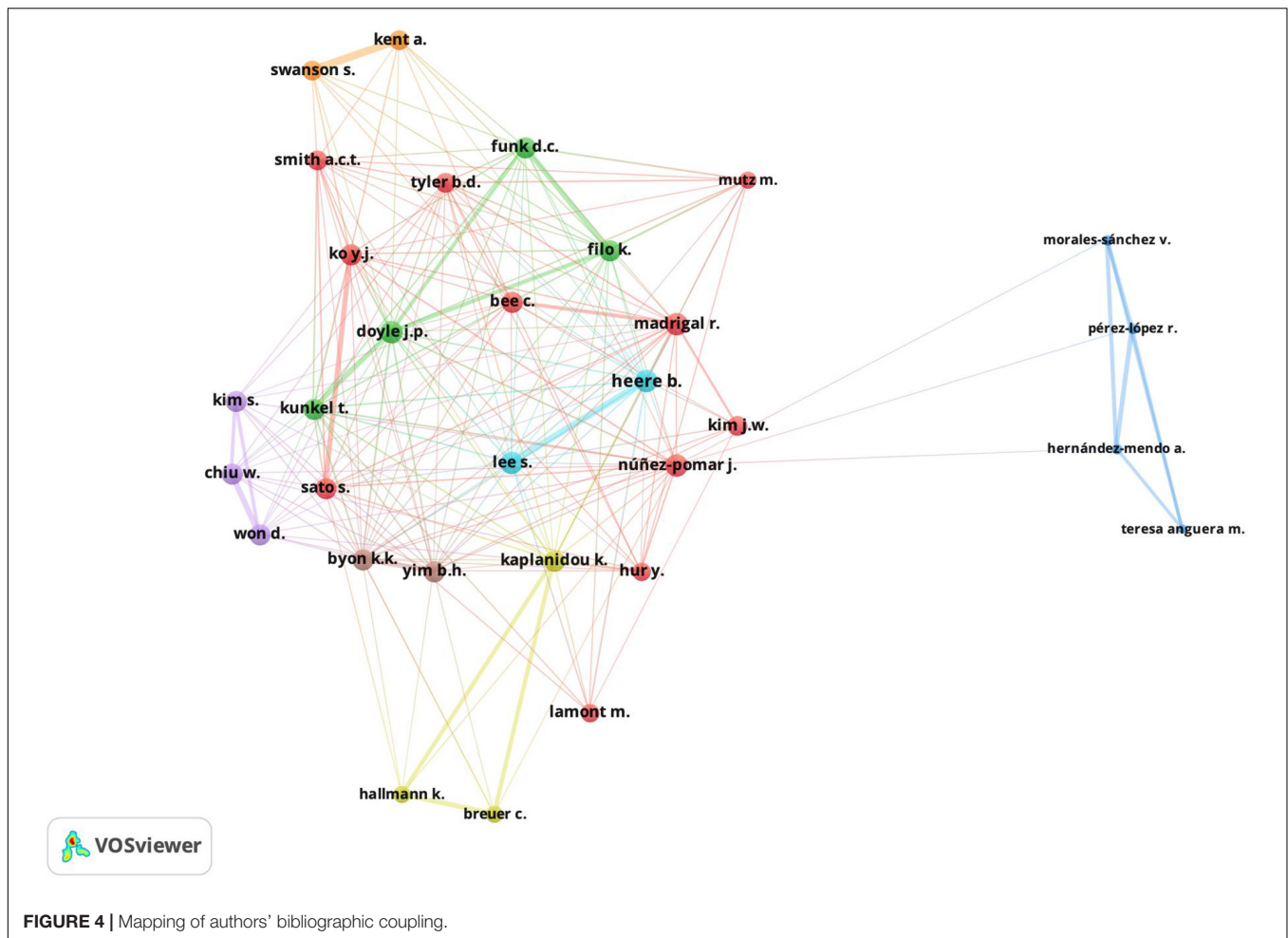


FIGURE 3 | Mapping of co-citation authors.



that the researchers have cited in their publications. In addition, please remember that the more references two researchers have in common, the more similar their research is (Ma, 2012). For these purposes, **Figure 4** shows the bibliographic linkages of the authors analyzed in this study. This figure shows the results using a threshold of 4 citations and 40 more representative connections.

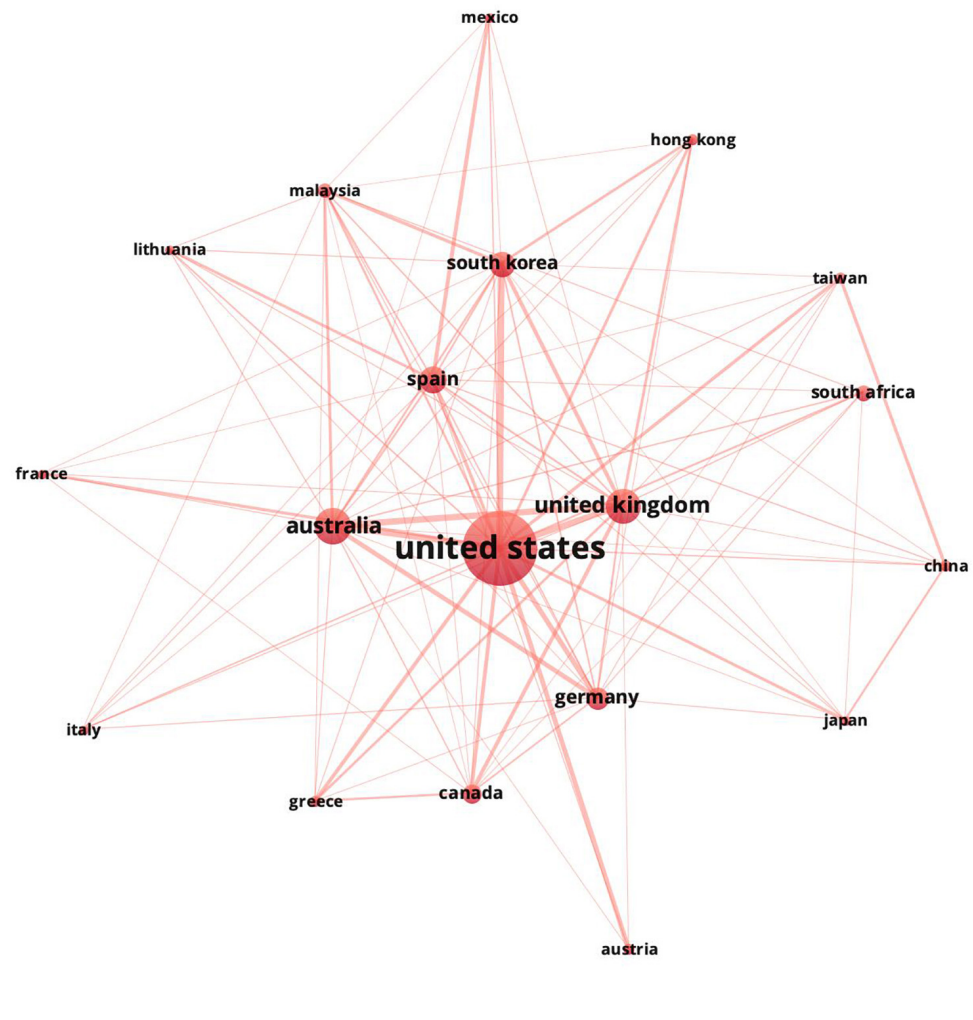
The figure shows how the authors connect with each other in terms of the common literature. Please note the formation of different clusters that tend to cite the same bibliography. Such is the case of the cluster formed by Kaplanidou, Breuer and Hallmann. It is likely that authors working in the same country or even coauthors of documents will appear in a bibliographic link. An example of this is the cluster formed by Hernández-Mendo, Pérez-López, Morales-Sánchez, and Anguera. This situation usually appears in the analysis of bibliographic linkages, and its explanation is based on the common interests or geographical proximity that researchers from the same country may have.

Following this same type of analysis, the bibliographic linkages of the countries are presented. Therefore, as in the previous explanation, this figure shows how the countries that research this topic are connected bibliographically. **Figure 5** shows the bibliographic linkages of the countries considering a threshold of 5 documents and 30 bibliographic linkages.

It is important to highlight that the United States is the leading country in this area of research and therefore appears in the center of the figure. However, countries such as the Australia, United Kingdom, Germany, Canada, Spain and South Korea also appear to be important. Please consider also that this outcome is consistent with what is indicated in **Table 9**. It is interesting to note that several of the European and Asian countries that appear on the periphery are countries that have begun to publish in the last decade. In the figure, it is also interesting to note that there is no grouping of countries by geographical region. This grouping is normal in literature linkage analyses. This phenomenon can be associated with the youth of the field of study and the clear influence of the countries that appear in the center of the figure.

Finally, a keyword co-occurrence analysis is developed. This analysis serves to observe the various topics related to the research topic of this study. **Figure 6** shows a visualization of the main keywords in the research area using a threshold of four cooccurrences and the seventy most-frequent coincidences. Please note that the visualization is shown according to years. This approach gives an idea of the most recent concepts in relation to the research topic.

There are several keywords used in this topic. The main keyword used in this research topic is "emotion\*." Please note



**FIGURE 5 |** Mapping of countries' bibliographic coupling.

that other concepts that appear close to the concept of emotions are those of satisfaction, sport, sport events, marketing and sport management, among several others. It is also interesting to note that several concepts have been linked quite frequently in recent years. These can be seen in yellow (**Figure 7**).

For example, the concepts of marketing, satisfaction or social media have recently been linked in this research topic to the emotion concept. All these words represent the different conceptual frameworks used to explain the intersection of emotions, management and sport.

## CONCLUSION

Sport management is still a young field of study, which has generated a multidisciplinary academic field linked both to theory and to the needs of the professional world (López-Carril et al., 2019). In this study, a deep bibliometric analysis of the references that are found in the theoretical intersection of emotions and

sport management was presented. Over the years, bibliometric studies have integrated a series of techniques and tools that can be complemented to give greater robustness and consistency to the studies (Cobo et al., 2011a). This study is developed based on two bibliometric techniques, namely, a bibliometric performance analysis and a graphic mapping of the knowledge, which have been generated in this research topic.

The overall results indicate that the literature on this research topic has grown significantly in recent years in all scientific disciplines. In this study, the literature was from the areas of business, management, accounting, economics, sociology, psychology, decision sciences and neuroscience have been analyzed. The bibliometric performance analysis performed in this study allows us to realize that the scientific productivity in this topic is led by Anglo-Saxon countries such as the United States, Australia and United Kingdom. The scientific mapping also confirms these results. However, both techniques confirm that of these countries, the most influential country by far is the United States, since it presents the best results of influence,





determined as the number of citations received and the h-index. This result is not surprising. In fact, the United States has both universities and authors of great trajectory, who tend to publish in the main journals that give space to this research topic. In addition, this country generally leads scientific research in most scientific areas (Baier-Fuentes et al., 2019). However, in the last five years, several countries have been paying increased attention to this research topic. The cases of Australia, South Korea or Spain for example, is notable and has contributed significantly to the productivity on this topic. The same is true for some Asian countries, such as Korea. However, these countries are still far from the top positions in the field. Other countries, such as those in Latin America or Africa, barely appear with some papers and are therefore encouraged to start expanding their research on this topic.

The United States leads among the countries that are researching this topic, and this situation does not change when institutions are analyzed. In fact, the University of Florida is the most influential and productive institution and therefore lead the research on this topic. As expected, most of the most productive universities are American, which explains the leadership of the United States in this research topic. European universities also have a strong presence, among which Spanish universities such as the University of Valencia, University of Barcelona and the University of Malaga stand out. This outcome should be noted since British universities generally tend to lead scientific research in Europe (based on university rankings).

When analyzing the authors of this topic, we find that Kaplanidou is the most influential and productive author, with good received citations and h-index indicators. Note that this author has 5 documents among the 50 most cited articles in the field. Another important author is Madrigal, who appears as one of the first to focus on this line of research. Nevertheless, it should be noted that several influential authors have appeared in recent years. Some cases are remarkable, such as those of Filo or Funk, with very good indicators of influence reached in the last five years. Spanish authors led by Calabuig-Moreno appear in the last five years with good indicators of influence and productivity. As expected, among the most productive authors, there was an absence of Latin American authors.

The analysis of the journals shows that the literature on this topic has been published in a long list of journals. Logically, given the topic that was analyzed, the journals focused on sport management are the most productive and influential. Among them, the *Sport Management Review* was found to be the most productive and influential journal, with an excellent h-index indicator. Our results also show that the journals of the Business and Marketing areas are important in this topic. The results derived from the mapping of science also confirm that *Sport Management Review* is important in this topic, together with journals such as the *European Sport Management Quarterly*, *Journal of Sport Management*, *Journal of Services Marketing* or *Journal of Sport Management*.

In conclusion, the results of this study may be important for several stakeholders. First, interested researchers would benefit from the relevant information on the main scientific actors

who have been publishing on this research topic. Furthermore, knowing this information may be important for profiling and detecting new research ideas (Ferreira, 2018) and may even help in the creation of networks among researchers (Mulet-Forteza et al., 2019); such a network would help to expand and strengthen this striking research topic. Second, the information presented in this study can be used for decision-making both in the political sector and in institutions when deciding to prioritize or fund projects related to this research topic.

However, this paper has several limitations. First, the changing dynamics of science must be taken into account. This implies that various bibliometric performance indicators and the structure of science may change over time. In the last five years, for example, several actors have appeared to publish on this topic, but nothing ensures that they will continue to consolidate and expand their research. Nevertheless, as mentioned, this study intends to present an updated general guide to the research that has been carried out at the intersection of emotions, management and sport. Second, the bibliometric performance indicators are based on the analysis of scientific publications, involving articles, reviews, letters and notes. This implies that several other influential documents may have been excluded from this analysis. Likewise, the use of Scopus as the main source of the references analyzed could also imply the exclusion of other documents. Some authors, such as Jacsó (2008), have pointed out that the loss or exclusion of some references is an endemic problem in bibliographic databases. To this end, future studies should extend or complement this bibliometric analysis to other databases such as WoS, EBSCO, Proquest, among others. Even so, to our knowledge, this study manages to represent quite well the main scientific actors who have contributed to this interesting line of research.

## DATA AVAILABILITY STATEMENT

The original contributions presented in the study are included in the article/**Supplementary Material**, further inquiries can be directed to the corresponding author.

## AUTHOR CONTRIBUTIONS

HB-F performed the search and the bibliometric and mapping science analysis describing the methodology and the results. MG-S has conceptualized and critically reviewed the manuscript. MA-D has critically reviewed the manuscript contributing from the theoretical perspective to this special issue. WI-M and VP-E developed part of the bibliometric performance analysis. All authors collaborated in the analysis of the results.

## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2020.01512/full#supplementary-material>

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# Overall Quality of Sporting Events and Emotions as Predictors of Future Intentions of Duathlon Participants

Ana M<sup>a</sup> Magaz-González<sup>1\*</sup>, César Sahelices-Pinto<sup>2</sup>, Cristina Mendaña-Cuervo<sup>2</sup> and Marta García-Tascón<sup>3</sup>

<sup>1</sup> Department of Didactic of Musical, Plastic and Corporal Expression, Faculty of Education, University of Valladolid, Soria, Spain, <sup>2</sup> Department of Economic and Business Administration, Faculty of Economics and Business Administration, University of Leon, Leon, Spain, <sup>3</sup> Department of Sports and IT, Faculty of Sport Sciences, Pablo de Olavide University, Seville, Spain

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Spain

### \*Correspondence:

Ana M<sup>a</sup> Magaz-González  
anamaria.magaz@uva.es

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The present study is intended to analyze the effect of global quality, perceived value, general satisfaction, and emotions on future behavior patterns among participants in the European Duathlon Championship. In this sense, a questionnaire was administered ( $n = 210$ ), composed of four sections: essential demographic and profiling variables, perceived quality, overall quality, and emotions. Consequently, a relational model was designed to be examined by means of structural equation modeling (SEM) and fuzzy set qualitative comparative analysis (fsQCA). Results reveal that global quality and general satisfaction are key dimensions for determining future behaviors of participants, but not so the perceived value. Moreover, up to three combinations of these dimensions together with emotions -pleasure and arousal- emerged as enough for depicting future intentions to a great extent. In this line, a remarkably sufficient combination consists of global quality, general satisfaction, pleasure, and arousal. These findings will guide organizers to design strategies that provide exciting experiences, as well as quality and satisfaction to the participants of sports events.

**Keywords:** future intentions, general satisfaction, perceived value, emotions, sport events participants, structural equations modeling, fuzzy set qualitative comparative analysis

## INTRODUCTION

Sporting events have become a major economic activity (Alonso-Dos-Santos, 2018; Lin and Lu, 2018; Zhang et al., 2018; Almeida, 2019) and sports companies and organizations in charge of their organization are subject to competitive forces like other markets, and so must seek strategies to differentiate themselves. The proliferation of this type of event results in athletes having to choose between multiple offers in the annual calendar and are facing increasingly demanding choices. The quality of the event that the participant perceives, the value that it gives to them, and the satisfaction that it causes are key elements for athletes' loyalty to the sporting event and their future intention of returning to that sporting event. Furthermore, the emotions experienced with their participation in the event shape their behavior (Calabuig-Moreno et al., 2015) and can influence their choice. On their part, organizations are interested in customer loyalty. So, for the organizing committee it is important to identify the quality perceived, the satisfaction, the value, the future intention, and the emotions experienced by participants, and to understand how they impact each other and manage them, in order to be more competitive.



In the service literature, understanding the relationship between quality, perceived value, satisfaction, and customer loyalty is a topic that has been analyzed in depth (Parasuraman et al., 1985, 1988; Zeithaml et al., 1996). Sports services are the focus of many of these analyses within the field of sports management (Cronin et al., 2000; Hightower et al., 2002; Calabuig-Moreno et al., 2010; Ko et al., 2010; Theodorakis et al., 2013; Alguacil et al., 2019). Few, however, add to the study the role of emotions (Biscaia et al., 2012; Calabuig-Moreno et al., 2015; Crespo-Hervás et al., 2019), despite the fact that in sports services, emotions and feelings are important factors for participation and development (Pérez-Campos, 2010; Vacher et al., 2017; Crespo-Hervás et al., 2019). Most of the literature is focused on viewer satisfaction, but there is less research focused on participants. Therefore, this study investigates a model that explains the relationships between service quality, perceived value, satisfaction, and emotions, and their ability to predict the future intentions of participants in a European Duathlon championship. The added value of this research lies, firstly, in introducing the role of emotions as a moderating variable, secondly, in applying it in a specific sporting event, and finally, in analyzing the relationships with two complementary methodologies to compare their results and reinforce or not the proposed model: structural equation modeling (SEM) and qualitative analysis (fsQCA).

## CONCEPTUAL FRAMEWORK AND HYPOTHESIS

The success of a sporting event depends on the degree to which it satisfies the participants and spectators with a quality service (Ko et al., 2010). Quality perception is formed through an individual's opinion of the superiority of a service derived from comparing consumption expectations and perceptions of the real performance of the service. It involves evaluating service delivery (Parasuraman et al., 1985) and the outcome (Brady and Cronin, 2001; Ko et al., 2011). Perceived quality is a multidimensional and hierarchical construct. The SERVQUAL instrument (Parasuraman et al., 1985) explains it using five dimensions. Others do so through dimensions and sub-dimensions (Brady and Cronin, 2001; Clemes et al., 2011; Ko et al., 2011; Yoshida and James, 2011). In the area of sporting events, studies focus on the quality perception of service users or spectators of sporting events. Instruments such as SPORTSERV (Theodorakis et al., 2001), EVENQUAL (Calabuig-Moreno and Crespo-Hervás, 2009), SEQSS (Ko et al., 2011), EPOD, and EPOD2 (Nuviala et al., 2008, 2013) are commonly used. The structure of these models is affected by the characteristics of each sporting event or service, adding specific dimensions to the particular context (Theodorakis et al., 2015; Calabuig-Moreno et al., 2016b; Choi et al., 2018; García-Fernández et al., 2018). But at a sporting event, participants may perceive quality differently than spectators (Shonk and Chelladurai, 2008). Taking this premise into account, several investigations guide their models to analyze the quality perceived by the participants (Ko et al., 2010; Pérez-Campos, 2010; Chen et al., 2012; Angosto-Sánchez

et al., 2016a,b; Montesinos-Saura et al., 2018). Angosto-Sánchez (2014) includes the perceived quality assessment instruments and the dimensions proposed by these authors in the area of sports services. Martínez-García and Martínez-Caro (2010) emphasize that clients can form perceptions of service quality at different levels of abstraction, from the most aggregated (such as overall service quality) to the most disaggregated, with different quality sub-dimensions. They propose the inclusion of a measure of overall service quality. With this, it is possible to verify if the global evaluation of service quality is different from the evaluation of the diverse attributes of perceived quality, to analyze the degree of solidity of the overall evaluation of service quality, check if some attributes are poorly rated, and compare them with the client's affective judgment. Along this same line, Clemes et al. (2011) reflect that the perceptions of different main dimensions form a global perception of the quality of the service and these, in turn, influence the perceived value and satisfaction of a service. Pérez-Campos (2010) and Angosto-Sánchez (2014), based on the instrument of Hightower et al. (2002), introduce the evaluation of global service quality in their questionnaires.

- H1: There is a direct and positive relationship between the different dimensions of quality perceived by the participant and the global quality of the event. This hypothesis is broken down into the following:
  - H1a: The good treatment of the organization's staff positively influences the global quality perception of the event.
  - H1b: The effective communication of the event positively influences the global quality perception of the event.
  - H1c: Good complementary services positively influence the global quality perception of the event.
  - H1d: Effective logistics positively influence the perception of the global quality of the event.
  - H1e: Correct management of the specific elements of the duathlon positively influences the perception of the global quality of the event.

For service managers, including those at sporting events, it is also important to know the perceived value of the service by customers as it is a predictor of behavioral intentions and loyalty and allows for less sensitivity toward price. The perceived value results from evaluating the utility of a product or service by comparing what is received with what is given (Zeithaml, 1988). Thus, consumers perceive value when the organization personally satisfies them in relation to their tastes, preferences, or needs and in comparison, with what they have invested in time, money, effort, and sacrifice (Calabuig-Moreno et al., 2010; Boksberger and Melsen, 2011). Quality is identified by several authors as a predictor of perceived value and as an antecedent of future intentions (Cronin et al., 2000; Hightower et al., 2002; Murray and Howat, 2002; Nuviala et al., 2015; García-Fernández et al., 2018).

- H2: There is a direct and positive relationship between global quality and perceived value.



The global quality of service and the dimensions it describe are directly related to satisfaction (Rust and Oliver, 1994; Zeithaml et al., 1996; Brady and Cronin, 2001), to the extent that the second factor is considered a consequence of the previous. Satisfaction is understood to depend on the discrepancy between expectations before consumption and perceptions of the service consumed (Oliver, 1980; Shonk and Chelladurai, 2008) and is also transitory, associated with a specific situation (Parasuraman et al., 1988). In sports services, where there is a high emotional involvement, the emotional attachment conditions these (Westerbeek and Shilbury, 2003; Alonso-Dos-Santos and Pérez-Campos, 2015). The participant satisfaction is thus an attitudinal result after the race participation. However, even the pre-competition motivational aspects can condition an individual to make the decision to register and compete (Du et al., 2015). Therefore, this decision is influenced by experience, subjective perception of service (Westerbeek and Shilbury, 2003; Montesinos-Saura et al., 2018; Bi et al., 2019), and by cognitive and affective elements (Oliver, 1981). In this line, satisfaction is linked to behavioral future intentions and loyalty (Alonso-Dos-Santos and Pérez-Campos, 2015; Bernal-García et al., 2018; Alguacil et al., 2019) and creates less price-sensitive customers (Ko et al., 2010; Calabuig-Moreno et al., 2015; Montesinos-Saura et al., 2018). Matsuoka et al. (2003) suggest that satisfaction has a strong effect on future intentions and the decision to attend other events. For its part, Biscaia et al. (2012) also identify a significant relationship between “satisfaction” and “behavioral intentions” so that satisfied spectators are more likely to attend future games, recommend them to others, and purchase equipment products and services. These results are consistent with several previous studies in sports settings (Matsuoka et al., 2003; Kuenzel and Yassim, 2007; Yoshida and James, 2010). Theodorakis et al. (2015) study how different dimensions of quality impact on the satisfaction of participants in sporting events. Nuviala et al. (2013) carry out an adaptation of previous questionnaires (Oliver, 1980, 1997; Bodet, 2006) in their EPOD2 instrument to assess satisfaction in sports services. And Pérez-Campos (2010) and Angosto-Sánchez (2014) use an adaptation of the scale of Hightower et al. (2002) to measure it in participants of sporting events. All of them consider emotional aspects to describe satisfaction.

H3: There is a direct and positive relationship between global quality and general satisfaction.

Another issue for managers to consider is the relationship between perceived value and satisfaction. There is controversy surrounding this issue in the literature. The works establish both a direct and an inverse, non-existent, and even reciprocal relationship between both dimensions (Nuviala et al., 2013, 2015, 2020; Bernal-García et al., 2018). But in service companies, including sports services companies, the majority defend that the perceived value affects satisfaction (McDougall and Levesque, 2000; Hightower et al., 2002; Murray and Howat, 2002; Brady et al., 2005; Calabuig-Moreno et al., 2015; García-Fernández et al., 2016; Crespo-Hervás et al., 2019).

H4: There is a direct and positive relationship between perceived value and general satisfaction.

For event organizers, knowing how to influence the participant's behavior to repeat the experience is a challenge. Following Biscaia et al. (2012), the behavioral intention is the participant's favorable intention to attend future games or recommend them to others, as well as purchase products associated with the event. Zeithaml et al. (1996) argue that behavioral intentions diagnose actual behaviors better than quality and satisfaction (Clemes et al., 2011). On the other hand, there are multiple studies that point to satisfaction and perceived value as antecedents of future intentions, and, therefore, indirectly to global quality, as a precursor to these (Zeithaml et al., 1996; McDougall and Levesque, 2000; Murray and Howat, 2002; Brady et al., 2005). So, knowing how these relationships develop and what motivates the intention to participate in an event again is important for managers. This statement is also shared in the sports context (Cronin et al., 2000; Hightower et al., 2002; Matsuoka et al., 2003; Pérez-Campos, 2010; Clemes et al., 2011; Theodorakis et al., 2013; Calabuig-Moreno et al., 2014). Many authors include in their models the simultaneous analysis of the effects – whether direct or indirect – of quality, satisfaction, and value in future intentions.

H5: There is a direct and positive relationship between perceived value and future intentions.

H6: There is a direct and positive relationship between general satisfaction and future intentions.

In the related service literature, a common assumption points that future intentions may be derived from other factors, such as the emotions that arise in a sporting event (Sumino and Harada, 2004; Biscaia et al., 2012). Emotions are complex interactions between subjective and objective factors influenced by neuronal and hormonal systems that generate feelings, cognitive processes, and activation of physiological functions and behaviors (Kleinginna and Kleinginna, 1981; Biscaia et al., 2012). These types of events are characterized by a high level of emotional participation (Mullin et al., 2007) and by generating hedonic experiences and varied moods in the participants. Thus, passion is the origin of high participation (Crespo-Hervás et al., 2019), and the sense of personal efficacy for achieving performance provokes a positive emotional affinity with the event (Du et al., 2015). Therefore, these emotions can create stronger emotional bonds than cognitive judgments (Fournier, 1998) and affect the perception of service performance (Calabuig-Moreno et al., 2015) such as satisfaction, perceived value, and future commitment to the service (Sumino and Harada, 2004; Biscaia et al., 2012). For instance, Oliver (1997) suggests that satisfaction depending on experience involves emotions, and Biscaia et al. (2012) suggests that a behavioral intention is better predicted if measures of satisfaction and emotion are used. Although these intangible variables are difficult for managers to manage, it is interesting to analyze the moderating effect of these on the evaluation of the service and on future intentions. However, there are few studies that incorporate emotions in the analysis

in sporting events (Sumino and Harada, 2004; Pérez-Campos, 2010; Biscaia et al., 2012; Alonso-Dos-Santos and Pérez-Campos, 2015; Calabuig-Moreno et al., 2015, 2016a,b), and these reach different conclusions. In this case, we evaluate how the emotions of the participants in the sporting event moderate the effect of perceived value and general satisfaction on athlete's intention to participate in future sporting events. For this, the pleasure-arousal taxonomy is used (Russell, 1980), as suggested by other authors, as it is a stable model in leisure contexts (Calabuig-Moreno et al., 2015, 2016a). Russell (1980) evidences that the affect dimensions are interrelated in a systematic fashion and it is possible to explain them with a circumplex model of affect. Russell (1980) represents this interrelation by a spatial model in which affective concepts fall in a circle in the following order: pleasure (0°), excitement (45°), arousal (90°), distress (135°), displeasure (180°), depression (225°), sleepiness (270°), and relaxation (315°). In this way, Russell's taxonomy very comprehensively captures affective experience and allows any word of affect to be defined as a combination of the components of pleasure and arousal.

H7: The inclusion of pleasure-arousal emotions in the model improves its explanatory power.

H8: Pleasure positively moderates the effect on future intention. It needs to derive two sub-hypotheses from the initial one:

H8a: Pleasure positively moderates the effect of perceived value on future intention.

H8b: Pleasure positively moderates the effect of general satisfaction on future intention.

H9: Arousal positively moderates the effect on future intention. It needs to derive two sub-hypotheses from the initial one:

H9a: Arousal positively moderates the effect of perceived value on future intention.

H9b: Arousal positively moderates the effect of general satisfaction on future intention.

In summary, the research model tests the effects of the following constructs: the dimensions of perceived quality on the global quality of service, the global quality of service on perceived value, and general satisfaction; the perceived value in general satisfaction and future intentions; and general satisfaction in future intentions. It also measures the effect of pleasure and arousal emotions on future intentions through its moderating effect on value and general satisfaction. Observed in **Figure 1**.

## MATERIALS AND METHODS

### Participants

In order to address the investigation hypotheses discussed above, a research approach was conducted based on a survey administered to a final sample of 210 participants ( $N = 999$ ;

$e = \pm 6.13\%$ ;  $\alpha = 95.5$ ) in the European Duathlon Championship, celebrated in Soria (Spain) in 2017. The duathlon is an individual sport that can be regarded as a modality of a triathlon. The sample comprised 151 males (71.9%) and 59 females (28.1%), aged 17–75 years old ( $\mu = 41.16$ ;  $\sigma = 14.22$ ). In this championship, there may be professional participants who are scoring within the general ranking as well as amateur participants.

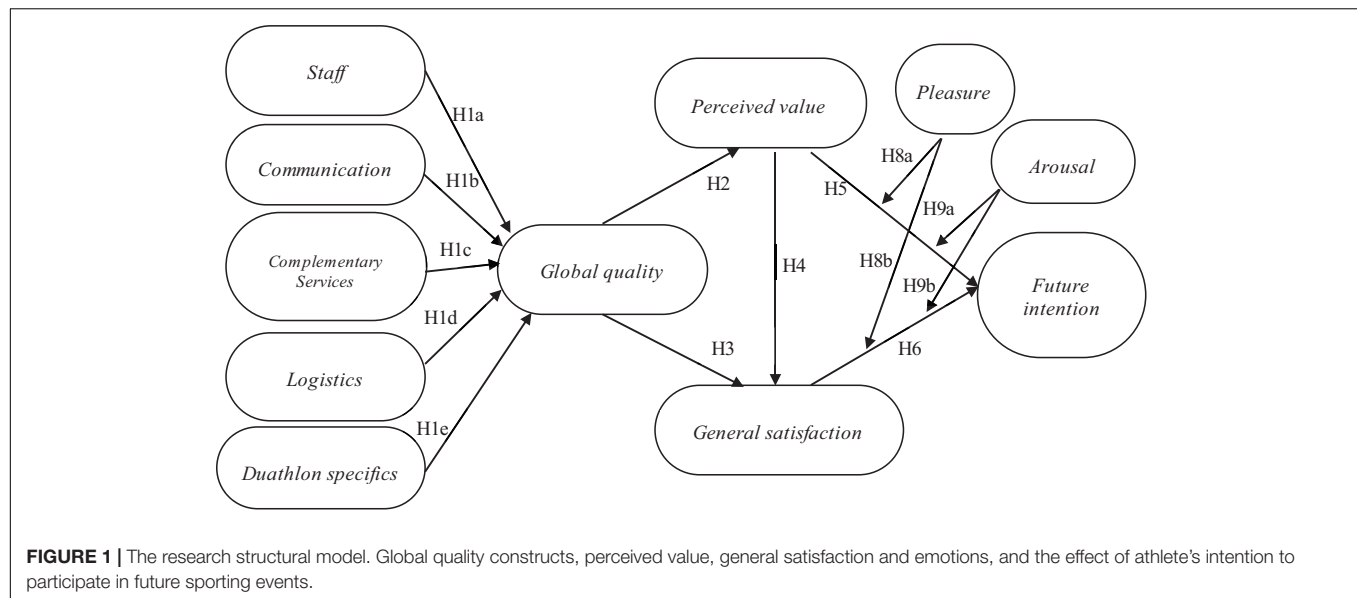
### Measures

All participants were asked to voluntarily answer a questionnaire consisting of four main sections (via computer aided personal – CAPI- and web –CAWI- interview). The first section gathered information about essential demographic and profiling variables. Likewise, the second section was integrated by diverse scales concerning the five components or sub-dimensions of perceived quality (staff –four items-, communication –four items-, complementary services –five items-, logistics –four items-, and specifics aspects of duathlon –eight items). The third section was devoted to the measurement of the overall quality of the event. This was a multidimensional instrument divided into four concepts, namely, global quality –four items-, perceived value –four items-, general satisfaction –four items-, and future intentions –five items-. All these scales were adapted from the previous research of Angosto-Sánchez et al. (2016b). The fourth section assessed the diverse emotions linked to the performance of individuals at the event. It was composed of 10 emotions referring to the basic spheres of pleasure (five items) and arousal (five items), originally developed by Russell (1980) and replicated by Pérez-Campos (2010) or Calabuig-Moreno et al. (2016a). All responses took the mode of a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Following this line, a group of experts was selected in order to assess the content validity of the instrument (Skjongs and Wentworth, 2001; Hernández-Sampier et al., 2010; Muñiz and Fonseca-Pedrero, 2019). These experts were both academics and professionals in the sports industry and presented suggestions about the potential deletion/modification of existing items, and/or the inclusion of prospective ones. Particularly, the criterion considered to add an item to the final version of the instrument required the agreement of at least 80% of the experts (Hyrkäs et al., 2003).

In the assessment, the group of experts was composed of 11 gender-equal participants: three male university professors, with extensive experience (more than 10 years) and experts on the subject matter, from different Faculties of Sports Sciences of Spanish universities; four athletes, with more than 6 years of competition experience (two female professionals and two male amateurs); and four members of the organization with more than 15 years of experience (two females belonging to the City hall of the championship host city and two men from the organization of the event).

The group of experts analyzed the content of the different items and their relevance, clarity, simplicity, and comprehensibility in relation to the object of study (Thomas and Nelson, 2007). After this phase, five items were eliminated from the sociodemographic section: three related to the perceived quality and one to the overall quality. In addition, four items



referring to the specific duathlon test were added. Eventually, the wording of two items of the staff dimension were modified for improved comprehension.

## Data Analysis

After the qualitative validation, the factorial unidimensional, convergent, and discriminant validities were statistically assessed.

Primarily, with the intent to test the proposed model, a structural equation modeling (SEM) technique of PLS was used, with the software SmartPLS 2.0 (Ringle et al., 2005). In contrast to other methods, such as covariance-based ones which are focused on the estimation of model parameters and overall fit measures, the objective of PLS is to maximize the variance explained by indicators and latent variables through the estimation of ordinary least squares and principal components analysis. In this frame, data treatment responds to the creation of optimal linear predictive paths with minimal demands on measurement scales, residual distributions, and sample sizes (Fornell and Bookstein, 1982; Chin, 1998). Therefore, compared with maximum likelihood methods, the PLS approach better matches the requirements of exploratory and theory building applications (Barclay et al., 1995; Chin et al., 2003).

The second stage, aimed at supporting and ratifying the previous analysis, the methodology fsQCA (Ragin, 2008) was applied in order to reach a more holistic and precise identity about those antecedents and consequences that represent outer or explanatory variables and research findings in case studies like the present investigation. Indeed, this methodological approach is centered on the estimation not of independent net effects but of combinatory ones, so that it is intended to identify all possible conditions –both necessary and sufficient– that lead to a specific result.

Overall, fsQCA (Ragin, 2008) is an approach that examines sets of established relationships emerged from the conjunction of the Qualitative Comparative Analysis –QCA– (Ragin, 1987),

and the theory of fuzzy sets posed by Zadeh (1965). In relation to the QCA, the procedure starts from all possible combinations between observed variables to determine what implications data support through the application of techniques of logic inference. Likewise, in the traditional theory of sets, membership is defined in binary terms, that is, an element belongs –value 1– or does not belong –value 0– to a set. However, in fuzzy sets, the same element is allowed to belong to a set in a certain degree: value 1 is linked to those elements that belong to the set without any sort of doubt, and value 0 to those that do not, whereas intermediate values are associated to elements with questionable membership, adopting diverse degrees of belonging in the range 0.0–1.0. This fact indicates that the same element may belong to different sets at a time in different degrees of membership. In this sense, the absence of strict limits between sets endows flexibility to the decision-making. For this stage, the software fsQCA 3.0<sup>1</sup> was used.

In particular, with regard to the sample size reached in this study, it is worth mentioning that both methodological approaches, PLS and fsQCA, widely used in the area of management and organizational issues, are particularly appropriate for operating in those research situations where sample sizes are limited (Chin and Newsted, 1999; Ragin, 2008; Rihoux and Ragin, 2009; Hair et al., 2012) and databases are derived from surveys (Emmenegger et al., 2014).

## RESULTS

### Assessment of the Measurement Model Reliability of Instruments

Table 1 shows the items included in the measurement model and their psychometric properties for the full sample. With the intent of evaluating the internal consistency of scales, the

<sup>1</sup><http://www.socsci.uci.edu/~cragin/fsQCA/software.shtml>

**TABLE 1** | Psychometric properties of scales.

Constructs and items <sup>a</sup>	$\lambda$	t	$\lambda^2$	$\alpha$	$\rho_c$	AVE
<b>Staff (S)</b>				0.8837	0.9450	0.8958
The organizing committee meets scheduled timetables	0.9481***	64.456	0.8989			
The staff are ready to help and give advice	0.9448***	50.7746	0.8926			
<b>Communication (C)</b>				0.7283	0.8803	0.7862
The event comes with a fair promotion and diffusion, and provides enough practical information about it	0.8935***	39.9111	0.7983			
It was easy to register as a participant	0.8799***	23.0448	0.7742			
<b>Complementary Services (CS)</b>				0.7536	0.8895	0.8010
The event has enough support utilities (WC, showers, changing rooms, cloakroom, massage zone, stands, etc.)	0.8745***	27.9938	0.7648			
There are easily accessible places (cafeterias, bars, restaurants.) close to the start/finish line	0.9151***	48.1548	0.8374			
<b>Logistics (L)</b>				0.8888	0.9363	0.7665
Event signs facilitate reaching the start line easily	0.8906***	19.4209	0.7295			
Material elements used at the event are visually appealing (banners, billboards, start line, finish line, circuit. . .)	0.9061***	23.8639	0.7661			
<b>Duathlon Specific (DS)</b>				0.8538	0.9013	0.6956
The equipment check has been carried out easily and without excessive waiting time	0.8160***	16.4028	0.6659			
The race comes with the necessary security measures to ensure the proper surveillance of the equipment	0.8739***	30.7506	0.7637			
The transition point is spacious and tidy to allow for adequate flow without clustering	0.8131***	15.5884	0.6611			
The circuit ground is in satisfactory conditions, with turns properly signed, and is free of obstacles	0.8316***	20.4228	0.6916			
<b>Global Quality (GQ)</b>				0.8946	0.9499	0.9046
Overall, the service provided by the organizing committee is appropriate	0.9529***	80.6094	0.9080			
I consider that the involvement of the staff in the event has been excellent	0.9493***	70.6986	0.9012			
<b>Perceived Value (PV)</b>				0.8272	0.9201	0.8520
I think that the event has been reasonably priced in general	0.9110***	9.8179	0.8299			
Overall, I consider that the race has a good quality-price relation	0.9349*	1.7696	0.8740			
<b>General Satisfaction (GS)</b>				0.9172	0.9602	0.9234
I am glad about all experiences I have had in this event	0.9644***	97.8323	0.9301			
Indeed, I have enjoyed participating in this event	0.9575***	61.4438	0.9168			
<b>Future Intentions (FI)</b>				0.9136	0.9405	0.7994
I stand ready to continue participating in future editions of the race	0.9465***	63.7668	0.8959			
I will recommend other athletes, friends, relatives, other people. to participate in the championship	0.9326***	47.6816	0.8697			
If I have the opportunity to participate in a similar event, I will repeat that experience	0.9306***	45.6017	0.8660			
<b>Pleasure (P)</b>				0.9461	0.9564	0.8144
Glad	0.9322***	4.6063	0.9655			
Delighted	0.8403***	3.9967	0.9167			
Pleased	0.8827***	4.5995	0.9395			
Excited	0.9357***	4.9239	0.9673			
Happy	0.9179***	3.5431	0.9581			
<b>Arousal (A)</b>				0.9630	0.9713	0.8715
Distressed	0.9093***	4.8802	0.9536			
Angry	0.9649***	5.3472	0.9823			
Annoyed	0.9522***	4.7832	0.9758			
Tense	0.8771***	4.4270	0.9365			
Afraid	0.9608***	5.2310	0.9802			

<sup>a</sup> $\lambda$ , Factorial loading;  $\lambda^2$  Communality;  $\alpha$ , Cronbach's alpha;  $\rho_c$ , Composite reliability; AVE, Average Variance Extracted. \* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .



PLS technique produces three indicators: Cronbach's alpha ( $\alpha$ ) (Nunnally and Bernstein, 1994), composite reliability ( $\rho_c$ ), and average variance extracted (AVE) indexes (Fornell and Larcker, 1981). Referring to  $\alpha$  and  $\rho_c$ , the latter is considered by some authors to be superior to the former because it is independent of the number of attributes associated with each construct (Fornell and Larcker, 1981). The interpretation of both indices is similar and values above 0.70 are considered reasonable (Bagozzi and Yi, 1988; Nunnally and Bernstein, 1994; Barclay et al., 1995). The results obtained showed compliance with this requirement, ensuring minimized measurement error (communication scale reflects the lowest coefficient rising to 0.73). For its part, AVE indexes, which quantify the amount of variance that a construct captures from its indicators relative to the amount of variance due to measurement error (Chin, 1998), were obtained through the execution of confirmatory factorial analysis (CFA). AVE values appeared to be satisfactory since these took positions above the minimum benchmark of 0.50 for all latent variables (Hair et al., 2006), as can be checked in **Table 1** (0.90 for S, 0.79 for C, 0.80 for CS, 0.77 for L, 0.70 for DS, 0.90 for GQ, 0.85 for PV, 0.92 for GS, 0.80 FI, 0.81 for P, and 0.87 for A).

### Validity of the Instruments

Subsequently, convergent and discriminant validities were checked for estimating the robustness of the scales. Commonly assumed, convergent validity is ascertained by verifying the significance of the standardized loadings ( $\lambda$ ) in the CFA (Barclay et al., 1995; Chin, 1998), and that each one of the dimensions included in the study is significantly correlated with the rest (Gómez-Bernabeu and Palací, 2003). In this sense, all loadings were above the threshold 0.50 (Barclay et al., 1995; Chin, 1998), according to a significance level of 95% ( $p < 0.05$ ) and calculated based on 200 bootstrapping runs, except for items 1 and 4 of S, 2 and 4 of C, 1, 2, and 3 of CS, 2 and 4 of L, 3, 5, 7, and 8 of DS, 2 and 4 of GQ, 3 and 4 of PV, 2 and 4 of GS, and 4 and 5 of FI, which did not reach this threshold and were consequently removed from the study (up 21 to items were excluded). Likewise, item communalities ( $\lambda^2$ ) exceeded the minimum requirement of 0.25, such that the latent constructs explained between 66.1 and 98.2% of variance in their respective

observed indicators. Similarly, as seen in **Table 2**, the correlations between pairs of constructs were also significant, although timid correlations could be identified between L, PV, P, and A, and the rest of the dimensions of the model, which seems to anticipate the poor explanatory/predictive capacity of these constructs over the hypotheses proposed in previous sections in reference to FI. Apart from that, a reasonable convergent validity can be confirmed (Anderson and Gerbing, 1988).

Next, with regard to the discriminant validity, it was verified that the manifest variables correlations (**Table 2**) were stronger with their associated latent variable than with any other latent variable (Barclay et al., 1995), and not overall excessively high ( $<0.85$ ), ensuring the existence of discriminant validity (Kline, 2005), except for emotional dimensions P and A. As **Table 2** displays, the square roots of the AVE values (diagonal elements) were larger than the standardized correlations among constructs (off-diagonal elements), suggesting an overall satisfactory discriminant validity (Fornell and Larcker, 1981), but not for P ( $\sqrt{\text{AVE}} = 0.90$ ) and A ( $\sqrt{\text{AVE}} = 0.93$ ), whose correlation was 0.94. This finding reveals that there is a vague conceptual differentiation among participants referring to the two emotional dimensions P and A.

### Confirmatory Factor Model

In order to confirm the factor structure of the re-specified model, which is composed of 11 dimensions and 31 indicators, authors used SEM through the PLS methodology. Such a technique, in contrast to other covariance-based structural equation modeling procedures, does not initially offer other global goodness-of-fit (GoF) measures different to the coefficient of determination  $R^2$  and AVE.

Nevertheless, even though new GoF measures have been recently formulated as indicative of judgment of the overall model fit in PLS path models, there is no clear consensus about its adequacy for this sort of approach, whose real potential revolves around its great capability for prediction rather than confirmatory purposes (Henseler and Sarstedt, 2013; Henseler, 2018).

**TABLE 2 |** Latent variable correlation matrix and square roots of AVE<sup>a</sup>.

Constructs	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1. S	4.279	0.987	(0.9465) <sup>a</sup>										
2. C	3.881	0.996	0.7506	(0.8867)									
3. CS	3.624	1.161	0.6539	0.6686	(0.8950)								
4. L	3.787	1.111	0.0231	0.0275	-0.0190	(0.8755)							
5. DS	3.830	0.993	0.7462	0.7164	0.7755	0.0442	(0.8340)						
6. GQ	3.976	1.046	0.7978	0.7234	0.7059	0.0659	0.8251	(0.9511)					
7. PV	2.995	1.259	-0.0024	-0.0394	-0.0508	-0.0065	-0.0265	-0.0289	(0.9230)				
8. GS	3.976	1.189	0.6410	0.6724	0.6572	0.0297	0.7371	0.8109	-0.0251	(0.9609)			
9. FI	3.823	1.120	0.6616	0.6805	0.6627	0.0410	0.7233	0.8171	0.0432	0.8275	(0.8941)		
10. P	4.000	0.873	0.0310	0.0436	-0.0252	-0.0226	-0.0186	0.0961	-0.0297	0.1211	0.0868	(0.9024)	
11. A	1.407	0.758	0.0038	-0.0002	-0.0549	-0.0228	-0.0360	0.0779	-0.0300	0.0878	0.0636	0.9385	(0.9335)

<sup>a</sup>Square roots of  $\sqrt{\text{AVE}}$  are in parentheses; AVE, Average Variance Extracted (**Table 1**); SD, Standard Deviation. \* $p < 0.05$ .



The essential criterion in relation to  $R^2$  obtained for each endogenous construct points that it should be higher than 0.10 (Falk and Miller, 1992). As seen in **Table 3**, all latent variables exceeded that minimum requirement by far, with the exception of PV, which was 0.00.

## Structural Model

Once the reliability and validity of the measurement model were tested, PLS was used to assess the structural model (**Figure 2**). A bootstrapping procedure with 200 subsamples was applied to determine the statistical significance of each estimated path in the model, according to Student's  $t$  computed for each hypothesis (Eberl, 2010).

Accordingly, in reference to hypotheses H1a and H1e, these were supported since statistical evidence that S ( $\beta_S \rightarrow GQ = 0.35$ ,  $p < 0.001$ ) and DS ( $\beta_{DS} \rightarrow GQ = 0.43$ ,  $p < 0.001$ ) have a positive impact over GQ (**Table 3**) was found. For their part, C, CS, and L did not seem to have any sort of effect on GQ. Hence, H1b, H1c, and H1d were not supported.

On the contrary, PV was confirmed to be a problematic construct since none of the research hypotheses in which it is implicated have emerged as significant (**Table 3**). That is, GQ did not appear to have any sort of effect on PV (H2 not significant), nor PV on GS (H4 not significant), nor PV on FI (H5 not significant). By contrast, a positive effect of GQ on GS ( $\beta_{GQ} \rightarrow GS = 0.81$ ,  $p < 0.001$ ), and, in turn, GS on FI ( $\beta_{GS} \rightarrow FI = 0.83$ ,  $p < 0.001$ ) came out as significant. H3 and H6 were thus supported (**Table 3**).

However, it should be noted that none of the two emotional dimensions, P and A, seemed to have any significant or enough of a positive moderating effect on the relations established in the model to explain FI of duathlon participants. Considering all output obtained, it would appear that the inclusion of

emotions, measured in terms of P and A, does not provide greater explanatory nor predictive capacity to the model. Therefore, hypotheses H7, H8a, H8b, H9a, and H9b cannot be supported (**Tables 3, 4**).

Finally, the overall positive effect of S on GS ( $\beta_S \rightarrow GS = 0.28$ ,  $p < 0.001$ ), and on FI ( $\beta_S \rightarrow FI = 0.24$ ,  $p < 0.001$ ) emerged as statistically significant for the sample, as well as the positive effect of DS on GS ( $\beta_{DS} \rightarrow GS = 0.35$ ,  $p < 0.001$ ), and on FI ( $\beta_{DS} \rightarrow FI = 0.29$ ,  $p < 0.001$ ), and finally, the positive effect of GQ on FI ( $\beta_{GQ} \rightarrow FI = 0.67$ ,  $p < 0.001$ ). No more overall positive effects between constructs were found to reach adequate levels of significance (**Table 4**).

In addition, **Figure 2** and **Table 3** also include indexes of global adjustment of the structural model. The essential criterion is the coefficient of determination ( $R^2$ ) obtained for each endogenous construct, which should be higher than 0.10 (Falk and Miller, 1992). All latent variables by far exceeded that minimum requirement, with the exception of PV, which was 0.00.

## Fuzzy-Set Qualitative Comparative Analysis (fsQCA)

Continuedly, bearing in mind all findings achieved through the previous approach, the next analysis is intended to verify whether emotions, if combined with other model dimensions, offer a more accurate explanation of FI. Furthermore, it is also deemed to be at the core of research objectives to know what combinations of conditions may elucidate the absence of FI to participate in sports events ( $\sim FI$ ).

Primarily, before implementing fsQCA, responses of participants must be transformed into fuzzy sets by the multiplication of the items scoring of latent variables (Villanueva et al., 2017; Crespo-Hervás et al., 2019). Thereupon, values of variables were calibrated, that is, it was determined to which extent each case belongs to each set. For the present study, since all figures range from 1 to 5, variables were directly calibrated considering percentiles 90, 50, and 10 as the basic thresholds (Woodside, 2013). Once calibration was carried out, those combinations that were not present among data in accordance with the table of configurations (truth table), or did not reach the minimum consistency cut-off and were conveniently deleted (due to the sample size, consistency cut-off was set in 0.90).

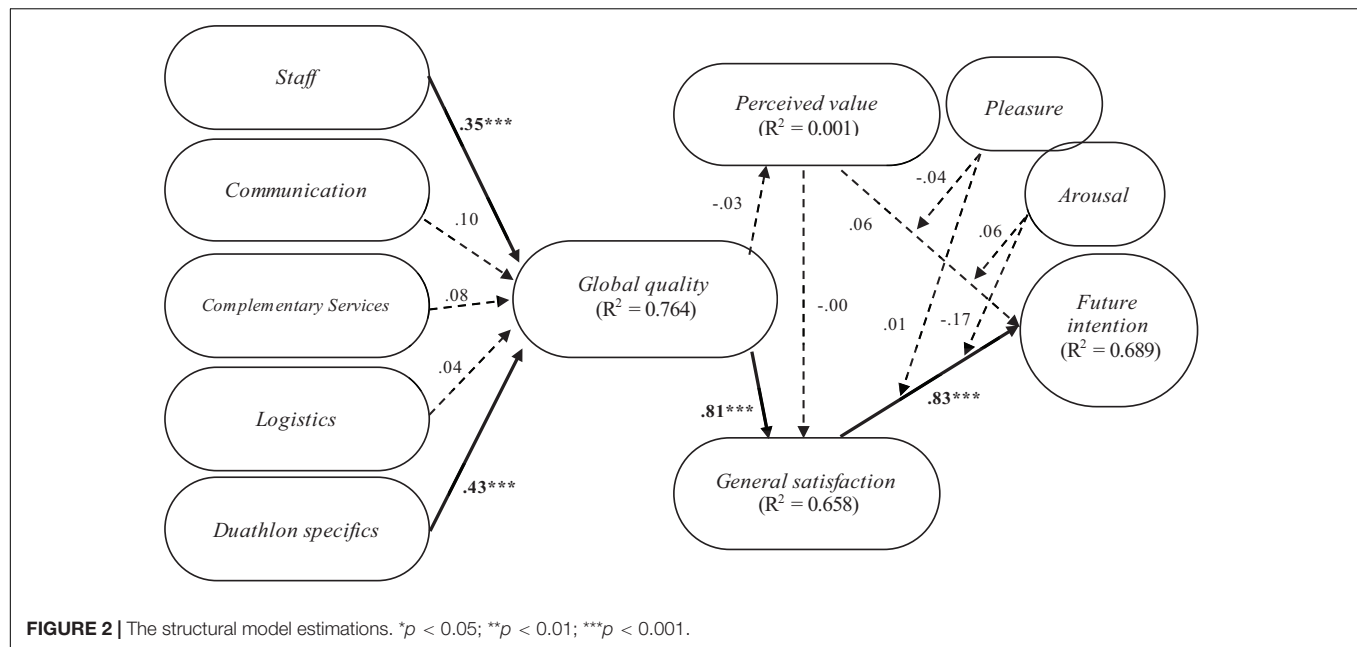
Referring to the necessary conditions test, all considered conditions reflected consistency values under the threshold 0.90 (Ragin, 2008) both for FI and for  $\sim FI$ , so it can be assumed that none of the variables represent a necessary condition of FI to participate or  $\sim FI$  to not participate. As usual, in the evaluation of sufficient conditions, the standard analysis presents three feasible scenarios: complex, parsimonious, and intermediate (the present study opts for the last one). **Table 5** shows the referred output according to the notation employed by Fiss (2011).

Ragin (2008) and Woodside (2013) suggest that a solution is remarkable if it reflects a consistency score over the threshold of 0.74 and a coverage variation between 0.25 and 0.65. As shown in **Table 5**, all solutions meet both requirements. Concretely, there are three possible combinations of sufficient conditions (firstly  $\sim GQ \cdot PV \cdot P \cdot A$ , secondly  $GQ \cdot GS \cdot P \cdot A$ , and

**TABLE 3 |** Partial effects of the structural relations, standardized loading, and hypothesis testing.

Hypothesis	Relations (path coefficients)	$\beta(t)$	Test
H1a	S $\rightarrow$ GQ	0.3506*** (3.6268)	Supported
H1b	C $\rightarrow$ GQ	0.0987 (1.0394)	Not supp
H1c	CS $\rightarrow$ GQ	0.0764 (0.7919)	Not supp
H1d	L $\rightarrow$ GQ	0.0374 (0.3114)	Not supp
H1e	DS $\rightarrow$ GQ	0.4319*** (3.8638)	Supported
H2	GQ $\rightarrow$ PV	-0.0289 (0.1100)	Not supp
H3	GQ $\rightarrow$ GS	0.8109*** (19.2160)	Supported
H4	PV $\rightarrow$ GS	-0.0017 (0.0241)	Not supp
H5	PV $\rightarrow$ FI	0.0626 (0.5818)	Not supp
H6	GS $\rightarrow$ FI	0.8291*** (10.7249)	Supported
H8	P $\rightarrow$ FI	-0.0594 (0.0095)	Not supp
H9	A $\rightarrow$ FI	0.1377 (0.0073)	Not supp
	$R^2$ GQ	0.7639	
	$R^2$ PV	0.0008	
	$R^2$ GS	0.6576	
	$R^2$ FI	0.6925	

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

**TABLE 4 |** Overall effects.

Relations (path coefficients)	$\beta$ (t)	Significance
S → PV	-0.0101 (0.1118)	No
S → GS	0.2843*** (3.5352)	Yes
S → FI	0.2351*** (3.2505)	Yes
C → PV	-0.0028 (0.0665)	No
C → GS	0.0800 (1.0414)	No
C → FI	0.0662 (1.0047)	No
CS → PV	-0.0022 (0.0486)	No
CS → GS	0.0620 (0.7951)	No
CS → FI	0.0512 (0.7686)	No
L → PV	-0.0011 (0.0157)	No
L → GS	0.0303 (0.3129)	No
L → FI	0.0251 (0.3014)	No
DS → PV	-0.0125 (0.1137)	No
DS → GS	0.3502*** (3.7268)	Yes
DS → FI	0.2896*** (3.4475)	Yes
GQ → FI	0.6705*** (10.1567)	Yes
PV * P → FI	-0.0389 (0.0155)	No
PV * A → FI	0.0634 (0.0023)	No
GS * P → FI	0.0124 (0.0256)	No
GS * A → FI	-0.1662 (0.0219)	No

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ .

finally  $GQ*PV*\sim GS*P*A$ ) explaining up to 55% of FI, with a consistency of 0.93. On the other hand, a unique combination of sufficient conditions emerges as representative for  $\sim FI$ , which is  $\sim GQ*\sim PV*\sim GS*A$  (solution coverage of 0.57; solution consistency of 0.90).

As seen before, the application of fsQCA allows analyzing interactions between different independent variables, an aspect that SEM does not permit. Overall, although it is clear that no

necessary conditions exist, there are some possible combinations (sufficient combinations) that may stimulate FI to participate in sports events. In this sense, it can be assumed according to results that emotions play a relevant role at the time of influencing FI, since both dimensions (P and A) are present in all combinations of solutions extracted. Therefore, hypothesis H7 can be supported. Instead, in case of  $\sim FI$ , findings support that high rates of A are countered by the absence of the other explanatory variables of the model (GQ, PV, and GS).

## DISCUSSION AND CONCLUSION

For several years, participation in sporting events has been booming and has become a form of both leisure and competition, attracting great social, political, and economic interest. The organization of sporting events is a challenge for federations, companies, and cities that strive to develop strategies to improve the quality of their events and the satisfaction of the participants in order to strengthen the events over time. This work investigates a holistic model of relationships between global quality, perceived value, general satisfaction, and future intentions under the moderating effect of emotions of the participants in a sporting event. The results undoubtedly serve to guide managers to plan this specific type of service to utilize such strategies.

The results of the analysis reveal that good indicators of adjustment, reliability, and the validity of measurements empirically support that the measurement model is adequate to a considerable extent. Each construct of the model is autonomous, different from the rest, and representative of the dimension that it wants to indicate. So, these results provide more evidence to the usefulness of the model proposed

**TABLE 5 |** Sufficient conditions.

Frequency cut-off: 1	Future Intentions (FI)			~Future Intentions (~FI)
	Consistency cut-off: 0.93			Consistency cut-off: 0.91
	1	2	3	1
GQ	○	•	•	○
PV	•		•	○
GS		•	○	○
P	•	•	•	
A	•	•	•	•
Raw coverage	0.25	0.45	0.26	0.57
Unique coverage	0.02	0.21	0.07	0.57
Consistency	0.93	0.96	0.93	0.90
Overall solution coverage			0.55	0.57
Overall solution consistency			0.93	0.90

• Presence of condition. ○ absence of condition.

by Angosto-Sánchez et al. (2016b) for sports modalities of the triathlon federation. The structural model identifies which items and dimensions are key for the participants in the duathlon, when determining the perceived quality and global quality of the event. This confirms the convenience of establishing the implicit dimensions in a specific scenario or event (Taylor et al., 1993; Theodorakis et al., 2015) since they affect the model, and the opportunity to consider sub-dimensions to improve the appreciation of global quality (Clemes et al., 2011).

The results for this specific event highlight the staff and the specific elements of a duathlon. In addition, these reinforce the general idea in sports management of the importance of staff (Kelley and Turley, 2001; Theodorakis et al., 2001; Hightower et al., 2002; Bodet, 2006; Kim and Severt, 2011; Ko et al., 2011; Crespo-Hervás et al., 2012) and the specific environment (Westerbeek and Shilbury, 2003). It is also confirmed that the general quality dimensions have a direct positive effect on the general satisfaction of the event, results that are similar to other authors (Zeithaml et al., 1996; Brady and Cronin, 2001; Nuviala et al., 2015). However, the influence of global quality on perceived value is not observed, unlike other studies that do support this relationship (Theodorakis et al., 2001; Clemes et al., 2011; Calabuig-Moreno et al., 2015, 2016a). This lack of relationship suggests that the participants in this event give more importance to quality than to the associated costs of attending. The study also does not support the relationship between value and general satisfaction, in contrast to the study of Murray and Howat (2002), Clemes et al. (2011), or that of Calabuig-Moreno et al. (2016a). The results also give more importance to the emotional aspects related to satisfaction than to value. The SEM analysis discovers that general satisfaction is a good predictor of future intentions, as well as, indirectly, the staff, duathlon aspects, and global quality, but not the perceived value, as other recognized studies have said (Cronin et al., 2000; Hightower et al., 2002; Calabuig-Moreno et al., 2015, 2016a,b). Therefore, the research reveals that emotional involvement associated with sports participation and affective aspects that condition

satisfaction influences an individual's intention to attend a similar event in the future.

The SEM analysis shows that emotions (pleasure and arousal) alone or indirectly are not explanatory of the future intentions of the participants. However, with the qualitative study fsQCA, the combinatorial effects have been estimated and sufficient combinations of conditions have been identified that do explain the incidence of emotions in the final effect studied. Thus, the application of fsQCA allows us to affirm that emotions, although by themselves are not a predictor of future intentions, in combination with other variables are very important. In fact, the three combinations of sufficiency conditions obtained bear in mind the two emotions considered in this work (pleasure and arousal).

We conclude that it has been appropriate to carry out an analysis of the relationships between quality, satisfaction, perceived value, future intentions, and emotions in participants of the European Duathlon Championship, as it has provided knowledge to managers of similar duathlon or triathlon events. This study suggests that in the management of sporting events, the emotions of the participants must be considered as precursors to behavioral intentions. Furthermore, the introduction of fuzzy logic has increased the explanatory value of the model. So, it seems convenient to combine the linear models and the fsQCA model to improve analyzes in the future.

The main limitation of this study is the low sample size, since a larger size would have allowed for creating more consistent and reliable fuzzy numbers. Furthermore, this specific type of event is not representative of others, making it difficult to generalize the results to all kinds of sporting events. However, we consider that the results are a useful representation of the phenomenon studied, in view of the limited number of research in the literature that address the phenomenon from the perspective of the participants. We suggest applying this study to participants from similar events and different contexts. We propose that how the outcome of the competition affects individual's future intentions should be analyzed and, moreover, to include the study of the influence of sex, nationality, or the modality

of competition into the evaluations of the dimensions. These issues will be useful to guide managers toward the development of efficient strategies focused on different segments of participants. Although this exceeds the limits of this work, it generates appealing futures lines of research.

During the completion of this investigation, many people have been living through lockdowns as a result of the Covid-19 pandemic. This situation will undoubtedly affect the holding of future events and the relationship between the agents involved. Therefore, it is hypothesized that there will be a need to design security protocols that can determine an individual's decision to attend an event or not. Therefore, new highly relevant lines of research have been generated.

## IMPLICATIONS FOR MANAGEMENT

In accordance with these results, managers are encouraged to focus on guiding staff functions toward participant satisfaction, focusing especially on amateur participants. It is suggested, for better efficiency, to pay special care to the design process and control of the technical aspects of the race. In addition, it is advised to develop strategies to increase pleasure and arousal during the moments before the celebration, during the trial, and at the end of it. Therefore, the main advice for managers would be to focus their efforts on offering high levels of perceived quality and satisfaction to participants, especially amateur participants.

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## DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation, to any qualified researcher.

## ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local legislation and institutional requirements. Written informed consent to participate in this study was provided by the all participants.

## AUTHOR CONTRIBUTIONS

AM-G put forward a theoretical idea and collected the data. CS-P and CM-C analyzed the data and wrote it into the article. MG-T revised the theoretical framework and organized the work. All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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# Sport Spectatorship and Health Benefits: A Case of a Japanese Professional Golf Tournament

Yasuhiro Watanabe<sup>1</sup>, Tyreal Y. Qian<sup>2\*</sup>, Jerred J. Wang<sup>3</sup>, N. David Pifer<sup>4</sup> and James J. Zhang<sup>5</sup>

<sup>1</sup> Department of Sport Business Administration, Hiroshima University of Economics, Hiroshima, Japan, <sup>2</sup> School of Kinesiology, Louisiana State University, Baton Rouge, LA, United States, <sup>3</sup> Department of Sport Leadership and Management, Miami University, Oxford, OH, United States, <sup>4</sup> Department of Kinesiology and Sport Management, Texas Tech University, Lubbock, TX, United States, <sup>5</sup> Department of Kinesiology, International Center for Sport Management, University of Georgia, Athens, GA, United States

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### \*Correspondence:

Tyreal Y. Qian  
yqian@lsu.edu

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It has been well-argued that professional sport or mega sport events could serve as a catalyst for sport participation behaviors through direct and indirect trickle-down effects. However, there is limited research exploring the impact of spectator services during sport events on personal and collective well-being. Elaborating on the social-ecological model and the concept of market demand, this study attempted to fill the gap in the literature by measuring core product (player attraction, event attractiveness, and course characteristics) and peripheral spectator services (event services, event information, event amenity, and parking and transportation) of a professional golf tournament hosted in Japan and examining how these services factors would influence spectators' length of stay at a golf event, physical activity as measured by step counts, self-rated health, and life satisfaction. Following the administration of a questionnaire to spectators at a Japanese professional golf tournament ( $n = 306$ ) and conducting confirmatory factor analyses (CFA) and structural equation modeling (SEM) analyses, research findings revealed that the tournament-related spectator services would have an influence on physical activity, which could in turn influence self-rated health and subsequently impact life satisfaction. That is, emphasizing the sense of accomplishment fulfilled in sport spectatorship is recommended for the well-being of the spectators. The findings of this study shed light on the significance of promoting golf spectatorship as an effective means to facilitate a healthy lifestyle and in the meantime provide golf event marketers with a unique, positive benefit through which their events can be promoted.

**Keywords:** golf spectators, market demand, length of stay, population health benefits, step counts

## INTRODUCTION

Research on the relationship between spectator sports and population health (e.g., physical activity participation, life satisfaction) has received considerable attention from scholars and practitioners alike in recent years (Banyard and Shevlin, 2001; Frawley and Cush, 2011; Wann et al., 2011; Wang et al., 2013; Elling et al., 2014; Inoue et al., 2015; Aizawa et al., 2018). In fact, to curb rising public health spending, the Japanese government has invested substantial resources in, and directed budgets toward, preventive policies and measures. Nevertheless, the rate of physical inactivity is still

rapidly increasing. The number of Japanese adults' daily walking steps has gradually declined since the late 1990s, and reports have shown that Japanese adults have the highest sitting time per day among the top 20 industrialized countries (Bauman et al., 2011; Inoue et al., 2011). In the wake of a successful bid to host the 2020 Olympic-Paralympic Games in Tokyo, several programs and policies have been established to encourage sport participation and promote physical activity. It has been well-argued that professional sport or mega sport events could stimulate regional economy and revitalize local communities (Japan Sports Agency, 2018; Misener et al., 2015; Weed et al., 2015). Research findings also suggest that mega sport events could serve as a catalyst for sport participation behaviors through direct and indirect trickle-down effects (Misener et al., 2015; Weed et al., 2015; Potwarka and Leatherdale, 2016; Aizawa et al., 2018). However, there are still a limited number of studies exploring how the management and marketing of spectator services during sport events would impact personal and collective well-being (Chelladurai, 2014; Inoue et al., 2015). Despite the upward trend of health promotion campaigns taking place lately in Japan, even less research of this nature can be found. Given the growing health concerns over an aging Japan and the potential of spectator sport events to provide health benefits, it is of great importance for sport management scholars to move this research agenda forward and bridge the gap between spectator services and their capacity to improve population health (Chalip, 2006; Inoue et al., 2015; Warner, 2019).

Golf has long been one of the most popular sport and leisure activities in Asia, especially among middle-aged Japanese. Unlike many other forms of spectator sports, golf spectatorship can potentially be of profound physical and mental benefits. For instance, walking while spectating a golf tournament is considered a good form of health-enhancing physical activity (HEPA) that strengthens bones and muscles with minimal risk of injury (Lyu and Lee, 2013). Many spectators have utilized golf tournaments to acquire health benefits by walking on spectator paths around the courses (Watanabe et al., 2013; Murray et al., 2018). There is a growing recognition of the important roles that spectator services in the form of core and peripheral tournament offerings (Byon et al., 2013) play in golf tournament attendance, such as the scenery and landscapes of golf courses, presence of well-known players, and event operations in the areas of staff performance, concession sales, and facility accessibility (Lyu and Lee, 2013; Watanabe et al., 2013; Watanabe and Zhang, 2019). Arguably, in addition to enhancing golf spectators' experiences, these tournament services may also provide an opportunity for spectators to engage in HEPA by motivating them to achieve recommended daily step counts and boost their self-rated health (Helliwell, 2003; Huang and Humphreys, 2012; Lyu and Lee, 2013; Murray et al., 2017b).

Even so, little is known as to what and how spectator services could influence golf spectators' physical activity and well-being variables (i.e., step counts, self-rated health, and life satisfaction). Through a social-ecological perspective, this study attempted to fill the research void by measuring core product and peripheral spectator services of a professional golf tournament hosted in

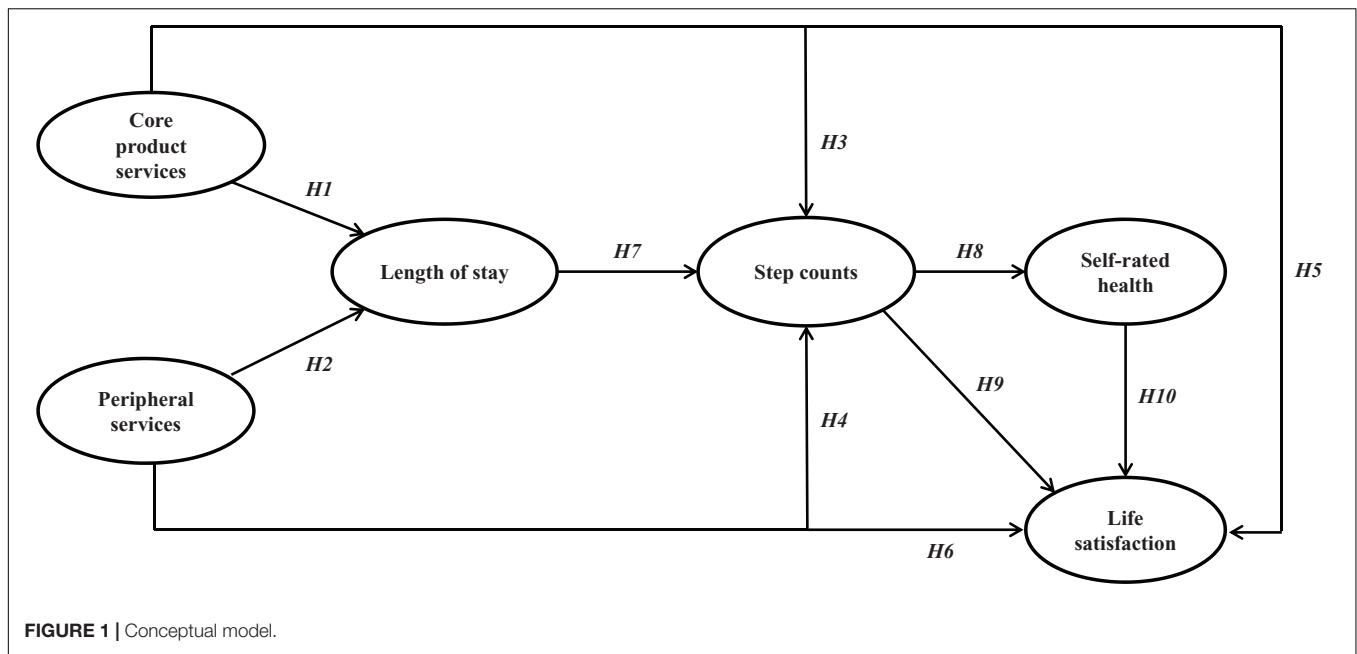
Japan and examining how these services factors would influence spectators' length of stay, physical activity as measured by step counts, self-rated health, and life satisfaction. In doing so, the current research sought to make two major contributions to the literature. First, this study aimed to provide new evidence for the health benefits accrued from golf spectatorship by clarifying and adding new knowledge to previous research on how sport could be managed and marketed to provide health-related benefits (Inoue et al., 2015, 2017; Murray et al., 2017a,b, 2019). Second, given growing interest in understanding the influence of people's interactions with physical and sociocultural surroundings on health-related behaviors, as well as inconclusive evidence regarding how tournament services could enhance spectators' physical activity and subjective well-being (Stokols, 1996; Giles-Corti and Donovan, 2002; Pikora et al., 2003; Sato et al., 2016a, 2019; Inoue et al., 2017; Murray et al., 2019), this study made an initial effort to identify the social and physical environmental elements through which health-related behaviors occurred in golf spectatorship.

## REVIEW OF LITERATURE

### Theoretical Background

In the present study, we adopted a social-ecological model of human behavior to conceptually guide our investigation of the social and physical environmental correlates of golf spectators' well-being outcomes. Social-ecological models have evolved over the past decades and been increasingly recognized due to their relevance to health-related behaviors and ever-increasing applications in research and practice, including but not limited to education, public health, psychology, sociology, and sport management (Stokols, 1996; Sallis et al., 1998, 2006; Pikora et al., 2003; Saelens et al., 2003a,b; Langille and Rodgers, 2010; Sato et al., 2019). The core notion of a social-ecological model is that health-related behaviors are impacted by multiple levels of influences, including factors at the intrapersonal, interpersonal, organizational, physical environmental, community, and public policy levels (McLeroy et al., 1988; Sallis et al., 1998, 2006, 2015). Rather than solely relying on psychosocial models, social-ecological models are favored by public health scholars because of their explicit inclusion of people's interactions with sociocultural and physical environments that are posited to influence health-related behaviors (Stokols, 1992, 1996; Sallis et al., 2006). Past research has suggested that integration of psychosocial and environmental variables is conducive to explaining health-related behaviors, in particular physical activity (Stokols, 1996; Sallis et al., 1998, 2006; Giles-Corti and Donovan, 2002; Saelens et al., 2003a,b).

Even so, it is worth noting that much of the existing scholarly work has been devoted to examining the influence of inter- and intra-personal variables on people's well-being (e.g., Sato et al., 2016a,b; Inoue et al., 2017), although a growing body of literature has indicated that physical activity is also influenced by environmental variables (e.g., Brownson et al., 2000; Sallis et al., 2015; Sato et al., 2016a, 2019). Understanding the relative influence of particular physical and social environments on



physical activity can help maximize well-being outcomes in those settings (Sallis et al., 1998). Thus, in line with this approach, we posited that delving into the physical and social environmental factors of golf tournaments could add explanatory value provided by intrapersonal and interpersonal factors to a better understanding of how golf tournaments could provide health benefits to spectators (**Figure 1**).

### Spectator Services and Length of Stay

Consumer demand is often referred to as market demand that is defined as a consumer's wants and expectations toward the core and peripheral attributes of a product or service (Zhang et al., 2003; Braunstein et al., 2005; Byon et al., 2013). Previous studies have examined demand factors in various sport and entertainment settings including baseball (Braunstein et al., 2005), basketball (Zhang et al., 2003), action sports (Tsuiji et al., 2007), Taekwondo (Kim et al., 2009), golf (Watanabe et al., 2013; Watanabe and Zhang, 2019), Formula 1 (Watanabe et al., 2018), and esports (Qian et al., 2019, in press). Consistent with the social-ecological model of human behavior (Stokols, 1996; Sallis et al., 1998, 2006; Saelens et al., 2003a,b) and the conceptualization of spectator services (Chelladurai, 2014), consumer demand factors for spectator sport can be viewed as social and physical environmental constructs that represent spectators' evaluation of, and expectation toward, the essential features of a contest, ancillary services, and third place experience.

Sport event spectators primarily attend sport events for the core products, namely, competitive athletic contests, while enjoying peripheral services such as halftime shows and game-day promotions that can only be experienced at the event venue (Mullin et al., 2014; Inoue et al., 2015). Some researchers have noted that provisions of spectator services, including both core and peripheral services, are critical in defining spectators'

experience (Zhang et al., 2003; Tsuiji et al., 2007; Byon et al., 2013). In the current research setting, due to the unique nature of golf tournaments (i.e., spectating while walking), the assessment of golf tournament services needs to be approached cautiously. By critically reviewing pertinent sport management and public health literature on this topic, we conceptualized and proposed three subdimensions for core product services and peripheral services, respectively (Hansen and Gauthier, 1993, 1994; Sallis et al., 1998; Saelens et al., 2003a; Byon et al., 2013; Watanabe et al., 2013, 2018). Core product services include player attraction, event attractiveness, and course characteristics, representing the core social and physical environmental appeals that attract spectators to attend a golf tournament (Watanabe et al., 2013; Watanabe and Zhang, 2019). In contrast, peripheral services are reflective of the features of tournament support/operation programs that are closely related to other product functions of a tournament (Zhang et al., 2003). In the current study, peripheral services incorporate event services, event information, event amenity, and parking and transportation, which are instrumental to the overall operational effectiveness of a golf tournament.

Previous research findings indicate that the perceived core product attributes (e.g., the game itself, players' performances) and event support program features (e.g., the physical environment, event staff, concessions, promotions) might play an important role in influencing spectators' event satisfaction, desire to stay, and repatronage intentions (Zhang et al., 1995, 2003; Watanabe et al., 2018). For instance, Wakefield et al. (1996) showed that sportscape elements covering a wide spectrum of spectator services influenced football and baseball spectators' attendance intentions. In the field of tourism and hospitality, Lam et al. (2011) noted that gaming customers who possessed a favorable assessment of the physical environment and casino services would have a higher level of desire to stay and intention to revisit. Similarly, Siu et al. (2012) showed how



customers' evaluation of environmental stimuli could influence their affective responses, revealing the vital role of perceived environmental elements of a convention center in influencing visitors' satisfaction and desire to stay. Based on these findings, we posited that spectators' perceived core product and peripheral services would have a positive influence on their length of stay at a golf tournament as the length of stay is mainly dependent on the assessment of spectator services of the tournament (Zhang et al., 2005; Mullin et al., 2014). As such, the following hypotheses were tested.

- H1: Core product services would positively correlate with spectators' length of stay.
- H2: Peripheral services would positively correlate with spectators' length of stay.

### Spectator Services and Physical Activity

Spectator services by themselves are essential antecedents of sport event consumption; however, they might also be associated with health-related benefits through increased physical activity levels. It has been found that social and physical environments are associated with physical activity such as walking, cycling, and life-space mobility (Giles-Corti and Donovan, 2002; Hoehner et al., 2005; Rantakokko et al., 2015; Chaudhury et al., 2016). Hoehner et al. (2005) assessed the environmental determinants of physical activity among urban adults through their perception of five major environmental dimensions: land use (e.g., destinations within walk distance), recreational facilities (e.g., park, trail, fitness facility), transportation environment (e.g., sidewalks present), aesthetics (e.g., neighborhood pleasant), and social environment (e.g., neighbors physically active). They found that recreational physical activity was positively associated with perceived access to recreational facilities while transportation-related physical activity was positively associated with number of destinations and public transit, yet negatively associated with perceived neighborhood aesthetics. Saelens et al. (2003a) found that environmental variables such as land use mix could add to variance accounted for beyond sociodemographic predictors of walking/cycling for transport in local neighborhoods. They also called for an evaluation of additional environmental variables such as neighborhood aesthetics and topography that might be related to physical activity. Rantakokko et al. (2015) identified perceived environmental facilitators outdoors such as green area, familiar environment, appealing scenery, resting places by the walking route, walkways without steep hills, good quality walkways, other people outdoors who motivate, and close-by services (i.e., shops, marts), showing that people who reported four to seven facilitators were less life-space restricted compared with those who reported three or fewer facilitators.

In a similar vein, the social and physical environmental elements offered by a professional golf tournament might also correlate with spectators' physical activity. Since golf spectatorship is characterized by long outing hours as opposed to many other forms of team sport events, it should not be too surprising that the health benefits are generally greater for spectators who walk on a course in contrast to players who usually ride on a golf cart (Kras and Larsen, 2002; Watanabe et al., 2013;

Murray et al., 2018). Murray et al. (2017b) exhibited that 82.9% of golf spectators reached their daily recommended amount of physical activity when measured by step counts (>7,500 steps). Ostensibly, spectators might unconsciously engage in moderate physical activity by walking behind beloved or famous professional golf players; at the same time, a good quality walking path on the golf course and a pleasant atmosphere of the tournament might provide spectators incentive to explore the course and walk more. Other peripheral services such as event amenity and event services might also impact spectators' desire to walk as supported by the spillover effect of customer evaluation of ancillary services that could sometimes go beyond the domain or range of the original behavioral area (Zeithaml et al., 1996; Athanassopoulos et al., 2001; Szymanski and Henard, 2001). For instance, attendance at sport events may promote stronger intentions to exercise among participants who are more satisfied with their event experience (Funk et al., 2011a,b); Funk et al. (2011b) found that when people were satisfied with their experience in a participant sport event, they were more likely to attend future events and intended to engage in more physical activities afterward. This makes improving core and peripheral spectator services a critical objective for event organizers as they should strive for offering high-quality spectator services and meeting consumer wants and expectations to not only promote tournament attendance and golf consumption but also nurture health benefits and fitness values (Wakefield and Blodgett, 1996; Watanabe and Zhang, 2019). Subsequently, the following hypotheses were posited.

- H3: Core product services would positively correlate with step counts during the tournament.
- H4: Peripheral services would positively correlate with step counts during the tournament.

### Spectator Services and Life Satisfaction

Life satisfaction is an individual's cognitive judgment of the quality of life and is one of the most basic indicators of subjective well-being (Rice, 1984; Diener et al., 1999). Participation in sports and engagement in physical activities improve life satisfaction by fulfilling people's basic psychological needs such as competence, autonomy, and relatedness, which in turn promote life satisfaction (Ryan and Deci, 2001; Funk et al., 2011a; Sato et al., 2016b). Similarly, recent studies have demonstrated that good sport event experiences may have positive effects on not only spectators' behavioral responses but also their overall assessment of physical and mental health (Funk et al., 2011a; Sato et al., 2014, 2017; Du et al., 2015; Inoue et al., 2015, 2017; Baker et al., 2018; Hyun and Jordan, 2020). In other words, attendance at sport events might provide a context where people could obtain psychological benefits such as enjoyment and self-esteem and support personal development and learning, which in turn contribute to people's life satisfaction (Iwasaki, 2007; Inoue et al., 2017).

Although life satisfaction may be attained through other behavioral means, live spectatorship represents a unique type of behavioral engagement that is especially the case during live spectating golf tournaments (Hansen and Gauthier, 1993,



1994; Lyu and Lee, 2013). Facilitated by core product services, walking on spectator paths with family or friends to enjoy the beautiful landscapes and scenery of golf courses is a common practice among golf spectators (Hansen and Gauthier, 1993, 1994; Lyu and Lee, 2013; Watanabe et al., 2013; Watanabe and Zhang, 2019). Perhaps most importantly, by closely observing sporting excellence and actively learning from professional golfers, spectators could have the opportunity to achieve personal development, which is critical for making one's life meaningful and satisfying (Iwasaki, 2007). Peripheral services such as foodservice, shows, concerts, and staff courtesy at a tournament are inherently associated with leisure activities that may help spectators gain positive emotions, which in turn enhance and maintain their life satisfaction (Byon et al., 2013). In brief, given the meaning derived from and the needs fulfilled by the level of physical activity associated with golf spectatorship, spectators might possess a positive evaluation of life (Iwasaki, 2007; Inoue et al., 2017). Consistent with the social-ecological perspective on the influence of social and physical environments on population health, it can therefore be argued that golf is a unique spectator sport with salient participation and socialization elements enabled by spectator services that assimilate positive psychological resources into spectating (Inoue et al., 2017). As such, the current study tested the following hypotheses.

H5: Core product services would positively correlate with life satisfaction.

H6: Peripheral services would positively correlate with life satisfaction.

### Length of Stay, Physical Activity, Self-Rated Health, and Life Satisfaction

Self-rated health is one's perception of one's own health and has been commonly measured in epidemiological and gerontological research (e.g., Mossey and Shapiro, 1982; Helliwell, 2003; Huang and Humphreys, 2012). It has been found to have a strong correlation with life satisfaction (Helliwell, 2003; Huang and Humphreys, 2012). Helliwell (2003) noted that self-reported health was one of the constructs that explained most variance in life satisfaction. Huang and Humphreys (2012) found that a supportive sport environment was positively associated with individuals' self-reported health. More recently, Inoue et al. (2018) discovered that sporting event attendance was positively correlated with self-rated health over a 12-year period. Their findings provided support for the notion that sport spectatorship is an important leisure activity that might generate positive perceptions of general health and contribute to positive health outcomes. In this sense, golf tournaments may have greater health impact on spectators because golf spectatorship involves walking as a form of physical activity. Researchers have suggested that a lot of golf spectators attend golf events with the purpose to exercise or participate in physical activity so that they could obtain potential health benefits (Hansen and Gauthier, 1993, 1994; Robinson and Carpenter, 2002; Robinson et al., 2004; Lyu and Lee, 2013; Watanabe et al., 2013). Spectators may have the opportunity to acquire multiple physical and physiological benefits including improvement of cardiovascular

and respiratory capacity, muscle strength, weight loss, and escape from physical stressors while walking on golf courses and learning diverse golf skills through spectating professional golf players' performances (Hansen and Gauthier, 1993, 1994; Lyu and Lee, 2013; Watanabe et al., 2013). Murray et al. (2017b) revealed that many spectators attended golf events to obtain HEPA, while the rest still gained incidental HEPA through observing particular golfers or courses. Murray et al. (2019) suggested that when golf spectators were informed about the potential health benefits of golf spectatorship, they showed greater interest in participating in and spectating golf. Sato et al. (2016a) stated that the pleasant aspect of physical activity is likely to bring about good feelings in life, which might be conducive to self-rated health and life satisfaction. To sum up, higher step counts may be associated with higher levels of health perception and life satisfaction as spectators with higher step counts are more conscious about their health outcomes. As such, the following hypotheses were developed for the current study.

H7: Length of stay would positively correlate with step counts during the tournament.

H8: Step counts during the tournament would positively correlate with self-rated health.

H9: Step counts during the tournament would positively correlate with life satisfaction.

H10: Self-rated health would positively correlate with life satisfaction.

## MATERIALS AND METHODS

### Participants

An on-site survey was conducted at the 2018 Bridgestone Open of the regular tour tournament in Japan, which was organized and operated by the Bridgestone Corporation. This tournament was a professional golf tournament held on October 18–21 at the Sodegaura Country Club's Sodegaura Course in Sodegaura City. The current study was approved by the ethics committee of the Hiroshima University of Economics and the tournament organizer. The questionnaire had a cover letter that provided information on involved institutions, ethical guidelines, and data protection. Participants must sign a consent form before proceeding with the survey. Of the respondents, 64.3% were male and 35.7% were female. Approximately 44% of the respondents were at least 60 years of age, 30% were 50–59 years old, and 19% were 40–49 years old. A vast majority of spectators were golf players (78.5%). Among the spectators, 19.9% stayed at the event for less than 4 h, 42.8% for 4–6 h, and 37.3% stayed more than 6 h.

### Instrumentation

A questionnaire was formulated to measure spectators' perceived core product services, perceived peripheral services, length of stay, step counts, self-rated health, and life satisfaction. The questionnaire was designed based on Hinkin's (1998) guidelines of (a) formulating preliminary measures via procedures including a comprehensive review of related literature, on-site observations of previous golf events, and dialogues with a group of event

marketers and event attendees of various golf tournaments, (b) conducting a test of content validity through a panel of experts, and (c) conducting a confirmatory factor analysis (CFA). For sample description purpose, variables for demographic information were also included in the questionnaire.

To measure the tournament's core product services and peripheral services, measurement scales developed in a few critical studies were taken into consideration (e.g., Hansen and Gauthier, 1993, 1994; Wakefield and Sloan, 1995; Watanabe and Zhang, 2019). As a result, 10 items were developed to measure core product services and 17 items were developed to measure peripheral services. Five items assessing life satisfaction were derived from Sato et al. (2014, 2016b) work. The aforementioned items were slightly modified and adapted to fit with the golf tour tournament setting in Japan and were measured in a 6-point Likert-type scale ranging from 1 (*strongly disagree*) to 6 (*strongly agree*). Self-rated health was assessed by a single item asking respondents to rate their current state of general health on a 6-point scale ranging from 1 (*very unhealthy*) to 6 (*very healthy*) (Helliwell, 2003). Finally, step counts were measured in numerical values by spectators who utilized personal pedometers or smartphone pedometers to decide on the number of steps from time of entry to the venue until exit (see **Appendix**).

## Procedures

Permission to conduct the survey was obtained from the event management prior to the tournament. The paper-pencil questionnaires were distributed in the afternoon hours to spectators at food court areas and the exit gate. Trained students majoring in sport management monitored tournament progress, approached spectators resting in a food court area or heading to the exit gate, and helped with the survey administration. Spectators were asked to answer the following questions: "Are you going home" (yes); "did you record step counts during the tournament using a pedometer or a cellphone app" (yes); and "how many steps did you walk in this tournament" (number of steps)? Of the 600 questionnaires distributed during the 4-day tournament, 554 questionnaires were retrieved with a return rate of 92.3%. However, in this study we only included spectators who responded to the questions with the answers in the parentheses. This led to a total of 306 usable observations. The demographic characteristics of our sample were largely consistent with those of general golf spectators in Japan. According to past research, approximately 65–70% of spectators were male, 40% were 60 years of age or older, 25% were 50–59 years old, and 20% were 40–49 years old (Watanabe et al., 2013; Bridgestone Sports Co., Ltd, 2017; The Golf Tournament Promotion Association of Japan, 2018; Watanabe and Zhang, 2019). In addition, to control self-selection bias, we examined whether there were demographic and event-specific differences between participants who measured step counts and those who did not. No difference was found in terms of gender ( $\chi^2 = 0.53$ ,  $df = 1$ ,  $p = 0.48$ ), age ( $\chi^2 = 28.81$ ,  $df = 4$ ,  $p = 0.14$ ), golf rounds ( $\chi^2 = 3.75$ ,  $df = 3$ ,  $p = 0.29$ ), companion ( $\chi^2 = 10.16$ ,  $df = 6$ ,  $p = 0.12$ ), and length of stay ( $\chi^2 = 1.77$ ,  $df = 2$ ,  $p = 0.41$ ), respectively.

## Data Analyses

Statistical analyses were performed using procedures in IBM SPSS Statistic 22.0 and IBM SPSS Amos 22.0. First, descriptive statistics (means, standard deviations, correlations, and checks for normality) were computed for variables using IBM SPSS Statistic 22.0. Second, confirmatory factor analyses (CFA) were conducted for the measurement model. Then, structural equation modeling (SEM) analyses examining direct and indirect effects in the proposed conceptual model were performed by using procedures in IBM SPSS Amos 22.0 with the maximum likelihood (ML) estimation. The measurement property of the structural model was first examined, followed by an assessment of the proposed structural relationships (Anderson and Gerbing, 1988). Goodness of fit indices were assessed by using the comparative fit index (CFI), normed chi-square ( $\chi^2/df$ ), standardized root mean square residual (SRMR), and root mean square error of approximation (RMSEA). The reliability of the measures was assessed by Cronbach's alpha, Average Variance Extracted (AVE), and composite reliability. The convergent validity and discriminant validity were examined by factor loadings and the inter-factor correlations (Fornell and Larcker, 1981; Kline, 2005; Hair et al., 2010).

## RESULTS

Descriptive statistics for the variables are presented in **Table 1**. We started to assess the normality of dataset at the univariate level with skewness and kurtosis values. As shown in the table, all items had skewness value ranging from  $-2.80$  to  $1.03$  and kurtosis value ranging from  $-0.92$  to  $2.64$ . Specifically, only one item's skewness and kurtosis values were slightly above the suggested value of  $\pm 2.58$  (Ghasemi and Zahediasl, 2012), suggesting that our data did not substantially deviate from normality. Further, the Mardia (1970) test was conducted to assess the multivariate normality of data distribution. As the results, the current data deviated from normality only at the multivariate level (Mardia's skewness statistics =  $221.92$ ,  $p < 0.001$ ; Mardia's kurtosis statistics =  $1307.98$ ,  $p < 0.001$ ). Therefore, the ML estimation method was used for the CFA because it was robust even when applying to some conditions non-normally distributed data (Hoyle and Panter, 1995; Olsson et al., 2000).

Subsequently, CFAs were proceeded. To reduce the complexity of tested relationship model and improve the reliability of research results, both core services and peripheral services were treated as second-order factors. As shown in **Table 2**, factor loadings for items were all greater than  $0.60$ . Fit indices of second-order core product services were acceptable:  $\chi^2/df = 3.07$ , CFI =  $0.92$ , RMSEA =  $0.08$  with  $90\%$  CI =  $0.06$ – $0.09$ , SRMR =  $0.06$  (Bollen, 1989; Kline, 2005). Similarly, fit indices of second-order peripheral services were satisfactory:  $\chi^2/df = 2.73$ , CFI =  $0.93$ , RMSEA =  $0.05$  with  $90\%$  CI =  $0.06$ – $0.08$ , SRMR =  $0.05$ . As to the overall measurement, its fit indices were  $\chi^2/df = 1.70$ , CFI =  $0.93$ , RMSEA =  $0.04$  with  $90\%$  CI =  $0.04$ – $0.05$ , SRMR =  $0.05$ . In addition, validity and reliability values for latent factors were also above the recommended threshold. As shown in **Table 2**, the values of Cronbach's alpha (ranging from  $0.71$  to

**TABLE 1 |** Descriptive statistics for variables included in the study.

	Variables	Mean	SD	Skewness	Kurtosis
Core product services	Presence of famous players	4.65	1.48	−1.38	1.72
	Showing of favorite players	4.85	1.51	−1.62	2.17
	Being able to follow players	3.73	1.70	−0.59	−0.37
	Opportunity to watch players closely	5.41	0.86	−1.96	2.07
	Being able to watch players' practice closely	4.75	1.40	−1.17	1.03
	Players' high performance	5.18	1.01	−1.20	0.87
	Opportunity to learn from players	4.16	1.70	−0.78	−0.19
	Ease of walking on golf course	4.37	1.47	−0.84	0.20
	Enjoyable scenery of golf course	4.46	1.31	−1.09	1.42
	Pleasant atmosphere of the event	4.38	1.39	−0.85	0.49
Peripheral services	Foodservice quality	4.12	1.14	−0.22	−0.09
	Price of foodservice	3.58	1.25	−0.09	−0.13
	Variety of golf shop offerings (e.g., souvenirs, equipment)	3.55	1.21	−0.31	0.88
	Ancillary activities (e.g., shows, concerts, autograph session)	3.63	1.28	−0.31	0.83
	Ticket promotion	3.82	1.41	−0.45	0.17
	Convenience of buying ticket	4.04	1.45	−0.63	0.41
	Event information accessibility	4.01	1.38	−2.80	2.64
	Crowd control	4.47	1.06	−0.46	0.29
	Spectating area accessibility	4.42	1.05	−0.32	−0.30
	Spectating area convenience	4.28	1.08	−0.30	−0.32
	Scoreboard quality	4.67	0.99	−0.40	−0.61
	Staff courtesy	4.55	1.05	−0.28	−0.55
	Restroom cleanliness	4.03	1.24	−0.45	0.06
	Parking accessibility	4.26	1.22	−0.40	−0.11
	Parking availability	3.07	1.90	−0.38	−0.88
	Parking cost	2.73	1.80	−0.15	−0.92
	Public transportation accessibility	4.49	1.46	−1.28	1.68
	I am satisfied with my life	4.49	1.15	−0.63	0.44
Life satisfaction	If I could live my life over, I would change almost nothing	4.45	1.14	−0.55	0.25
	In most ways my life is close to ideal	4.54	1.13	−0.47	−0.25
	The conditions in my life are excellent	4.78	1.03	−0.67	0.54
	So far, I have gotten the important things I want in life	4.53	1.10	−0.37	−0.27
	Length of stay (in hours)	5.05	1.60	0.36	0.14
	How many steps did you walk in this tournament?	8,714.35	3658.06	0.63	1.02
	Self-rated health	4.85	0.86	−0.91	1.27

0.92), AVE (ranging from 0.54 to 0.75), and composite reliability (ranging from 0.82 to 0.93) were all above the suggested values ( $\alpha \geq 0.70$ ,  $CR \geq 0.60$  by Bagozzi and Yi, 1988;  $AVE \geq 0.50$  by Fornell and Larcker, 1981). Factor loadings were larger than or close to 0.70, indicating good convergent validity (Hair et al., 2010). Inter-factor correlations were below the cutoff value of 0.85, ranging from −0.01 to 0.61 (Table 3), confirming good discriminant validity of measurement model (Hair et al., 2010). We also assessed whether there was a threat of common method bias (CMV) by using Harman's single factor test. The result showed that no single factor could explain more than 50% of the variance, indicating that CMV was not a serious issue in our study.

Research hypotheses were tested by conducting SEM analyses. Fit indices of relationship model were above average:  $\chi^2/df = 2.25$ , CFI = 0.96, RMSEA = 0.05 with 90% CI = 0.04–0.06, SRMR = 0.06. As shown in Table 4 and Figure 2, core product services positively correlated with spectator's length of stay at

the tournament ( $\beta = 0.27$ ,  $p < 0.001$ ), confirming H1. However, peripheral services did not have a significant effect on length of stay, rejecting H2. Core product services positively ( $\beta = 0.28$ ,  $p < 0.01$ ) and peripheral services negatively ( $\beta = -0.17$ ,  $p < 0.05$ ) correlated with step counts, supporting H3 but rejecting H4. As to life satisfaction, only core product services positively associated with it ( $\beta = 0.57$ ,  $p < 0.001$ ), supporting H5 and rejecting H6. Further, length of stay positively correlated with step counts ( $\beta = 0.13$ ,  $p < 0.01$ ), supporting H7; step counts positively associated with self-rated health ( $\beta = 0.14$ ,  $p < 0.01$ ), which further positively linked to life satisfaction ( $\beta = 0.15$ ,  $p < 0.05$ ), supporting H8 and H10. The direct effect of step counts on life satisfaction was not supported, rejecting H9. Albeit minimal, the indirect effect of step counts on life satisfaction via self-related health was significant ( $\beta = 0.02$ ,  $p < 0.01$ ), suggesting a full mediating effect. Overall, the structural model explained 16% of the length of stay, 17% of step counts, 12% of self-rated health, and 31% of life satisfaction.

**TABLE 2 |** Indicator loadings, critical ratios, construct reliability, average variance extracted for the measurement model.

Factors	Items	Loadings	$\alpha$	CR	AVE
Core product services	<i>Player attraction</i>	0.77	0.71	0.82	0.60
	Presence of famous players	0.84			
	Showing of favorite players	0.79			
	Being able to follow players	0.69			
	<i>Event attractiveness</i>	0.72	0.75	0.83	0.54
	Opportunity to watch players closely	0.78			
	Being able to watch players' practice closely	0.77			
	Players' high performance	0.70			
	Opportunity to learn from players	0.70			
	<i>Course characteristics</i>	0.74	0.86	0.90	0.75
	Ease of walking on golf course	0.90			
	Enjoyable scenery of golf course	0.89			
	Pleasant atmosphere of the event	0.81			
	First-order factor model: CMIN/DF = 3.07, CFI = 0.92, SRMR= 0.06, RMSEA = 0.08 (90% CI = 0.06–0.09)				
	Second-order factor model: CMIN/DF = 3.06, CFI = 0.92, SRMR= 0.06, RMSEA = 0.08 (90% CI = 0.06–0.09)				
Peripheral services	<i>Event services</i>	0.72	0.85	0.89	0.67
	Foodservice quality	0.82			
	Price of foodservice	0.82			
	Variety of golf shop offerings (e.g., souvenirs, equipment)	0.82			
	Ancillary activities (e.g., shows, concerts, autograph session)	0.81			
	<i>Event information</i>	0.79	0.84	0.88	0.71
	Ticket promotion	0.92			
	Convenience of buying ticket	0.88			
	Event information accessibility	0.71			
	<i>Event amenity</i>	0.79	0.91	0.93	0.69
	Crowd control	0.91			
	Spectating area accessibility	0.89			
	Spectating area convenience	0.84			
	Scoreboard quality	0.82			
	Staff courtesy	0.81			
	Restroom cleanliness	0.69			
	<i>Parking and transportation</i>	0.76	0.81	0.89	0.68
	Parking accessibility	0.71			
	Parking availability	0.93			
	Parking cost	0.92			
	Public transportation accessibility	0.70			
	First-order factor model: CMIN/DF = 2.73, CFI = 0.93, SRMR= 0.05, RMSEA = 0.05 (90% CI = 0.06–0.08)				
	Second-order factor model: CMIN/DF = 2.76, CFI = 0.93, SRMR= 0.05, RMSEA = 0.05 (90% CI = 0.06–0.08)				
Life satisfaction	I am satisfied with my life	0.89	0.92	0.92	0.69
	If I could live my life over, I would change almost nothing	0.89			
	In most ways my life is close to ideal	0.86			
	The conditions in my life are excellent	0.78			
	So far, I have gotten the important things I want in life	0.72			

Cronbach's alpha ( $\alpha$ ), construct reliability, (CR), averaged variance extracted (AVE).

## DISCUSSION

The findings of this study help clarify spectators' consumption and health-rated behaviors by examining the antecedents and consequences of event-related factors at a professional golf tournament in Japan. Intuitively, the tangible and intangible factors that are related to the core product services and peripheral spectator services of a golf tournament are often

viewed as being important preconditions for attracting spectators and influencing their consumption outcomes. Previous studies have revealed that the core product services and peripheral services of sporting events have an impact on spectators' desires to stay, their event satisfaction levels, and their repatronage intentions (Tsuji et al., 2007; Byon et al., 2013; Watanabe et al., 2018). Nevertheless, it was further seen in this study that the tournament-related spectator services would have an influence

**TABLE 3 |** Inter-concept correlations among variables.

			1	2	3	4	5	6	7	8	9	10	11
1	Player attraction	Pearson	–										
		Kendall											
		Spearman											
2	Event attractiveness	Pearson	0.33***	–									
		Kendall	0.25***										
		Spearman	0.32***										
3	Course characteristics	Pearson	0.30***	0.31***	–								
		Kendall	0.24***	0.25***									
		Spearman	0.32***	0.32***									
4	Event services	Pearson	0.33***	0.39***	0.36***	–							
		Kendall	0.24***	0.28***	0.25***								
		Spearman	0.32***	0.37***	0.33***								
5	Event information	Pearson	0.29***	0.36***	0.27***	0.47***	–						
		Kendall	0.22***	0.23***	0.23***	0.35***							
		Spearman	0.29***	0.30***	0.30***	0.46***							
6	Event amenity	Pearson	0.25***	0.26***	0.30***	0.47***	0.47***	–					
		Kendall	0.21***	0.23***	0.26***	0.35***	0.37***						
		Spearman	0.28***	0.30***	0.34***	0.46***	0.48***						
7	Parking and transportation	Pearson	0.28***	0.30***	0.25***	0.40***	0.39***	0.43***	–				
		Kendall	0.18***	0.19***	0.16***	0.26***	0.27***	0.32***					
		Spearman	0.24***	0.26***	0.22***	0.35***	0.36***	0.43***					
8	Life satisfaction	Pearson	0.33***	0.42***	0.32***	0.31***	0.35***	0.34***	0.24***	–			
		Kendall	0.24***	0.31***	0.24***	0.23***	0.25***	0.27***	0.15***				
		Spearman	0.32***	0.41***	0.33***	0.30***	0.33***	0.35***	0.21***				
9	Length of stay (in hours)	Pearson	0.11*	0.10	0.09	0.06	0.18**	0.07	0.03	0.21***	–		
		Kendall	0.10*	0.06	0.04	0.03	0.14**	0.04	0.01	0.16***			
		Spearman	0.13*	0.07	0.05	0.04	0.18**	0.06	0.01	0.21***			
10	Step counts	Pearson	0.07	0.10*	0.09	−0.02	0.04	0.02	0.03	0.02	0.19***	–	
		Kendall	0.06	0.10*	0.06	0.00	0.01	0.01	0.01	0.02	0.15***		
		Spearman	0.09	0.14*	0.09	0.00	0.01	0.01	0.01	0.03	0.20***		
11	Self-rated health	Pearson	0.05	0.21***	0.15**	0.16**	0.08	0.17**	0.16**	0.21***	0.03	0.11	–
		Kendall	0.07	0.18***	0.13**	0.14**	0.07	0.12**	0.12**	0.17***	0.04	0.07	
		Spearman	0.08	0.23***	0.17***	0.18***	0.09	0.15**	0.15**	0.21***	0.04	0.09	
Mean			4.41	4.88	4.41	3.72	3.96	4.40	3.64	4.56	5.05	8714.36	4.85
SD			1.17	0.90	1.23	1.01	1.16	0.89	1.11	0.93	1.60	3658.06	0.86

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .

on physical activity, which could in turn influence self-rated health, and subsequently impact life satisfaction. Inoue et al. (2017) stated that the significant relationship between spectator attendance and life satisfaction highlights the unique ability of behavioral engagement with spectator sporting events to predict life satisfaction. Emphasizing the sense of accomplishment fulfilled in sport spectatorship is recommended for the well-being of the spectators (Kim and James, 2019). In line with the social-ecological perspective (Stokols, 1996), the findings of the current study provide support for the potential correlation between sport event-related and health-related variables. Concerning the core product services, in particular, it makes reasonable sense that seeing highly skilled golfers compete in person positively affects spectators' length of stay and step counts at the tournament (Hansen and Gauthier, 1993, 1994; Watanabe et al., 2013). Past research has shown that the positive performance of star soccer

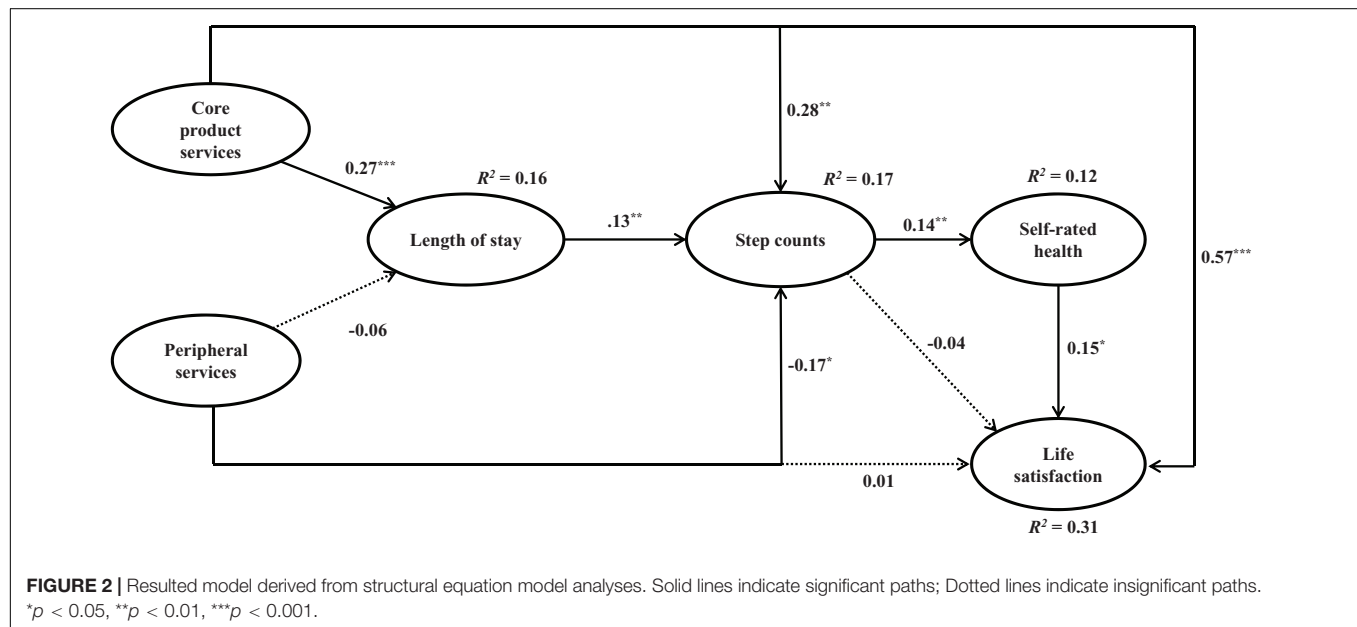
players can have a positive effect on their fans' physical activity (Mutter and Pawlowski, 2014), and this effect appears to carry over to golf. Events featuring Tiger Woods and other superstars, for example, tend to receive the most attention and the most massive followings (Keefer, 2018). As fans follow these famous golfers around, they are more likely to achieve higher step counts and tend to gain higher levels of life satisfaction. Golf events could encourage players to interact more frequently with the fans. In this way, a vital element of the core product can be linked more directly to spectator health and life satisfaction. The tournament observed in this study was also played on a reputable course that had a history and tradition associated with it; thus, this core factor, too, may have further motivated spectators to attend the event and remain active at the event as they were inspired by the competitive nature of the tournament and its associated aesthetics. Tudor-Locke and Bassett (2004) recommended as part



**TABLE 4 |** Standardized coefficients of model paths.

Effects			$\beta$	$t$	SE	Hypotheses	
Core product services	⇒	Length of stay (in hours)	0.27***	3.46	0.16	H1	Supported
	⇒	Step counts	0.28**	2.59	0.21	H3	Supported
	⇒	Life satisfaction	0.57***	5.42	0.11	H5	Supported
Peripheral services	⇒	Length of stay (in hours)	−0.06	−0.81	0.14	H2	Not supported
	⇒	Step counts	−0.17*	−2.08	0.18	H4	Not supported
	⇒	Life satisfaction	0.01	−0.12	0.09	H6	Not supported
Length of stay (in hours)	⇒	Step counts	0.13**	2.62	0.06	H7	Supported
Step counts	⇒	Self-rated health	0.14**	2.60	0.05	H8	Supported
Step counts	⇒	Life satisfaction	−0.04	−0.71	0.03	H9	Not supported
Self-rated health	⇒	Life satisfaction	0.15*	1.98	0.02	H10	Supported
$R^2$			Fit indices				
Length of stay (in hours)			0.16	CMIN/DF = 2.25, CFI = 0.96 RMSEA = 0.05 (90%CI=0.04–0.06), SRMR = 0.06			
Step counts			0.17				
Self-rated health			0.12				
Life satisfaction			0.31				

\* $p < 0.05$ , \*\* $p < 0.01$ , \*\*\* $p < 0.001$ .



of a general physical activity plan that people accumulate 10,000 steps each day. Walking 18 holes in a standard round of golf certainly meets the recommendation to accumulate 10,000 steps per day, as would following a golfer or series of golfers around an expansive course for several hours (Kobriger et al., 2006). In other words, attending a golf tournament can almost be as beneficial to one's health as playing the game itself (Murray et al., 2017a,b). Spectators who have more steps may increase their self-rated health through spectating golf events.

Based on these suggestions, one's ability to remain close to the golfer and observe his or her mechanics and demeanor may provide more utility than pure entertainment value. Moreover, according to Funk and James (2001, 2006), a consumer characterized by high allegiance provides repeat consumption

(i.e., continued participation in an activity) based on the symbolic value of the activity, the amount of relevant knowledge, and the positive emotional response. Thus, when a spectator already has an allegiance to golf, they may want to enable further exploration of this meaning through a process such as spectatorship that links golf and life satisfaction. This is supported by the positive effect of core product services on life satisfaction ( $\beta = 0.57$ ,  $p < 0.001$ ).

Shifting to the influence of peripheral services on the spectators, the only significant effect was a small, negative link between peripheral services and step counts ( $\beta = -0.17$ ,  $p < 0.05$ ). Though the small effect size limits the need for extensive discussion, the negative relationship makes sense given that many peripheral services (e.g., parking accessibility, special seating areas, merchandise stores, and concession areas) are

designed for convenience. Convenience, by nature, will limit step counts and keep people from exerting too much energy. If tournament organizers wanted to mitigate this adverse effect, they could place kiosks and concession areas further back in the course, limit seating in these areas, and ensure that most of the focus remains on the core product of following golfers around the course. As many researchers (Wakefield and Sloan, 1995; Wakefield et al., 1996; Zhang et al., 2005; Mullin et al., 2014) have stated, the peripheral services are supplementary to the process of providing the core product. Spectators attending a sporting event are likely attending to experience the core product (i.e., the competition itself); peripheral services, as the name implies, are secondary to the main event. Therefore, it is not too surprising that peripheral services are incapable of keeping people longer. Most likely, the core product will have to do that. Having seen that peripheral services have a negative effect on step counts, it may actually be good for spectator health if they are not influential in keeping patrons at the event. There was also no significant relationship between peripheral services and life satisfaction; again, this is likely explained by the reality that consumers are paying for, and basing their expectations on, the core product. Their experiences with the core product are the ones capable of significantly influencing their life satisfaction, as was seen in the **Figure 2** model ( $\beta = 0.57, p < 0.001$ ).

## PRACTICAL IMPLICATIONS

As noted in parts of the opening discussion, some of these results can be practically applied to areas of sport event management and marketing. The primary application stems from one of the unique attributes of golf spectatorship in that it is rooted in physical activity and consists of patrons who play the game even at an old age. Indeed, golf sets itself up as a rare form of spectator sport where spectators – in an effort to follow star players around the course or see the intricacies of a course's different holes – generally remain on the move. The health benefits generated while observing a competition are bolstered when they attend these events and witness the performances of the players firsthand. In this sense, spectating golf carries with it a variety of health benefits (Parkkari et al., 2000; Kobriger et al., 2006; Murray et al., 2017a, 2019).

Marketers and planners of similar events should incorporate these unique health-related benefits into their plans and promotional efforts by advertising and incentivizing them more frequently. Perhaps more people would attend if they were more aware of the associated health benefits and how a physically active lifestyle can lead to higher levels of satisfaction in life. Health-related sponsors could also be recruited to further facilitate this unique relationship and bring in additional funding to the event. Furthermore, if it is the core elements of an event that give patrons a desire to remain at the course for a longer duration, these elements should be logically emphasized. Increased accessibility to star players, such as what is seen at Augusta National during the practice rounds for the Masters, will likely lead to increased physical activity and life satisfaction for those in attendance. Similarly, a course layout that features

unique holes will encourage spectators to avoid sitting in one location throughout the event, as would a level of competition that is close and unpredictable. This last feature certainly presents a unique challenge for golf event marketers who cannot control the performances of the key players. Even so, such situations may be mitigated by the sheer presence of a popular, skilled golfer who can still attract large followings. Attracting and raising awareness for these golfers is, therefore, an important task. In being close to the professional players and seeing their skills and abilities firsthand, patrons are also likely to leave with knowledge of new swing mechanics or techniques that they could try on their own. The PGA Tour's slogan for many years, after all, was "These guys are good" (Beall, 2018); perhaps some consumers want to replicate this in their own right. Allowing spectators to view the players while they practice and warm up is a helpful way in which this activity could be facilitated.

Nevertheless, it is important to mention the peripheral services, the lack of impact they appear to have on duration of stay and life satisfaction, and the negative impact they have on step counts at the event. In regards to the latter, concession stands, merchandise shops, customer service attendants, and other specialized areas could be placed throughout the course to encourage walking and reward those who are being physically active. Rather than having everything at the beginning of the course or in the clubhouse area, certain locations could be strategically placed so as to motivate people to walk there and satisfy those who do. For example, if spectators achieve a set number of steps, they could have a photograph taken with a player. In this way, patrons will be happier and required to stay longer – two things that benefit both the spectator and those running the event.

Lastly, both of the core and peripheral features and their links to physical activity and satisfaction could be enhanced by merging gamification elements with the spectator experience. Gamification, a term frequently used to refer to the implementation of game designs in non-game contexts (Koivisto and Hamari, 2019), is being paired with technology to direct people's motivations toward intrinsically motivated experiences and behaviors. By allowing spectators to check-in via mobile apps and other technologies, track steps, and earn badges or other rewards for reaching certain locations or physical milestones on the course, spectators could become more involved in a process that suits both their fandom and physical activity. Though it might go against the grains of tradition to allow mobile devices at golf events, there have been recent movements to make the game more laid-back and enjoyable.

In 2017, the PGA and European tours announced that they were lifting the bans on mobile phones that had been in place at professional golf tournaments for years (Berhow, 2017). "The softening of the mobile device policy is a step to make the Tour more fan-friendly," said one PGA Tour spokesperson. "Fans will also be allowed to share their tournament photos and videos via social media" (Berhow, 2017, para. 4). Ultimately, these loosened restrictions on the use of mobile devices and other social technologies should make golf tournaments a more conducive setting for those who want a more social and interactive environment. Event organizers might also find that these relaxed

rules promote healthier habits and a stronger connection to the sport as spectators will now be motivated to walk around and take pictures of their favorite golfers at different hole locations. Therefore, tournament policies and plans should be seamlessly merged with creative applications and technologies that can enhance the spectator experience through physical activity and intrinsic rewards. In this way, event organizers and promoters can emphasize the core product while encouraging healthier habits among their spectators, healthier habits that may lead to more satisfied consumers.

## LIMITATIONS AND FUTURE DIRECTIONS

This study has several limitations, the first of which lies in the design of cross-sectional survey in which participants' responses were subjected to short-term situational factors (e.g., personal mood, atmosphere, and specific needs during the survey period). This, to some extent, reduced the reliability and validity of research findings. Future studies are strongly recommended to employ a longitudinal design and collect panel data to better decipher golf spectators' health-related behaviors. Another limitation of the study involves the generalizability of the findings. While the sound characteristics of its measures would allow it to be applied to similar research contexts in the future, this questionnaire was developed specifically for the study of a Japanese professional golf event. It should be noted that our sample could be susceptible to potential sampling bias that would influence the generalizability of the study. Future research is advised to adopt a more effective sampling method to tackle this issue. Further, diverse spectator roles, purposes, and segmentations according to various background variables (e.g., gender, age, ticket type, day of the week) should be included and integrated more thoroughly in future studies. Seeing as cost and affordability may play a key role in the sports one watches or participates in, ticket type and its corollary of consumer income might be particularly important for future analyses to consider. Golf in particular is often viewed as being a "higher-class" sport (An and Sage, 1992), so one could see if personal income has an impact on the likelihood that a consumer will consistently play the sport after attending an event. A spectator's involvement with peripheral elements of the event and their overall satisfaction may also be influenced by this variable, further highlighting the need for future studies to incorporate it in their analyses.

When considering health-related variables, step counts, the physical activity measure in our study, may have a high variability depending on the characteristics of a course (Kobriger et al., 2006). Robinson and Carpenter (2002) highlighted how certain characteristics such as course layout and proximity to the

players differ among spectators, meaning it may be necessary to include these characteristics in future studies in an effort to explore potential moderating effects. In a similar sense, it might be interesting to include variables related to the "competitive balance" of the tournament. Closer competitions in which two or more players are battling it out will likely draw bigger crowds, leading to more vigorous walking (exercise) as patrons follow the action instead of remaining stationary and attempt to beat the crowds to prime viewing locations. The significantly positive influence of the core elements of consumer demand (which would include the players and their performances) on patrons' desires to stay at the event may already be capturing this effect in-part, but variables that more accurately capture the effects of a close match on exercise vigor and satisfaction could prove more insightful. Lastly, as prior research has noted (e.g., Sato et al., 2016a), actual behavior may be inconsistent with self-reported measures, and focusing on actual behavior as the outcome variable may yield more accurate results (Sato et al., 2015). Therefore, the gap between self-reported and actual behavioral measurement could be melded in future studies.

## DATA AVAILABILITY STATEMENT

All datasets generated for this study are included in the article/supplementary material.

## ETHICS STATEMENT

The current study was approved by the Ethics Committee of the Hiroshima University of Economics and the tournament organizer. The participants provided their written informed consent to participate in this study.

## AUTHOR CONTRIBUTIONS

YW, TQ, and JZ contributed to the conception and design of the study. YW collected the data and analyzed the data. YW and TQ wrote the draft of the manuscript. JW, NP, and JZ contributed to the manuscript revision. All authors contributed to the article and approved the submitted version.

## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2020.01494/full#supplementary-material>

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# Social Atmospheric, Affective Response, and Behavioral Intention Associated With Esports Events

Wooyoung W. Jang, Kyungyeol A. Kim and Kevin K. Byon\*

Indiana University, Bloomington, IN, United States

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### \*Correspondence:

Kevin K. Byon  
kbyon@indiana.edu

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The purpose of this study was to conceptualize social atmospheric in the context of esports attendance and examine the relationship among social atmospheric, affective responses, and behavioral intention. Based on review literature, we conceptualized social atmospheric as five dimensions in esports events' environments: social density, suitable behavior, similarity, cosplay, and cheering behavior. Notably, cosplay (i.e., a portmanteau of the words "costumes" and "play") and cheering behavior factors adopted from extant social atmospheric served to capture the unique features associated with esports events. Via an online survey, data were collected ( $n = 372$ ) from esports fans who have experienced attending esports events. The data set was split into half; the first data set ( $n = 189$ ) was used to examine the psychometric properties of the measurement model and the second data set ( $n = 184$ ) was employed to test the hypothesized model. The initial model fit was not shown to be acceptable. The model was re-estimated using the second data set after dropping four items with low factor loadings, resulting in the acceptable model fit. The results via structural equation modeling indicated that cheering behavior, similarity, cosplay, and social density positively and significantly influenced affective responses and behavioral intention. However, there was no significant relationship between suitable behavior and affective responses. In terms of theoretical contributions, we tested a five-factor model of social atmospheric associated with esports events and its effects on behavioral intention through affective responses. The findings in this study extend the sportscape model (Wakefield and Sloan, 1995) by incorporating the mediating effect of affective responses and expand the utility of the Stimulus–Organism–Response (SOR) framework as a viable theory that can explain esports consumption behavior.

**Keywords:** esports, social atmospheric, esports events, cosplay, cheering behavior

## INTRODUCTION

Global esports revenues reached \$138.7 billion in 2018, and 2.5 billion gamers across the world were expected to spend \$152.1 billion in 2019 (Wilson, 2019). Such growing popularity of the esports industry has attracted interest from researchers, ranging from those interested in conceptual discussions to those seeking to conduct empirical examinations. More specifically, scholars have prompted and largely facilitated in-depth discussions regarding the definition of esports and the

qualification of esports as sport and sport management scholarship (Cunningham et al., 2018; Hallmann and Giel, 2018). Researchers have also empirically examined esports consumer behavior in different contexts such as esports gameplay (Seo, 2016; Jang and Byon, 2020), online esports media consumption (Sjöblom and Hamari, 2017; Qian et al., 2019), and esports event attendance (Pizzo et al., 2018).

Despite the academic progress that has facilitated a greater understanding of esports consumers, one area that has not been explored has to do with consumers' perceptions of social environment in esports venues. In the research regarding environment associated with traditional sport stadiums, physical environment (known as sportscape) has been viewed as important and has thus garnered considerable attention (e.g., Jang et al., 2020). More specifically, it was revealed that customers' positive perceptions regarding physical environment led to positive emotions (Uhrich and Benkenstein, 2012; Jang et al., 2020), positive service quality perceptions (Hightower et al., 2002), and future behavioral intention (Chen et al., 2013). However, recently, researchers have emphasized the need to focus on social atmospherics (e.g., Uhrich and Benkenstein, 2012; Kim et al., 2019). Direct or indirect interactions among spectators affect their consumption experiences (Kim et al., 2019, 2020). For example, Kim et al. (2020) found that other spectators' passionate behaviors positively influenced individuals' perceived value, while other consumers' dysfunctional behaviors negatively influenced individuals' perceived value. Although research on sport service environments has seen progress, little attention has been given specifically to the esports context, especially how social atmospherics should be understood and how social atmospherics affects consumers' affective responses and behavioral outcomes. Specifically, little is known about what elements comprise social atmospherics associated with esports events and how to understand consumers' affective responses and behavioral intention that may result from social atmospherics in esports venue. While previous studies have demonstrated the importance of social atmospherics in managing spectators' experiences, the sport marketing literature lacks a conceptual model that can be used to assess individuals' perceptions of social atmospherics during esports events.

The purpose of the current study is to fill the gap in the literature by (a) conceptualizing social atmospherics in the context of esports attendance and (b) examining the interrelationships that exist among social atmospheric factors associated with esports events, consumers' affective responses, and consumers' behavioral intention. We define social atmospherics associated with esports events as a social aspect of the environment where service encounters take place within esports venues. The hypothesized model was proposed to explain the impact of social atmospherics associated with esports events on esports fans' affective responses and behavioral intention. We adopted Stimulus–Organism–Response (SOR) (Mehrabian and Russell, 1974) as the theoretical foundation in the current study. Grounded in the SOR framework, we conceptualized social atmospherics in the context of esports attendance as the stimulus (S). The social atmospherics includes social density, suitable behavior, similarity, cosplay, and cheering behavior as

focal constructs. In terms of delimitation, this current study intentionally adopted the selected social atmospherics factors according to the features of esports context rather than adopting all extant social atmospherics factors. For instance, physical appearance, which refers to other spectators' appearance, has been considered as one of the important social atmospherics factors (Brocato et al., 2012). However, we did not adopt it because, unlike the traditional sport, esports spectators are likely to be less inclined yet to wear their favorite teams' jerseys. We developed our conceptual model, including affective responses (O) and behavioral intention (R), based on the review of the literature. Then, research methods and results were presented, and we discussed the findings.

## LITERATURE REVIEW

### The SOR Framework

Since Mehrabian and Russell's (1974) introduction of the SOR framework, it has been considered one of the dominant theoretical foundations for study regarding servicescape and sportscape (e.g., Kim et al., 2019; Jang et al., 2020). The SOR framework suggests a full mediation role of the organism (O) on the relationship between the stimulus (S) and the response (R) (Mehrabian and Russell, 1974). Recently, Avan et al. (2019) proposed a servicescape model based on SOR that included servicescape components and hotel guests' emotional states and behavioral responses. In sport management literature, Jang et al. (2020) suggested a sportscape model that included sportscape factors, positive emotion, and behavioral intention across the big four United States-based major sport leagues [i.e., National Basketball Association (NBA), National Football League (NFL), Major League Baseball (MLB), and National Hockey League (NHL)]. As such, this current study employed SOR as the theoretical foundation of the research model, which includes social atmospherics associated with esports events (i.e., stimulus), affective responses (i.e., organism), and behavioral intention (i.e., response).

### Social Atmospherics of Esports Events

As previously noted, we define social atmospherics as esports consumers' perceptions of environmental stimuli about other spectators who are simultaneously present in the esports event with a focal consumer. Although social atmospherics have been defined and used in previous studies, the uniqueness of the current study is to theorize the social atmospherics in the context of esports attendance. In the retail service context, Brocato et al. (2012) developed the other customer perception scale to measure the impact of consumer-to-consumer interactions on consumers' behavioral intention. In addition, Uhrich and Benkenstein (2012) indicated a need for attention to be given to social stimuli in the sport service environment. As such, social elements need to be considered when consumers' perceptions regarding the sport service environment are examined (Kim et al., 2019). There has been an emphasis especially on consumer-to-consumer interactions and the role they play in consumers' affective responses (e.g., excitement) (Kim et al., 2019). Thus, in the

present study, upon reviewing the literature, we conceptualized social atmospherics in the context of esports attendance so that we could measure esports fans' perceptions regarding esports venue environments. The factors for social atmospherics (i.e., social density, suitable behavior, similarity, cosplay, and cheering behavior) were identified based on the review of previous peer-reviewed and press articles regarding the context of esports.

### Social Density

Social density can be defined as an individual's perception regarding space between him- or herself and other individuals (Uhrich and Benkenstein, 2012). Thus, in this study, we define social density as an esports spectators' perception regarding space between spectators themselves and other spectators in an esports event environment. Mehrabian and Russell (1974) indicated that social density could significantly influence consumers' internal and external responses. In spectator sport, "the *adequate manning* of a sporting event is reached when a high number of other customers are present in the stadium" (Uhrich and Benkenstein, 2012, p. 1744). This is because spectators in sports events have a more active role so that they can serve for social atmospherics as cop performers.

According to Jenny et al. (2018), the capacity of esports event venues is generally smaller than that of traditional sports event facilities. This might be because esports spectators must watch the entire games via an electronic screen found within esports events spaces. However, esports venue attendance has grown substantially over the last few years, which might bring venue managers' attention to social density (i.e., perception of high numbers of other spectators) as it applies to hosting esports events. We hypothesized that social density would positively influence affective responses:

Hypothesis 1: Social density has a positive effect on affective responses.

### Suitable Behavior

The definition of suitable behavior is an individual's feeling or perception regarding other customers' appropriate behaviors in the service environment (Brocato et al., 2012). Understanding suitable behavior is important because other spectators' behaviors can influence individuals' evaluations of their game-day experience. In the spectator sport literature, Kim et al. (2020) found that when other spectators violated codes of conduct, it resulted in negative perceptions because people have an expected social norm for others' behavior. For example, in the context of traditional sports such as the NFL, fan brawls have been considered as one of the severe problems regarding consumption experience at sport venues (Barker, 2016). Incidents such as fighting among spectators can be an example of the violation on codes of conduct, and such unsuitable behavior is likely to lead to negative affective responses (Kim and Byon, in press). On the other hand, suitable behavior might positively influence individuals' affective responses. According to Orland (2017), esports events are full of enthusiasm in which the crowd itself becomes a participant in the competition. In the enthusiastic esports event environment, attendees may consider other spectators' appropriate behaviors as one of the primary

social atmospherics (Kim et al., 2019). Thus, the following hypothesis was proposed.

Hypothesis 2: Suitable behavior has a positive effect on affective responses.

### Similarity

Similarity is defined as "the extent to which an individual customer felt that they were similar to and could identify with other customers in the service environment" (Brocato et al., 2012, p. 386). When spectators are around other spectators with whom they feel similarities, they may feel more comfortable. Similarity could relate to any characteristic such as age, gender, or gamer identity. Gamer identity refers to gamer self-identification (Deshbandhu, 2016). Deshbandhu stated, "There are many players of video games but only a select few of them can be called gamers" (p. 50). Thus, gamers may be defined as an exclusive social group. Social identity theory has focused on the dimension of similarity because individuals want to be members of or included in social groups, and "the intergroup categorization leads to favoring the *in-group* and discriminating against the *out-group*" (Tajfel, 1981, p. 386). Since most esports fans have experienced esports gameplay (Jang and Byon, 2020) and because esports events attendance might signify that attendees are enthusiastic esports fans, it may be reasonable to suggest that esports event spectators are identified as gamers. Furthermore, Brocato et al. (2012) found that similarity significantly influenced consumers' responses. Thus, we expected that the dimension of similarity would positively influence esports spectators' affective responses.

Hypothesis 3: Similarity has a positive effect on affective responses.

### Cosplay

Cosplay is a portmanteau word of the terms *costume* and *play*. According to Tan (2019), cosplay represents a unique culture associated with esports events. Esports fans like to cosplay their favorite in-game characters at an event venue. While cosplay-related studies have focused on people who engage themselves in cosplay activities (e.g., Rahman et al., 2012), we define cosplay as spectators' perceptions about other spectators or professional cosplay teams' cosplay-based actions. Notably, this concept of cosplay is similar to physical appearance, which is an important social atmospherics factor. Brocato et al. (2012) defined physical appearance as "the physical characteristics and overall look (i.e., the attributes) of other customers in the service environment (i.e., the object) as perceived by individual customers (i.e., the rater)" (p. 386). According to the theory of affordances (Gibson, 1979), consumers evaluate a service organization based on social cues such as the appearance of other consumers.

Therefore, we adopted and modified the concept of physical appearance for the cosplay construct. A consumer's positive perception regarding other consumers' physical appearances can lead to positive behavioral intention (Brocato et al., 2012). Thus, spectators' perceptions regarding cosplayers' physical appearances may play an important role in increasing spectators' affective responses within the esports context.



Hypothesis 4: Cosplay has a positive effect on affective responses.

### Cheering Behavior

Orland (2017) and Zacny (2015) referred to cheering behaviors as emotional shouting, booing, and using boomsticks (i.e., inflatable thundersticks) in esports events. In the current study, we adopted cheering behavior to reflect the uniqueness of esports spectators' cheering behaviors in an esports event context. Cheering behavior (e.g., shouting, clapping, or booing) influences other spectators' affective responses (Uhrich and Benkenstein, 2012). Chen et al. (2013) conceptualized the concept of consumer behavior to measure spectators' passion, which is defined as spectators' emotionally expressive behaviors resulting from strong positive arousal during sport consumption (Kim et al., 2019). Chen et al. (2013) developed a scale to measure spectators' perceptions regarding sport stadium atmosphere, and they found that the component of stadium atmosphere positively and indirectly influenced spectators' internal responses (i.e., satisfaction) and behavioral intention. Thus, esports consumers' cheering behavior may significantly influence their affective response. The following hypothesis was built:

Hypothesis 5: Cheering behavior has a positive effect on affective responses.

### Behavioral Intention

In the present study, behavioral intention is defined as esports attendees' intention to attend their favorite esports events in the future. According to SOR (Mehrabian and Russell, 1974), internal responses, such as affective responses, lead to approach or avoidance behavior regarding a given environment. Approach behavior that is the product of positive emotional responses can manifest in various ways such as on-site spending, revisiting to the event, or positive word of mouth. For instance, Uhrich and Benkenstein (2012) found a significant interrelationship that exists between affective responses and visit frequency. Chen et al. (2013) revealed the significant impact of satisfaction on behavioral intention of purchasing tickets for sports event attendance. Avan et al. (2019) adopted the intention of approach and avoidance behaviors that emerged from the influence of individuals' emotional states. Recently, Jang et al. (2020) revealed the significant impact of positive emotion on behavioral intention regarding future attendance. Drawing upon previous studies, we investigated the impact of spectators' affective responses on their behavioral intention. The findings in the literature led to the development of the following hypothesis:

Hypothesis 6: Affective responses have a positive effect on behavioral intention.

### Mediating Role of Affective Responses

Employing Mehrabian and Russell's (1974) SOR framework, Bitner (1992) suggested that servicescape factors influence affective responses, which in turn leads to approach or avoidance behavior. In other words, affective responses serve as a full mediation between service environment stimuli and consumers' behavioral intention. The direct effects of environmental cues on affective responses and the direct impact between affective states

and behavioral intention have been granted attention in studies regarding the servicescape and the sportscape. Walsh et al. (2011) revealed the mediating effects of pleasure and arousal in the relationship between consumers' cognitions regarding the store environment and customers' behaviors. Nusairat et al. (2017) indicated the mediating role of emotion and cognition in the relationship between social cues and customer behavior in a shopping mall environment. Avan et al. (2019) found that positive and negative emotions served as mediators between servicescape components and behavioral responses. In sport management, using the SOR framework, Jang et al. (2020) revealed the mediating effect of emotion in the relationship between sportscape cues and behavioral intention in the context of professional sport leagues. As such, we postulate that affective responses mediate the relationship between social atmospherics cues associated with esports events and behavioral intention:

Hypothesis 7: Affective responses fully mediate the relationship between social atmospherics components (i.e., social density, suitable behavior, similarity, cosplay, and cheering behavior) and behavioral intention.

## MATERIALS AND METHODS

### Participants and Data Collection Procedure

Data were collected from United States -based adults via Amazon Mechanical Turk (M-Turk). We recruited respondents who had a reliable record (i.e., >99% approval rating and over 100 approvals) to participate in our survey. We required that participants must have experience in attending at least one professional esports event. Thus, we asked participants about esports game titles, esports events, and the locations of the esports events to ensure that participants had experience attending esports events.

While we initially collected 400 responses, 28 were removed because of too-short completion times (e.g., <1 min). We assumed that too-short completion times were not reliable due to the lack of engagement with the survey. A total of 372 usable data remained. The demographics of the usable data were as follows. Male participants totaled 271 (72.7%), and female participants totaled 102 (27.3%). Regarding age, there were 83 (22.3%) respondents who were between 19 and 25 years of age, 208 (55.7%) who were between 26 and 35 years of age, and 59 (15.8%) who were between 36 and 45 years of age. The demographics of this sample represent the characteristics of esports consumers as a whole (Newzoo Esports, 2018). With regard to annual income, 173 (46.4%) earned incomes between \$40,000 and \$79,999, and 122 (32.7%) earned incomes between \$10,000 and \$39,999. Concerning ethnicity, Caucasians totaled 268 (71.8%), African Americans totaled 53 (14.2%), and Asians totaled 32 (8.6%).

We randomly split the data into two sets. The first data set ( $n = 189$ ) was used to examine the psychometric properties of the measurement model, and the second data set ( $n = 184$ ) was used to examine the hypothesized model. In terms of

the demographics of the first data, male participants were 144 (76.2%), and female participants were 45 (23.8%). Forty-nine (26%) were between 19 and 25 years, 106 (56%) were between 26 and 35 years, and 34 (18%) were over 36 years. One hundred thirty-eight (73%) were Caucasians, 29 (15%) were African Americans, and Asians totaled 14 (7.4%). For the second data, male participants were 127 (69%), and female participants were 57 (31%). Thirty-four (18.5%) were between 19 and 25 years, 102 (55.5%) were between 26 and 35 years, and 48 (26%) were over 36 years. Caucasians totaled 130 (70.7%), 24 (13%) were African Americans, and Asians were 18 (9.8%).

## Instruments

The survey items related to the social atmospherics of esports events, affective responses, and behavioral intention were adapted from Wakefield and Sloan (1995) (i.e., social density), Brocato et al. (2012) (i.e., suitable behavior and similarity), Uhrich and Benkenstein (2012) (i.e., affective response), and Jang and Byon (2020) (i.e., behavioral intention). Based on the review of the literature, we adapted cosplay (three items) and cheering behavior (four items). We used items for the two constructs by modifying items of physical appearance (Brocato et al., 2012) for cosplay and perceived customer behavior (Uhrich and Benkenstein, 2012; Zacny, 2015; Orland, 2017) for cheering behavior.

Specifically, for cosplay, one of the items regarding physical appearance (i.e., “I liked the appearance of the other spectators”) was modified so that it read, “I like to see the cosplay of the other spectators.” Another item (i.e., “The other spectators looked nice”) was modified to read, “The other spectators’ cosplay looked nice.” Other items of the cosplay construct were as follows: “The other spectators were dressed as esports game characters” and “Other spectators’ cosplay looked like my type of exhibition.”

For cheering behavior, one of the items regarding perceived consumer behavior (i.e., “Fans frequently perform set maneuvers”) was modified to read, “Fans frequently performed to get a wave going through the stands and use boomsticks (stick balloons for cheering).” Another item (i.e., “There is always a great reaction to goals”) was modified to read, “There is always a great reaction to the esports teams’ performances on the big screens.” Other items of cheering behavior were as follows: “The fans shouted out a cheer of their esports teams/players names” and “The fans swooned in crescendo with each good performance and cried out in pain with every close miss” (Table 1).

Therefore, we adapted 28 items representing seven factors (i.e., social density = 3 items, suitable behavior = 4 items, similarity = 5 items, cosplay = 4 items, cheering behavior = 4 items, affective responses = 6 items, and behavioral intention = 3 items).

## Data Analysis

SPSS Statistics 21 was used for descriptive statistics. Using AMOS 21 with a maximum likelihood estimation method, we employed a confirmatory factor analysis (CFA) and structural equation modeling (SEM) to test the factor structure of the proposed model and the hypotheses. We validated the measurement model and the latent constructs by using CFA. Then, we used SEM to examine the links between constructs (see Figure 1).

## RESULTS

As an assumption test for CFA, we examined the normality, outliers, and multicollinearity issues with the first data set ( $n = 184$ ). The results of skewness (−1.05 to 0.66) and kurtosis (−0.81 to 1.39) showed the normality of the data (Hair et al., 2010). The results of the correlations for all constructs met the suggested criteria ( $<0.85$ ) (Kline, 2015). The results of the variance inflation factor (1.13–4.64) showed that there were no multicollinearity issues. Lastly, the boxplot indicated that there were no outliers.

As a result of CFA, the model fit was not acceptable [ $\chi^2 = 1,211.61$ ,  $df = 329$ ,  $\chi^2/df = 3.68$ , Comparative Fit index (CFI) = 0.68, and root mean squared error of approximation (RMSEA) = 0.119, 90% CI = 0.13–0.20] based on the suggested cutoff values (Hair et al., 2010) of the goodness-of-fit (e.g., normed chi-square  $< 3.0$ , CFI  $> 0.90$ , RMSEA  $< 0.08$ ). We found that there were four items whose factor loading values were below the threshold of 0.50 (Hair et al., 2010). These items had to do with one item of the suitable behavior factor, which read, “The other spectators’ behaviors were pleasant;” one item of the similarity factor, which read, “I fit right in with the other spectators;” one item of the cosplay factor, which read, “I like to see other spectators’ cosplay;” and one of the cheering behavior factor, which read, “Fans frequently get a wave going through the stands and use boomsticks.” These low factor loadings indicated that the items could not significantly represent the respective factors. Empirically, the low factor loading also negatively influenced the reliability and validity of the factors (Hair et al., 2010). Therefore, we decided to drop the four items.

Since we dropped the four items, the second data set ( $n = 184$ ) was used to conduct another CFA to examine the respecified model because an independent sample should be used to validate the respecified model (Hair et al., 2010). The results showed that the model fit of the revised measurement model was good ( $\chi^2 = 618.31$ ,  $df = 231$ ,  $\chi^2/df = 2.68$ , CFI = 0.84, and RMSEA = 0.09, 90% CI = 0.08–0.10). Table 2 indicates that the constructs in the measurement model had acceptable convergent validity because the factor loadings were above the suggested threshold of 0.50 (Hair et al., 2010). The average variance extracted (AVE) also suggested adequate convergent validity of the measurement model because the values were 0.50 or higher. For discriminant validity, we used the squared correlation between factors and AVE (Table 3). Overall, the squared correlations were smaller than the AVE values (Fornell and Larcker, 1981), which indicates that the constructs in the measurement model have discriminant validity, so items represent well its construct that the items belong. Additionally, all of the composite reliability (CR) values were above the suggested criteria ( $>0.07$ ), indicating good reliability of the constructs in the measurement model. Thus, the results of CFA showed that the measurement model was found to be good reliability and validity.

Then, we examined SEM with the second data set ( $n = 184$ ) to examine the hypotheses. The structural model showed a reasonable fit to the data ( $\chi^2 = 654.24$ ,  $df = 236$ ,  $\chi^2/df = 2.77$ , CFI = 0.83, and RMSEA = 0.09, 90% CI = 0.08–0.10). The results of SEM (Table 4) showed that the following

**TABLE 1 |** Indicator loadings ( $\lambda$ ), construct reliability (CR), and average variance extracted (AVE) for the measurement model (the first data set,  $n = 189$ ).

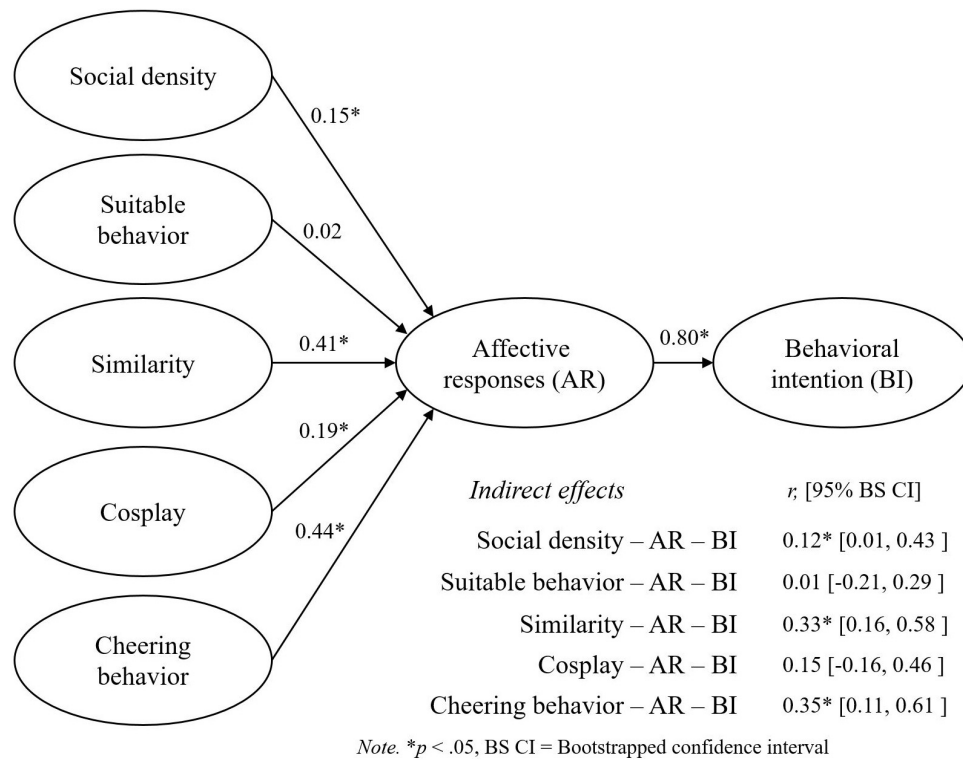
Factors and variables	$\lambda$	CR	AVE
Social density		0.78	0.55
1. The fans' stands are confined.	0.79		
2. The fans' stands are crowded.	0.58		
3. The fans' stands are cramped.	0.83		
Suitable behavior		0.63	0.31
1. The behavior of the other spectators was appropriate for the setting.	0.65		
2. The other spectators were friendly toward me.	0.63		
3. I found that the other spectators behaved well.	0.60		
4. The other spectators' behavior was pleasant.	(0.28)		
Similarity		0.76	0.39
1. I could identify with the other spectators in the facility.	0.78		
2. I am similar to the other spectators in the facility.	0.55		
3. The other spectators are like me.	0.70		
4. The other spectators come from a similar background to myself.	0.65		
5. I fit right in with the other spectators.	(0.38)		
Cosplay		0.63	0.45
1. I like to see cosplay of the other spectators.	(0.05)		
2. The other spectators were dressed in costumes of the esports game characters appropriately.	0.81		
3. The cosplay of other spectators looked like my type of exhibition.	0.83		
Cheering behavior		0.64	0.36
1. The fans shouted out a cheer of their esports teams/players names.	0.79		
2. Fans frequently perform get a wave going through the stands and use boomsticks (stick balloons for cheering).	(0.06)		
3. The fans swooned in crescendo with each good performance and cried out in pain with every close miss.	0.58		
4. There is always a great reaction to the esports team's performances on the big screens.	0.71		
Affective responses		0.85	0.48
1. In the venue, there are amazing vibes.	0.72		
2. In the venue, you experience really strong emotions.	0.69		
3. In the venue, the atmosphere gives you goose bumps.	0.64		
4. In the venue, there's a real thrill in the air.	0.74		
5. In the venue, you get caught up in the general euphoria	0.69		
6. In the venue, you get a real high.	0.68		
Behavioral intention		0.83	0.62
1. I plan to continue attending my favorite esports game's events frequently.	0.78		
2. I intend to attend my favorite esports game's events soon.	0.80		
3. I expect to continue attending my favorite esports game's events in the near future.	0.78		

Parentheses = the dropped items.

four latent variables positively and significantly influenced affective responses: social density ( $\beta = 0.15$ ,  $p < 0.05$ ), similarity ( $\beta = 0.41$ ,  $p < 0.05$ ), cosplay ( $\beta = 0.19$ ,  $p < 0.05$ ), and cheering behavior ( $\beta = 0.44$ ,  $p < 0.05$ ). These results supported hypotheses 1, 3, 4, and 5. However, there was a nonsignificant relationship between suitable behavior and affective responses ( $\beta = 0.02$ ,  $p > 0.05$ ), and thus, hypothesis 2 was not supported. Affective responses positively and significantly affected behavioral intention ( $\beta = 0.80$ ,  $p < 0.05$ ), supporting hypothesis 6. The explanatory power ( $R^2$ ) of affective responses (i.e., 88%) and behavioral intention (i.e., 65%) also support the precise prediction of esports spectators' emotional and behavioral responses.

We used a bootstrapping procedure to examine the mediation effects of affective responses. Specifically, we employed 95% confidence intervals using 2,000 bootstrap samples. There were

three significant and indirect relationships between social density [ $\beta = 0.12$ ,  $p < 0.05$ , 95% BC CI (0.01, 0.43)], similarity [ $\beta = 0.33$ ,  $p < 0.05$ , 95% BC CI (0.16, 0.58)], cheering behavior [ $\beta = 0.35$ ,  $p < 0.05$ , 95% BC CI (0.11, 0.61)], and behavioral intention through affective responses. However, suitable behavior [ $\beta = 0.01$ ,  $p > 0.05$ , 95% BC CI (−0.21, 0.29)] and cosplay [ $\beta = 0.15$ ,  $p < 0.05$ , 95% BC CI (−0.16, 0.46)] were found to be insignificant. The results indicated that there were mediating effects of affective responses in the relationships of three social atmospherics with the behavioral intention, which partially supported hypothesis 7. Although the two hypotheses about suitable behavior (i.e., the hypotheses 2 and 7) were not supported, the full set of the identified five factors of social atmospherics should be considered essential in the context of esports attendance. We discuss the results in the following section.



**FIGURE 1** | Summary of the results (the second data set,  $n = 184$ ).

## DISCUSSION

The findings in this current study extend current knowledge in that they describe esports event participants' perceptions regarding the social atmospherics of the esports event environment. These perceptions can explain esports event participants' emotional and behavioral responses. While there is interest in and an understanding regarding the importance of social atmospherics in sport marketing, servicescape, and sportscape, sport management researchers' understanding of social atmospherics of esports events' environments has been limited. We proposed the conceptualization of social atmospherics regarding esports events' environments, including the characteristics of esports events (i.e., cosplay and cheering behavior), to provide theoretical support for the social atmospherics in the context of esports events. According to the findings, the suggested conceptual model in this current study was found to be reliable, and it predicted esports spectators' emotional and behavioral responses.

Specifically, cheering behavior, similarity, cosplay, and social density were revealed as significant social atmospherics components that could lead to positive affective responses and behavioral intention. According to social identity theory (Tajfel, 1981), the intergroup categorization, such as in-group feelings, is important for the generation of similarity perceptions among consumers, which is important because similarity leads consumers to have positive affective responses. Additionally,

the findings provide empirical evidence of the concepts of cosplay and cheering behavior, which are unique features of the esports event environment. While pressed articles exist that discuss the phenomena associated with esports events, such as cosplay (Tan, 2019) and cheering activities (Zacny, 2015; Orland, 2017), there were limited peer-reviewed articles. Previous studies regarding cosplay have been born of an interest in participants engaging cosplay activities (e.g., Rahman et al., 2012). Based on the concepts of customer-to-customer and physical appearance (Brocato et al., 2012), the present study conceptualized cosplay as individual spectators' perceptions regarding other spectators or professional teams' cosplay activities. Cheering behavior was also modified from the concept of customer behavior (Uhrich and Benkenstein, 2012) to assess it within the context of esports events. Future studies may need to improve the social atmospherics associated with esports events by modifying the cosplay or cheering behavior factors or adding new factors. Lastly, social density significantly influenced affective response and behavioral intention. This finding supports the line of research regarding social atmospherics in sports venues (Uhrich and Benkenstein, 2012; Kim et al., 2019). In other words, perceptions of a high number of other spectators have a positive impact on spectators' affective responses in esports arena.

However, there was no significant impact of suitable behavior on affective responses, which was unexpected. Unsuitable behavior, such as dysfunctional behavior (Kim et al., 2020), is found to be problematic in traditional sport event contexts, so

**TABLE 2 |** Indicator loadings ( $\lambda$ ), construct reliability (CR), average variance extracted (AVE) for the measurement model (the second data set,  $n = 184$ ).

Factors and variables	$\lambda$	CR	AVE
Social density		0.75	0.50
1. The fans' stands are confined.	0.82		
2. The fans' stands are crowded.	0.51		
3. The fans' stands are cramped.	0.76		
Suitable behavior		0.75	0.50
1. The behavior of the other spectators was appropriate for the setting.	0.74		
2. The other spectators were friendly toward me.	0.72		
3. I found that the other spectators behaved well.	0.66		
Similarity		0.82	0.54
1. I could identify with the other spectators in the facility.	0.80		
2. I am similar to the other spectators in the facility.	0.71		
3. The other spectators are like me.	0.75		
4. The other spectators come from a similar background to myself.	0.66		
Cosplay		0.75	0.60
1. The other spectators were dressed in costumes of the esports game characters appropriately.	0.74		
2. The cosplay of other spectators looked like my type of exhibition.	0.81		
Cheering behavior		0.77	0.53
1. The fans shouted out a cheer of their esports teams/players names.	0.77		
2. The fans swooned in crescendo with each good performance and cried out in pain with every close miss.	0.64		
3. There is always a great reaction to the esports team's performances on the big screens.	0.77		
Affective responses		0.88	0.56
1. In the venue, there are amazing vibes.	0.82		
2. In the venue, you experience really strong emotions.	0.80		
3. In the venue, the atmosphere gives you goose bumps.	0.80		
4. In the venue, there's a real thrill in the air.	0.74		
5. In the venue, you get caught up in the general euphoria.	0.68		
6. In the venue, you get a real high.	0.64		
Behavioral intention		0.88	0.70
1. I plan to continue attending my favorite esports game's events frequently.	0.82		
2. I intend to attend my favorite esports game's events soon.	0.82		
3. I expect to continue attending my favorite esports game's events in the near future.	0.87		

**TABLE 3 |** Interfactor correlation (the second data set,  $n = 184$ ).

	AVE	SD	SB	SM	CP	CB	AR	BI
SD	0.50	1						
SB	0.50	0.13* (0.02)	1					
SM	0.54	0.13* (0.02)	0.62* (0.38)	1				
CP	0.60	0.33* (0.11)	0.64* (0.41)	0.61* (0.37)	1			
CB	0.53	0.19* (0.04)	0.61* (0.37)	0.55* (0.30)	0.59* (0.35)	1		
AR	0.56	0.67* (0.45)	0.67* (0.45)	0.75* (0.56)	0.75* (0.56)	0.75* (0.56)	1	
BI	0.70	0.57* (0.33)	0.57* (0.33)	0.82* (0.67)	0.61* (0.37)	0.80* (0.64)	0.53* (0.28)	1

\* $p < 0.05$ . Parentheses = squared correlation. SD = social density; SB = suitable behavior; SM = similarity; CP = cosplay; CB = cheering behavior; AR = affective responses; BI = behavioral intention.

the unexpected finding in the current study might have to do with the differences between esports fans and traditional sports fans. For instance, Nelson (2019) stated that esports fans' way of supporting their favorite teams and players are more similar to following a lifestyle brand than a sport team. Therefore, the code of conduct regarding suitable behaviors of other spectators in esports event contexts might be different from the spectators' code of conduct in traditional sport event contexts. Although suitable behavior was not found to significantly impact affective

responses or behavioral intention in this current study, we still believe that suitable behavior needs to be adopted and examined again in future studies after it is reconceptualized and modified per the features of the esports context.

## Theoretical Contributions

According to the overview of the findings, we indicate two primary theoretical contributions. First, we conceptualize social atmospherics in the context of esports attendance. Drawing upon



**TABLE 4 |** Results of structural equation modeling (the second data set,  $n = 184$ ).

	$\beta$	$t$ -Value	Hypothesis
<b>Direct effects</b>			
Social density – affective responses	0.15*	2.69	H1: Supported
Suitable behavior – affective responses	0.02	0.20	H2: Not supported
Similarity – affective responses	0.41*	5.18	H3: Supported
Cosplay – affective responses	0.19*	2.05	H4: Supported
Cheering behavior – affective responses	0.44*	5.30	H5: Supported
Affective responses – behavioral intention	0.80*	9.90	H6: Supported
<b>Indirect effects</b>			
	$r$ , (95% BS CI)		
Social density – behavioral intention	0.12* (0.01, 0.43)		
Suitable behavior – behavioral intention	0.01 (–0.21, 0.29)		
Similarity – behavioral intention	0.33* (0.16, 0.58)		
Cosplay – behavioral intention	0.15 (–0.16, 0.46)		
Cheering behavior – behavioral intention	0.35* (0.11, 0.61)		H7: Partially supported

\* $p < 0.05$ . BS CI, bootstrapped confidence interval.

the literature, social atmospherics were adapted in the esports spectating environment. Notably, the items and constructs regarding cosplay and cheering behavior were revealed as the unique features of the esports attendance environment. Furthermore, similarity and social density were also shown as an important social atmospherics at esports venues. As stated above, suitable behavior needs further validation in future studies. By extending social atmospherics in a new context, esports attendance, our findings contributed to the line of research regarding social atmospherics in sports venues (Uhrich and Benkenstein, 2012; Chen et al., 2013; Kim et al., 2019) and retail settings regarding servicescape (Brocato et al., 2012; Nusairat et al., 2017; Avan et al., 2019).

Second, grounded in the SOR framework (Mehrabian and Russell, 1974), the current study proposed a conceptual model that includes social atmospherics components to predict esports spectators' behavioral intention through their affective responses. Despite there being two extant studies regarding esports event attendance (Pizzo et al., 2018) and esports venue (Jenny et al., 2018), there was no study related to esports event participants' perceptions of social atmospherics in an esports venue. The current study theoretically contributes to the line of research regarding esports fans' consumption behaviors by suggesting a conceptual model aimed at assessing social elements in the esports events environment and predicting esports event participants' affective responses and behavioral intention. In addition, the results indicated that affective responses acted as a means of mediation between social atmospherics cues and behavioral intention, which supports the SOR framework. The previous studies in servicescape (e.g., Walsh et al., 2011; Nusairat et al., 2017; Avan et al., 2019) and sportscape (e.g., Uhrich and Benkenstein, 2012; Jang et al., 2020; Kim et al., 2019) have determined the generalizability of the SOR framework, and the current study contributes to the extension of the SOR framework in terms of the social environment in esports event contexts.

## Practical Contributions

The results indicated the satisfactory reliability and validity of the constructs in the model and adequately explained the

variability of esports event participants' affective responses and behavioral intention. As important triggers for positive affective responses, the results suggested cheering behavior, similarity, cosplay, and social density. When esports event organizers or managers develop their marketing strategies, they need to consider the impact of social atmospherics factors. We found that cheering behavior is the strongest trigger for positive affective responses. For instance, Orland (2017) stated that cheering experience at esports events might lead esports fans to attend on-site events rather than to watch events via the various media platforms; watching esports games on on-site electronic screens is technically the same as attending on-site events in person.

Thus, in order to manage esports event attendees' experiences effectively, managers may need to prepare cheering promotions by distributing items such as free esports teams' jerseys or boomsticks (i.e., a pair of long balloons for cheering) in order to promote an intergroup feeling. Furthermore, the promotions, such as holding cosplay contests among spectators or inviting professional cosplay teams to an event, may positively influence esports event attendees' affective responses and behavioral intention. For instance, Sneaky, former Cloud9 professional player in League of Legends league, has cosplayed numerous in-game champions, and it has caught a lot of esports fans' attention. Lastly, esports managers may need to attract more esports events attendees in the future because the size of esports arenas has been growing so that it might be difficult to fill in the esports arena for social density. In 2020, the largest public esports arena on the West Coast is being built in Los Angeles (Gonzalez, 2020). The size will be 26,000 ft<sup>2</sup>, which is equivalent to 5.5 NBA basketball courts. The esports events in this public esports arena need to prepare strategies to fill in the large arena with spectators, and manage the crowd. While the perception of high numbers of other customers can lead to positive affective responses from esports attendees, managers may need to effectively manage safety issues on the days of the esports events.

Finally, the findings showed the impact of social atmospherics in esports attendance context on their affective responses and future behavior. As such, if esports organizers can successfully manage the perception regarding the suggested social atmospherics, it may positively influence esports attendees'

emotions and revisit intention. In this sense, esports event organizers or managers need to consider social atmospherics to improve their managing and marketing activities.

## Limitations and Suggestions for Future Studies

Although the findings of the current research contribute to the extant and emerging literature on esports event environments, there are limitations related to further validation of the items. Despite the conceptual model showing good reliability and validity, in the first attempt of CFA, four items were removed for empirical reasons (i.e., lower factor loadings). We should acknowledge that two items represented a revised cosplay construct (i.e., the construct without one cosplay item initially proposed), even though three or more items preferably (Hair et al., 2010). While the relationship between a revised cosplay construct and affective responses was statistically significant ( $p = 0.04$ ), it was marginally less than the threshold of 0.05. It might explain the insignificant indirect effects of the relationship between cosplay and behavioral intention. This can be addressed by improving the items in future studies. Future studies may need to use more adequate words to improve the items. If the items are modified with more proper wording, the revised items might better represent their constructs so that the latent variables can be measure more adequately.

In addition, future studies may need to consider extending the conceptual model proposed by the current study by adding moderators such as a ticket price. Although one of the implications of this study is that it serves to fill a gap regarding the need to explore social atmospherics in esports events contexts, esports attendees' game-day experience might be heterogeneous per their stands' section. For example, according to the online ticketing website, the ticket prices for the esports event of Overwatch at the Met Philadelphia (i.e., the Philadelphia Metropolitan Opera House) range from \$49 to \$232 per section.

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- Jenny et al., (2018), future studies may need to pay more attention the ticket price as a moderator because esports attendees' heterogeneous game-day experience based on their stands section (i.e., ticket price) might influence on the relationship between social atmospherics and their affective responses.

## DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Institutional Review Board at Indiana University – Bloomington. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

## AUTHOR CONTRIBUTIONS

WJ contributed by serving as the primary writer of the manuscript and by performing the primary data collection and data analysis. KK contributed by providing critical feedback, assistance in the data analysis, and suggestions to the initial and revised drafts. KB provided insight into conceiving the overall research idea, design, and execution. He contributed immensely to the overall improvement in the quality of this study by giving critical feedback based on his profound insight into the research. All authors contributed to the article and approved the submitted version.

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# The Influence of Emotion in the Management of Amateur Football Organizations

Melany Hebles<sup>1</sup>, Vicente Javier Prado-Gascó<sup>2\*</sup>, Orlando Llanos-Contreras<sup>1</sup> and Mario Alguacil<sup>3</sup>

<sup>1</sup> Management Department, Faculty of Economics and Management Science, Catholic University of the Most Holy Conception, Concepción, Chile, <sup>2</sup> Social Psychology Department, Faculty of Psychology, University of Valencia, Valencia, Spain, <sup>3</sup> Department of Teaching and Learning of Physical, Plastic and Musical Education, Faculty of Teaching and Educational Sciences, Catholic University of Valencia San Vicente Mártir, Valencia, Spain

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### \*Correspondence:

Vicente Javier Prado-Gascó  
Vicente.prado@uv.es

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This article is oriented to the analysis of organizational and emotional variables in amateur sporting organizations. The general objective is to analyze the influence of organizational variables such as service quality, transactional leadership, and transformational leadership and emotional variables such as affective commitment, emotional attachment investment, and emotional attachment dividend to predict the credibility that members of amateur sporting organizations perceive, as well as their degree of identification and loyalty. The opinions of 203 members of Chilean amateur football teams [169 men and 34 women, with ages between 18 and 68 years (mean = 32.75 years, DT = 9.92)] have been analyzed through a self-completed questionnaire. To reach the objectives, two types of differential but complementary analyses, in the form of hierarchical regression models (from hereon, HRMs) and qualitative comparative analysis (from hereon, QCA), were performed. The results obtained suggest that the organizational variables are better predictors than the emotional variables in all of the cases. In the same way, the inclusion of the emotional variables improves the predictive capacity of the proposed models to explain identification and loyalty, but not in the case of credibility. In general, the variables considered seem to explain 37% of the credibility, 56% of loyalty, and 65% of identification. On the other hand, considering the results of the QCA, no variable turned out to be necessary. However, different combinations of variables (conditions) were observed that were able to explain between 47 and 91% of the cases of the variables analyzed. In general, based on these results, it was observed that the emotional variables were important in interaction with other organizational ones since they are present in the three combinations that most explain identification and loyalty and are also present in the three combinations that most explain credibility. This study contributes to the literature by supporting the importance of managing emotions in order for sporting organizations to be more successful.

**Keywords:** affective commitment, emotional attachment, emotions in sport management, leadership, loyalty, organizational identification, service quality, sport management



## INTRODUCTION

Emotions can be a source of conflict within an organization, as they can also be an element capable of promoting the generation of social capital, trust among members of the same team, and a common purpose to follow (Llanos-Contreras and Jabri, 2019; Chang, 2020). Emotions are the result of the formation, interruption, or renovation of affective links and are considered a central element that allows for reinforcing the connections between people (Grisaffe and Nguyen, 2011). Therefore, the managing of emotions would be critical in strengthening the effects of organizational management in the performance of an organization or team. In this way, emotions are a basic driver that must be kept in mind in contemporary society, as well as in sporting organizations. People are connected, and for this reason, the decisions they make affect others in the organization, influencing their own emotions and actions related to behavioral decisions such as credibility, loyalty, and identification (Rodríguez-Pomeda et al., 2017).

For their part, credibility, loyalty, and identification of the members of an organization inform about the behaviors associated with the commitment of the people with an organization and influence the stability and success of the teams (Punjaisri and Wilson, 2011; Del Barrio-García and Prados-Peña, 2019). Credibility increases the levels of trust of the stakeholders and is fundamental in sustaining lasting personal relationships (Connelly et al., 2011). Loyalty is related to the psychological commitment of the members of an organization (Jacoby, 1971), and the identification with the organization is associated with high levels of positive feelings such as belonging (Punjaisri and Wilson, 2011). A better position concerning these three indicators is undoubtedly desirable, and understanding which aspects must be managed is central to achieving it.

The literature about management of emotions in sporting entities has advanced in understanding these elements from a commercial perspective in organizations with high levels of professionalization (e.g., Rodríguez-Pomeda et al., 2017). The importance of emotions in the willingness to align oneself with a determined club has been researched as has the identification of the fans with their club (Dwyer et al., 2015). The literature has also advanced in the comprehension of aspects of organizational management and leadership in the performance of elite sports (Arnold et al., 2015). However, little is known about the influence of organizational and emotional aspects in sporting organizations when these are not professional.

Among the organizational factors that influence the behavior and commitment of the people with an organization or team are found styles of transformational leadership and transactional leadership (Peng et al., 2020). Another organizational variable that is relevant for this case is the service quality, and among the emotional variables, there are affective commitment, emotional attachment investment, and emotional attachment dividend (Calabuig Moreno et al., 2008; Dwyer et al., 2015). For their impact in the sporting and social success of these entities, it is important to understand how these organizational and emotional variables influence credibility, identification, and loyalty, as well as their relative importance for this effect. In order to advance

in the comprehension of this phenomenon, this study seeks to respond to the questions of how organizational variables (service quality, transactional leadership, and transformational leadership) and emotional variables (affective commitment, emotional attachment investment, and emotional attachment dividend) influence credibility, identification, and loyalty in members of amateur sporting organizations and which of them are more important in explaining the variables of interest.

To respond to this question, three prediction models were tested in two steps. In the first step, considering the organizational variables (service quality, transactional, and transformational leadership) and, in the second, adding the emotional variables. This allowed us to test, on the one hand, if the organizational variables significantly predict the variables of interest and, on the other hand, if the inclusion of the emotional variables improves the predictive capability of the models significantly. Besides, a comparative qualitative analysis was developed to know if there exists a necessary variable which must always be present to produce the expected result and which variables, or interactions of variables, are sufficient to reach the expected result.

This article is developed in this way; what follows is a theoretical discussion about the organizational and emotional variables being studied and their potential impact on the variables of interest, then we inform about the methodological aspects of the study with the following section showing the results obtained from the analysis of the data. The last section discusses the results and presents the main conclusions.

## Theoretical Framework

The perceived service quality is a factor that has been used to explain behavior and organizational performance at a business level and also in the context of sporting organizations, as well as in events (Calabuig et al., 2014) and services (García-Fernández et al., 2018). The perceived service quality has to do with the fulfillment of expectations and the level of satisfaction of users-members of sporting entities (Grönroos, 1984). Both the way the club offers services and the functioning of the organization on an internal level (accesses to the stadium, parking, cleaning, quality of the playing field, repair services, and fan control) must be taken into account, as both aspects contribute to the satisfaction of the fans (Nogales, 2006). These are the attributes used over and over again by users-members to refer to the quality of the service and their satisfaction with it (Kelly and Turley, 2001).

There is literature that relates the perceived service quality (Castillo-Rodríguez et al., 2019) with different organizational variables such as value (Oriade and Schofield, 2019) and satisfaction with a sporting organization (Theodorakis et al., 2019; Vuong et al., 2020), as well as the relationships between them and the future intentions of the users (Crespo-Hervás et al., 2019) which are essential for the success of an event and/or service in the sporting sphere. Along the same lines, it would seem that the service quality influences loyalty and the level of participation of the members of sporting clubs (Alexandris et al., 2017), as well as in the perceived credibility of the entity (Alguacil et al., 2018). In the same way, the existing literature suggests the existence of a positive relationship between the perception of the



service quality of a sporting organization and the identification of the spectators (Benesbordi and Esmaeili, 2019).

In summary, the research analyzed above points out the importance of the service quality in relation to sporting entities and their users. This research confirms the existence of a positive relationship between the service quality and other organizational results associated with the participants. These relationships suggest the following hypothesis.

*H1: The service quality positively and significantly influences credibility, loyalty, and identification.*

The literature on styles of leadership and organizational management informs of the existence of relationships between leadership, management, and business results (Fletcher and Arnold, 2015). When talking of leadership, following the classic definitions, this concept is understood as a behavioral process in which the leader seeks influence over individuals in order to obtain predetermined objectives (Barrow, 1977), whether these be at an organizational or social level (Hollander, 1985). The literature offers multiple classifications of leadership styles, and among the most used is that which argues that a leader can be more oriented either to the task or to the people (Blake and Mouton, 1964). This defines leadership in terms of the types of interactions carried out by the leader with members of his or her team, deriving in two categories of leadership, transactional leadership and transformational leadership (Avolio et al., 1999).

Transactional leadership has to do with a strong style of management, based on reward and punishment, where the rules to comply to are clearly established and where the relationships between members of the group are based on extrinsic aspects, such as the economic aspect (Si and Wei, 2012). In transformational leadership, the leader is charismatic and more ambitious in the proposed objectives, where persuasion is exercised to convince the group that those objectives are reachable (Bernerth and Hirschfeld, 2016). These styles of leadership are widely studied for their influence in worker performance and organizational behavior (Lee and Ding, 2020). In sport and the management of sporting organizations, the styles of leadership are especially relevant as they affect the motivations of the sportspeople and the relationships they establish with their leaders, which in turn boost the success of some teams over others (Arnold et al., 2015; Mitrovic et al., 2019). Therefore, the understanding of how these styles of leadership affect organizational results helps to satisfy the needs of the sporting organization and also to overcome challenges that surround not-for-profit sports such as organizational commitment (Peng et al., 2020).

Transactional leadership has been traditionally considered as an antagonist of transformational leadership, granting it a negative connotation in most cases (Laohavichien et al., 2009). However, there exists evidence that shows that both leadership styles can be useful and complementary in improving management and organizational performance (e.g., Hetland and Sandal, 2003; Xu and Wang, 2019). Thus, even when transactional leadership is useful mainly to improve the response to individuals in terms of a task (Lee and Ding, 2020), this

would also positively influence variables associated with behavior and the commitment of individuals such as motivation and loyalty. Along these lines, Monzani et al. (2014) have found that while transformational leadership is a better precursor to loyalty, there are no significant differences between them when the followers present a high level of affability, kindness, and respect. In the same way, Epitropaki and Martin (2005) found a positive relationship between transactional leadership and organizational identification, particularly for individuals characterized by a connected scheme of self.

According to Lee and Ding (2020), there is little information that measures the relationship between specific styles of leadership and results that are reflected in people's behavior. However, the literature offers empirical evidence that would support this idea. Mitrovic et al. (2019) inform that the leadership style and the improvement in the relationships between the sporting management and the members of the organization positively affect motivation, mutual trust, and loyalty of the members. Particularly, in terms of transformational leadership, Bass and Riggio (2006) and Caillier and Sa (2017) have demonstrated that there exists a positive impact from this style of leadership on motivation, attitudes, and behavior of employs, as well as in commitment. In the same way, Peng et al. (2020) found that transformational leadership has a direct bearing on how employs perceive their work and their emotional commitment to the organization. Other empirical studies have demonstrated that the transformational style of leadership is positively associated with the satisfaction of followers with their leaders and with the work in itself (Lee et al., 2018), as well as with the credibility perceived by the members and the behaviors they carry out (Bolkan and Goodboy, 2009).

The aforementioned shows that transformational leadership and transactional leadership positively influence variables that reflect different behaviors that are associated with commitment and loyalty to an organization, which suggests the following hypothesis:

*H2: Transformational leadership and transactional leadership positively and significantly influence credibility, loyalty, and identification.*

The *affective commitment* of people is a central element in defining attitudes and social behavior of individuals (Agrawal and Maheswaran, 2005). A greater or lesser level of affective commitment is related to positive or negative attitudes in terms of a person, organization, brand, company, or institution. Affective commitment is defined as "a psychological state internal to the individual, which is the result of an initial attraction process" (Heere and Dickson, 2008, p. 228). This has to do with the intention of individuals to establish lasting relationships with others (Morgan and Hunt, 1994). It is also related to those emotions that are linked with the relationship already established with a brand, organization, service, team, or other (Geyskens et al., 1996).

Affective commitment has been demonstrated to be a relevant predictor in the performance of volunteer workers in non-profit organizations (Hoye, 2007). This would occur because

the affective commitment of the volunteers generates greater stability in their link with the organization (Preston and Brown, 2004). In the case of amateur clubs, this factor would be central in recruiting and adequate management of volunteers, as well as in their capacity to generate activities that allow its viability. Affective commitment is considered a central element to explain the loyalty and satisfaction of the individuals that participate in non-profit organizations (Juaneda-Ayensa et al., 2017). Along the same lines, affective commitment is associated with the motivation of the members of these organizations in the development of their volunteer activities (McCormick and Donohue, 2019). Therefore, agreement exists in the literature on the importance of this factor in the behavioural decisions of the individuals.

The systematic nature of people's behavior means that emotions are a central factor in explaining the decisions and social behavior of the individual. How some members of an organization feel and behave will have an influence on the actions and emotions of others in the team (Rodríguez-Pomeda et al., 2017). Particularly, emotional attachment is an important factor in explaining the connections between people, human relationships, and the emotional consequences of these relationships (Bowlby, 1982; Shaver and Mikulincer, 2002). If this emotional attachment does exist, there could be a commitment that leads to greater willingness of people to make personal sacrifices to achieve objectives within an organization (Chatzopoulou and Tsogas, 2017). In the same way, high levels of emotional attachment will generate high levels of identification with a group or product (Paxton and Moody, 2003) and greater levels of perceived credibility (Dwivedi et al., 2019).

Emotional attachment is composed of two distinct forms of attachment. One, known as emotional attachment investment, is considered as the cognitive feelings put into the team and the other, known as emotional attachment dividend, is understood as the affective feelings derived from the team (Dwyer et al., 2015). Understanding the differences in emotional attachment, whether it is affective or cognitive, offers relevant information on the behavior of the fans as these emotions influence the mood of the people and predict their loyalty to a sporting institution (Fedorikhin et al., 2008). This is considered a critical factor for the management of this type of institution.

In the sphere of football, like in other sports, there are strong emotional responses where the spectators create a link with the entity, receiving in return intangible elements in the form of emotions (Hay and McDonald, 2007). For this reason, to the extent that the fans and participants are linked, their levels of satisfaction increase, and their emotional attachment grows, positively influencing their levels of loyalty (Dwyer et al., 2015). This same thing could occur in the case of sportspeople linked to amateur institutions, as they also compete defending their specific club many times also as fans. This discussion leads to the following hypothesis.

*H3: Affective commitment and emotional attachment (investment and dividend) positively and significantly affect credibility, loyalty, and identification*

Understanding the management of emotion in sporting organizations is a challenging topic as it is believed to be an important element for the role that fans' and sportspeople's emotions, such as attraction and passion, play in the results of the organization (Rodríguez-Pomeda et al., 2017). According to Zajonc and Markus (1982), people develop preferences based on what they think and feel with respect to an organization, brand, or service. While the importance of the cognitive aspects and the management in the definition of these preferences are recognized, these aspects fade over time while the emotional factors tend to last (Park and MacInnis, 2006). Particularly, for the case of sporting organizations, when the fact is added that the strength of the emotions has an individual effect in the participants and fans of the football clubs, but also generates a collective effect of identification with the club. This would have an influence on what happens on the inside of the institution (Fink et al., 2002). Thus, distinct to the management variables whose effect is considered more linear, the emotional variables would generate multiple effects that are reinforced at an individual and collective level. Therefore, affective commitment and emotional attachment would be a better predictor of credibility, loyalty, and identification, leading to the following hypothesis.

*H4: The emotional variables of emotional attachment (investment and dividend) and affective commitment are better predictors of credibility, loyalty, and identification than the management variables (service quality, transformational leadership, and transactional leadership).*

## MATERIALS AND METHODS

### Participants

The sample for this study consisted of 203 members of Chilean football clubs, ranging in age from 18 to 68, with an average age of 32.75 ( $\pm 9.92$ ), 83% (169) of whom were men. On the other hand, in terms of the labor, 73.4% ( $n = 149$ ) were in full-time employment, 19.2% were part-time workers, 4.4% were unemployed, 2% were students, and 1% were retirees/pensioners.

On the other hand, with regard to the series of the club in which they participate, 19.2% ( $n = 39$ ) belonged to Honor series, 16.7% corresponded to women's football, 11.3% were from second and first age adult series, 10.8% belonged to Super Senior, while at third age adult level, there were 16 (7.9%), 4.9% were from Senior level, and from the Golden Age, there was only one person who represents 0.5% of the total.

**TABLE 1 |** Description in relation to belonging and frequency of playing and participation in activities of the club.

	Belonging to the club (years)	Playing in the club (month)	Participation club activities (month)
Mean	10.12	3.91	2.68
SD	11.55	1.30	1.80
Minimum	0	1	1
Maximum	54	10	8

Finally, with regard to the participants' involvement in the club (**Table 1**), the participants belonged to the club between 0 and 54 years, with an average of 10.12 years ( $\pm 11.55$ ). On the other hand, in relation to the monthly frequency of playing in the club, those surveyed play 3.91 days mean ( $\pm 1.30$ ) from those who only attend 1 day a month to those who attend up to 10 occasions. Finally, in terms of the frequency with which they participate in the activities organized by the club, apart from matches, we can see that the mean participation is 2.68 times a month ( $\pm 1.80$ ) from those who participate once a month to those who participate eight times.

## Instrument

Data for this study were collected between September 2019 and February 2020. The instrument used in the study is composed of a series of questionnaires with a scale of Likert-type responses of five anchors, where 1 means totally disagree with the statement and 5 totally agree. The filling time of the instrument was 40 min. All the scales have shown adequate psychometrics both in the aforementioned contributions, meeting the criteria of reliability, meeting the composed reliability, Cronbach's alpha (Hair et al., 2006) and the AVE value (Fornell and Larcker, 1981), as well as in the criteria of validity, such as the root mean square error of approximation (RMSEA) value (Browne and Cudeck, 1993), the fit indexes (Hu and Bentler, 1999), the weighting of items in each Scale (Bagozzi et al., 1998), and the T values (Veasna et al., 2013).

*Scale of service quality* is made up of five items taken from Yoo and Donthu (2001), Carrasco and Gutiérrez (2008), and Lee and Leh (2011). Scores range from 1 to 5, with higher scores indicating a higher perceived service quality. The Scale has shown adequate psychometric properties in previous studies (Lee and Leh, 2011), which are also observed in this study ( $\alpha = 0.83$ ).

*Scale of affective commitment*, adapted from Tuškej et al. (2013), is made up of three items, with scores ranging from 1 to 5. Higher scores indicate a greater affective commitment with the club. The Scale has shown adequate psychometric properties in previous studies (Tuškej et al., 2013), which are also shown in the present one ( $\alpha = 0.83$ ).

*Scale of emotional attachment*, adapted by the research team from Dwyer et al. (2015), is composed of seven items grouped into two factors: emotional attachment investment (three items) and emotional attachment dividend (four items). Scores range from 1 to 5, with higher scores indicating a greater emotional attachment with the club. The Scale has shown adequate psychometric properties both in previous studies (Dwyer et al., 2015) and in the present one (emotional attachment investment,  $\alpha = 0.86$ ; emotional attachment dividend,  $\alpha = 0.91$ ).

*Scales of leadership* are adapted from the work of Avolio and Bass (2004). The scale scores of transformational leadership (seven items) and that of transactional leadership (six items) range from 1 to 5, with higher scores indicating a greater transformational or transactional leadership perceived in the club. The scales have shown adequate psychometric properties both in previous studies (Avolio and Bass, 2004) as well as in the present one (transformational leadership,  $\alpha = 0.94$ ; transactional leadership,  $\alpha = 0.92$ ).

*Scale of brand credibility* is composed of six items adapted by the research team from Sweeney and Swait (2008). Scores range from 1 to 5, with higher scores indicating greater credibility in the club. The Scale has shown adequate psychometric properties in previous studies (Sweeney and Swait, 2008), something that is also seen in the present study ( $\alpha = 0.82$ ).

*Scale of brand loyalty* has five items adapted by the research team taken from Yoo and Donthu (2001); Tong and Hawley (2009), and Lee and Leh (2011). Scores range from 1 to 5, with higher scores indicating greater loyalty toward the brand or service. The Scale has shown adequate psychometric properties in previous studies (Yoo and Donthu, 2001; Tong and Hawley, 2009; Lee and Leh, 2011), as well as in this study ( $\alpha = 0.82$ ).

*Scale of brand identification* is composed of five items taken from Stokburger-Sauer et al. (2012). Scores range from 1 to 5, with higher scores indicating a greater identification with the club. The Scale has shown adequate psychometric properties both in previous studies (Stokburger-Sauer et al., 2012) and in the present one ( $\alpha = 0.89$ ).

## Statistical Analysis

Firstly, three models of hierarchical regression were carried out in two steps (credibility, loyalty, and identification). In the first step, the organizational variables were included (service quality, transformational leadership, and transactional leadership). In the second, the emotional variables (affective commitment, emotional attachment investment, and emotional attachment dividend) were included. Then a qualitative comparative analysis (QCA) was carried out. For this purpose, the data collected from the responses of the participants were transformed into fuzzy set responses. For this, the first task was to eliminate all the lost data (five participants) to then calculate the different constructs by multiplying the items that make them up (Giménez-Espert and Prado-Gascó, 2018). Once done, the values were recalibrated through the fsQCA 3.0 software (Ragin and Davey, 2016), calibrating said values between 0 and 1 (Ragin, 2008) following the consideration of Rey-Martí et al. (2016) and Woodside (2013) that argue for the need to establish three thresholds: 10% (low level of agreement or totally outside the set), 50% (degree of intermediate agreement, neither inside nor outside the set), and 90% (high level of agreement, completely inside the set). After the recalibration of the values of the variables, we proceeded to carry out the analysis of need and sufficiency. In the analysis of need, the intention is to test if any of the variables that form part of the study must be present in all of the cases to obtain the expected result, understanding that a variable is necessary when the consistency values of that variable are above the criterion of 0.90 (Ragin, 2008). For its part, the analysis of sufficiency aims to show those conditions or interactions of conditions that lead to a specific result. For the calculation of said sufficient conditions, Eng and Woodside (2012) indicate that two steps should be produced: the first of these is to generate a table of the truth in which the scores of the diffuse sets are transformed into the combinations of causal conditions that are logically possible and their empirical result. In the second step, three solutions are generated: complex (the most restrictive), parsimonious (the least restrictive), and intermediate, which is the one recommended in



the literature (Ragin, 2008). In this analysis of sufficiency, paths or combinations are shown that explain the variance of the variables of interest, finding three fundamental terms: the consistency of the solution, which has to do with the possible reliability or fit of the model, and must be above 0.75 to consider the solution adequate. On the other hand, there is the raw coverage that indicates how many cases can be explained by each combination of conditions, while the unique coverage is the variance that can be explained by a concrete combination of conditions and not by other possible combinations (Eng and Woodside, 2012). The software used has been, on the one hand, the statistical package SPSS (Statistical Package for the Social Sciences, Version 25, Armonk, NY, United States: IBM Corp.) for the descriptive analysis, the HRM models, and the obtaining of the calibration values, and, on the other hand, the fsQCA (Fuzzy-Set Qualitative Comparative Analysis, version 3.0, Irvine, CA, United States; Ragin and Davey, 2016, Department of Sociology, University of California) for the qualitative comparative analysis.

## Ethical Considerations

This study respected the fundamental principles of the Declaration of Helsinki (World Medical Association [WMA], 2013), with particular emphasis on the anonymization of the data collected, confidentiality, and non-discrimination of participants. The protocol was approved by the Scientific Ethics Committee of the Catholic University of the Holy Conception, Chile.

## RESULTS

In order to achieve the objectives of the study and to test the four hypotheses raised, two differential analyses, hierarchical regression models and comparative qualitative models, were carried out.

### Hierarchical Regression Models

Based on the results obtained from the HRM (Table 2), it is observed how the prediction of the considered models oscillates between 37 and 65%. The variables taken into account are better predictors in the case of brand identification ( $R^2_{adjusted} = 0.65$ ,  $p = 0.000$ ), followed by brand loyalty ( $R^2_{adjusted} = 0.56$ ,  $p = 0.000$ ), with the case of brand credibility being where they predicted least ( $R^2_{adjusted} = 0.37$ ,  $p = 0.000$ ). In general, the inclusion of the emotional variables improved the prediction of brand loyalty and brand identification, but without producing a significant improvement in the model in the case of brand credibility.

In concrete terms, in the first of the predictions, that of brand credibility, we see that, in the first step, the model is capable of predicting 39% of the variance of the brand credibility ( $R^2_{adjusted} = 0.39$ ) where the variable of service quality exercises the greatest weight ( $\beta = 0.41$ ;  $p = 0.000$ ) followed by transformational leadership ( $\beta = 0.23$ ;  $p = 0.003$ ). In the second step, the inclusion of the emotional variables does not improve the model ( $\Delta R^2 = 0.007$ ,  $p = 0.533$ ), and the final model is able to explain 37% of the variance of brand credibility ( $R^2_{adjusted} = 0.37$ ), with service quality

**TABLE 2 |** Hierarchical regression models for the prediction of brand credibility, brand loyalty, and brand identification.

Variable	Brand credibility		Brand loyalty		Brand identification	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	B
Predictors						
Step 1	0.39***		0.37***		0.39***	
SQ		0.41***		0.22**		0.24**
TFL		0.23**		0.44***		0.43***
TSL		0.09		0.02		0.03
Step 2	0.007		0.20***		0.26***	
SQ		0.38***		−0.03		−0.06
TFL		0.18*		0.01		0.02
TSL		0.09		0.03		0.03
AC		0.14		0.15		0.44***
EAI		−0.04		0.30***		0.23**
EAD		−0.01		0.31***		0.24***
Total $R^2_{adjusted}$	0.37		0.56***		0.65***	

\* $p < 0.05$ ; \*\* $p < 0.01$ ; \*\*\* $p < 0.001$ . “—,” not part of the analysis; SQ, service quality; TFL, transformational leadership; TSL, transactional leadership; AC, affective commitment; EAI, emotional attachment investment; EAD, emotional attachment dividend.

( $\beta = 0.38$ ;  $p = 0.000$ ) and transformational leadership ( $\beta = 0.18$ ;  $p = 0.042$ ) as influential.

In the second hierarchical regression, that of the prediction of brand loyalty, we see that the initial variables are capable of predicting 37% of the variance of brand loyalty ( $R^2_{adjusted} = 0.37$ ) where a significant influence is shown by the variables of transformational leadership ( $\beta = 0.44$ ;  $p = 0.000$ ) and service quality ( $\beta = 0.22$ ;  $p = 0.003$ ). With the inclusion of the emotional variables in the second step, the model improves ( $\Delta R^2 = 0.20$ ,  $p = 0.001$ ), and thus the model is finally capable of predicting 56% of the variance of brand loyalty ( $R^2_{adjusted} = 0.56$ ). The variables that significantly influence the prediction are the emotional attachment dividend ( $\beta = 0.31$ ;  $p = 0.000$ ) and the emotional attachment investment ( $\beta = 0.30$ ;  $p = 0.000$ ).

Lastly, we find the prediction model for brand identification in which the first step of the analysis indicates that the model predicts 39% of the variance of that variable ( $R^2_{adjusted} = 0.39$ ) where transformational leadership ( $\beta = 0.43$ ;  $p = 0.000$ ) and service quality ( $\beta = 0.24$ ;  $p = 0.001$ ) significantly influence prediction. In the second step, again including the emotional variables, we see that the model improves ( $\Delta R^2 = 0.26$ ,  $p = 0.000$ ) and is able to predict on this occasion up to 65% of the variance of that variable ( $R^2_{adjusted} = 0.65$ ), where affective commitment ( $\beta = 0.44$ ;  $p = 0.000$ ) shows the highest weight, followed by emotional attachment dividend ( $\beta = 0.24$ ;  $p = 0.000$ ) and emotional attachment investment ( $\beta = 0.23$ ;  $p = 0.001$ ).

### Fuzzy-Set Qualitative Comparative Analysis

To carry out the qualitative comparative analysis, as has already been set out, firstly, the descriptors and calibration values were calculated for the variables under study (Table 3). Then we proceeded to carry out the analysis of need and sufficiency.

**TABLE 3 |** Descriptive statistics and calibration values.

		BC	BL	BI	AC	SQ	EAI	EAD	TFL	TSL
Mean		7,845.63	2,053.86	1,982.83	90.62	1,687.71	91.19	459.35	26,345.07	115,298.11
SD		4,927.16	984.21	1,006.32	35.03	919.94	35.61	190.84	16,299.10	185,626.36
Minimum		1	1	1	1	1	1	1	1	1
Maximum		15,625	3,125	3,125	125	3,125	125	625	46,875	2,156,250
Calibration values										
Percentiles	10	1,728	625	518.4	39.6	432	36	144	3,142.8	8,326.8
	50	8,000	2,000	2,000	100	1,600	100	500	24,000	82,048
	90	15,625	3,125	3,125	125	3,125	125	625	46,875	203,125

BC, brand credibility; BL, brand loyalty; BI, brand identification; SQ, service quality; TFL, transformational leadership; TSL, transactional leadership; AC, affective commitment; EAI, emotional attachment investment; EAD, emotional attachment dividend.

**TABLE 4 |** Analysis of necessity for brand credibility, brand loyalty, and brand identification.

	BC		~BC		BL		~BL		BI		~BI	
	Con	Cov	Con	Cov	Con	Cov	Con	Cov	Con	Cov	Con	Cov
SQ	0.80	0.74	0.49	0.52	0.71	0.78	0.49	0.45	0.72	0.76	0.50	0.47
~SQ	0.49	0.45	0.76	0.81	0.50	0.54	0.75	0.68	0.50	0.53	0.75	0.71
TFL	0.79	0.70	0.51	0.52	0.77	0.80	0.46	0.40	0.79	0.80	0.47	0.42
~TFL	0.45	0.45	0.70	0.79	0.42	0.49	0.77	0.74	0.42	0.47	0.77	0.77
TSL	0.78	0.72	0.48	0.51	0.71	0.78	0.47	0.42	0.74	0.79	0.45	0.43
~TSL	0.47	0.44	0.74	0.79	0.48	0.52	0.76	0.69	0.46	0.49	0.77	0.73
AC	0.77	0.69	0.49	0.50	0.78	0.82	0.41	0.36	0.83	0.84	0.39	0.36
~AC	0.45	0.43	0.70	0.78	0.39	0.45	0.80	0.75	0.37	0.40	0.83	0.81
EAI	0.75	0.65	0.54	0.54	0.82	0.84	0.42	0.35	0.82	0.81	0.43	0.38
~EAI	0.47	0.47	0.65	0.75	0.37	0.43	0.81	0.78	0.37	0.42	0.78	0.79
EAD	0.80	0.65	0.56	0.53	0.87	0.83	0.44	0.35	0.87	0.81	0.45	0.37
~EAD	0.42	0.46	0.63	0.79	0.32	0.42	0.79	0.83	0.32	0.39	0.76	0.84

~, absence of condition; Con, consistency; Cov, coverage; Condition needed, consistency  $\geq 0.90$ ; BC, brand credibility; BL, brand loyalty; BI, brand identification; SQ, service quality; TFL, transformational leadership; TSL, transactional leadership; AC, affective commitment; EAI, emotional attachment investment; EAD, emotional attachment dividend.

## Analysis of Necessity for Brand Credibility, Brand Loyalty, and Brand Identification

Based on the results obtained (Table 4), none of the variables or conditions turned out to be necessary to obtain high levels (presence) or low levels (absence) of credibility, loyalty, and identification, as the consistency in all of the cases was less than 0.90 (Ragin, 2008).

## Analysis of Sufficiency of Credibility, Loyalty, and Identification

Once the analysis of necessity had been carried out, we proceeded to the analysis of sufficiency. As can be seen in Table 5, the frequency cutoff was set at 1, and the cutoffs for consistency are found in the range between the value of 0.82 and the value of 0.90. In the same table, the three most important combinations for the presence and absence of each of the conditions (brand credibility, brand loyalty, and brand identification) are summarized.

Firstly, in terms of the prediction of high levels of credibility, we found seven paths or interactions capable of explaining 47% of the cases, where the three most representative combinations were: (a) the interaction between high service quality, high levels of transformational leadership, and low levels of transactional

leadership that explained 30% of the cases (Raw coverage = 0.30; Consistency = 0.83); (b) the interaction between high levels of service quality, low levels of transformational leadership, and high levels of transactional leadership that explained 29% of the cases (Raw coverage = 0.29; Consistency = 0.89); and (c) the interaction between high levels of transformational leadership, low levels of transactional leadership, and high levels of emotional attachment dividend that explained 29% of the cases (Raw coverage = 0.29; Consistency = 0.80). On the other hand, in terms of the prediction of low levels of brand credibility, of the six paths capable of explaining 77%, the three most representative interactions were: (a) low levels of service quality and low levels of transactional leadership (Raw coverage = 0.64; Consistency = 0.88), (b) low levels of service quality and low levels of emotional attachment investment (Raw coverage = 0.59; Consistency = 0.87), and (c) low levels of transactional leadership and low levels of emotional attachment dividend (Raw coverage = 0.58; Consistency = 0.86) that explained 64, 59, and 58% of the cases, respectively.

Secondly, in terms of the prediction of high levels of brand loyalty, seven combinations explained 86% of the cases, with the three most important interactions being: (a) the interaction



**TABLE 5 |** Analysis of sufficiency for credibility, loyalty, and identification.

Frequency cutoff: 1	BC			~BC			BL			~BL			BI			~BI		
	Consistency cutoff: 0.87			Consistency cutoff: 0.89			Consistency cutoff: 0.83			Consistency cutoff: 0.90			Consistency cutoff: 0.82			Consistency cutoff: 0.90		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
SQ	●	●	—	○	○	—	—	●	—	—	○	○	—	—	—	—	—	—
TFL	●	○	●	—	—	—	●	—	—	—	—	—	●	—	—	—	—	○
TSL	○	●	○	○	—	○	—	—	●	—	—	○	—	—	●	—	—	●
AC	—	—	—	—	—	—	—	—	—	—	○	—	—	●	—	○	—	—
EAI	—	—	—	—	○	—	—	●	—	—	—	○	—	●	—	—	—	○
EAD	—	—	●	—	—	○	●	●	●	○	—	—	●	●	●	—	○	—
Consistency	0.83	0.89	0.80	0.88	0.87	0.86	0.87	0.91	0.86	0.83	0.81	0.87	0.86	0.92	0.85	0.81	0.84	0.89
Raw coverage	0.30	0.29	0.29	0.64	0.59	0.58	0.72	0.67	0.67	0.79	0.67	0.61	0.73	0.70	0.69	0.83	0.76	0.27
Unique coverage	0.01	0.03	0.002	0.03	0.02	0.02	0.01	0.03	0.02	0.13	0.01	0.004	0.01	0.03	0.01	0.12	0.05	0.007
Overall solution consistency			0.75			0.79			0.83			0.75			0.81			0.77
Overall solution coverage			0.47			0.77			0.86			0.85			0.88			0.91

●, presence of condition; ○, absence of condition. All sufficient conditions are adequate, raw coverage between 0.47 and 0.91. ~, low levels of condition; BC, brand credibility; BL, brand loyalty; BI, brand identification; SQ, service quality; TFL, transformational leadership; TSL, transactional leadership; AC, affective commitment; EAI, emotional attachment investment; EAD, emotional attachment dividend. Expected vector for credibility: 1.1.1.1.1 (0, absent; 1, present). Expected vector for ~ credibility: 0.0.0.0.0. Expected vector for loyalty: 1.1.1.1 (0, absent; 1, present). Expected vector for ~ loyalty: 0.0.0.0. Expected vector for identification: 1.1.1.1 (0, absent; 1, present). Expected vector for ~ identification: 0.0.0.0. Using the format of Fiss (2011).

between high levels of transformational leadership and high levels of emotional attachment dividend (Raw coverage = 0.72; Consistency = 0.87), (b) high levels of service quality with high levels of emotional attachment, both investment and dividend (Raw coverage = 0.67; Consistency = 0.91), and (c) high levels of transactional leadership and high levels of emotional attachment dividend (Raw coverage = 0.67; Consistency = 0.86), of which 72% of the cases were explained by the first interaction and 67% by each of the remaining. In terms of the prediction of low levels of loyalty, four paths were obtained that could explain 85% of the cases, with the three most relevant interaction being: (a) low levels of emotional attachment dividend (Raw coverage = 0.79; Consistency = 0.83) that explained 79% of the cases, (b) the interaction of low levels of service quality and commitment (Raw coverage = 0.67; Consistency = 0.81) that explained 67% of the cases, and, finally, (c) the interaction between low levels of service quality together with low levels of transactional leadership and low levels of emotional attachment investment (Raw coverage = 0.61; Consistency = 0.87) that explained 61% of the cases.

Finally, for the prediction of high levels of brand identification with the club, seven paths were found that could explain 88% of the cases. Among them, the three most relevant interactions were: (a) the interaction of high levels of transformational leadership and high levels of emotional attachment dividend (Raw coverage = 0.73; Consistency = 0.86) that explained 73% of the cases; (b) the interaction of high levels of commitment with high levels of attachment, both investment and dividend (Raw coverage = 0.70; Consistency = 0.92) that explained 70% of the cases; and, finally, (c) the interaction between high levels of transactional leadership with high levels of emotional attachment dividend (Raw coverage = 0.69; Consistency = 0.85) that explained 69% of the cases. In terms of the prediction of low levels of identification with the club, three paths were found that explained 91% of the cases. These paths were: (a) low levels of commitment (Raw coverage = 0.83; Consistency = 0.81) that explained 83% of the cases; (b) low levels of emotional attachment dividend (Raw coverage = 0.76; Consistency = 0.84) that explained 76% of the cases; and, finally, (c) the interaction between low levels of transformational leadership, high levels of transactional leadership, and low levels of emotional attachment investment (Raw coverage = 0.27; Consistency = 0.89) that explained 27% of the cases.

## DISCUSSION AND CONCLUSION

The aim of this work has been two-pronged; on the one hand, it sought to determine how organizational and emotional variables influence the credibility, loyalty, and identification of members of amateur sporting organizations and, on the other hand, it has wanted to determine which of them were more important in explaining the variables of interest. The analyses carried out by means of hierarchical regression models show that the models suggested are capable of predicting between 37 and 65% of the variance of the variables of interest. These models give support (albeit partial) to the hypotheses stated. Meanwhile, the analyses

based on fsQCA indicated that none of the variables was a necessary condition to achieve high levels of credibility, loyalty, or identification and informed of the distinct combinations of factors that were sufficient to achieve high and low levels of the variables of interest.

The results of the hierarchical regression models confirm that service quality influences credibility, but not necessarily loyalty or identification, which lose weight with the inclusion of the emotional variables. Therefore, there seems to be partial support for the first hypothesis raised, which posited that *The service quality positively and significantly influences credibility, loyalty, and identification*. This, on the one hand, would be in line with the idea that credibility is highly associated with the capacity of the organization to create value and satisfy the expectations of its members (Oriade and Schofield, 2019; Theodorakis et al., 2019; Vuong et al., 2020), and achieving it requires control to be maintained over the correct implementation of activities and processes. Something similar happens with the influence of transformational and transactional leadership on the variables of interest (H2: *Transformational leadership and transactional leadership positively and significantly influence credibility, loyalty, and identification*). The results confirm the hypothesis 2 only for the case of transformational leadership on credibility, but not for loyalty or identification that loses significance with the inclusion of the emotional variables. Given the influence that transformational leadership has on credibility, this would be critical in defining the type of relationships that sportspeople and amateurs establish with their leaders, thus confirming that pointed out by Arnold et al. (2015) and Mitrovic et al. (2019). Particularly, the results obtained in the first step of the multiple regression analyses confirm that transformational leadership is a better precursor of loyalty than transactional leadership (Monzani et al., 2014), but unlike that study, these differences would be statistically significant.

In the analysis of the emotional variables, as in the cases before, the hypotheses associated with their influence on credibility, loyalty, and identification of amateur sportspeople [H3: *Affective commitment and emotional attachment (investment and dividend) positively and significantly affect credibility, loyalty, and identification*].

H4: The emotional variables of emotional attachment (investment and dividend) and affective commitment are better predictors of credibility, loyalty, and identification than the management variables (service quality, transformational leadership, and transactional leadership)] were only partially confirmed.

However, it was shown that the inclusion of these variables improved the predictive capacity of the models significantly in trying to explain loyalty and identification while not significantly improving the case of credibility. This offers additional support for the idea that affective commitment and attachment are central in defining the attitudes of individuals, especially in those factors that determine long-term relationships with people or institutions (Morgan and Hunt, 1994; Geyskens et al., 1996). On the other hand, it reinforces the argument of Zajonc and Markus (1982) and Park and MacInnis (2006) in relation to the value of emotional aspects over and above more cognitive and management-based elements (such as service quality) when the

time comes to predict answers related to commitment (such as loyalty and identification).

In terms of the results of the qualitative comparative analysis, in addition to what was already stated about none of the variables being necessary, the sufficiency analyses for the prediction of high values of credibility are able to explain 47% of the cases. The most representative models by order of capacity for explanation are the interaction between high service quality, high levels of transformational leadership, and low levels of transactional leadership (30%). Other observed combinations were the interaction between high levels of service quality, low levels of transformational leadership, and high levels of transactional leadership (29%) and the interaction between high levels of transformational leadership, low levels of transactional leadership, and high levels of emotional attachment dividend (29%). In the same way as the results drawn out by the structural regression analysis, these results reaffirm the importance of the variables associated with the service quality to achieve high levels of credibility (in only one of the models does a high emotional variable appear). It also reaffirms the idea that the service quality is a precursor for credibility, as, according to Crespo-Hervás et al. (2019), from the service quality would depend on the value the sporting institution is able to create for its members, as well as its capacity to satisfy their expectations (Vuong et al., 2020). These results are also in line with the idea that a good service quality helps to build the trust of the members of an organization and thus credibility (Men, 2012).

In the prediction of high levels of loyalty, different sufficient conditions explain 86% of the cases. The most relevant combination includes high levels of transformational leadership and high levels of emotional attachment dividend (72%). Then, this is followed by the combination of high levels of service quality, high levels of emotional attachment investment, and high levels of emotional attachment dividend (67%). Finally, high levels of transactional leadership and high levels of emotional attachment dividend (67%) are also associated with high levels of loyalty. These results confirm the idea of Lee and Ding (2020) that both transformational leadership and transactional leadership can be useful in improving the commitment of people within an organization, one by means of the task and the other by means of inspiration. This also gives support to the conclusions of Peng et al. (2020) with respect to the idea that transformational leadership is a source of inspirational motivation. This, in combination with affective commitment, would improve the levels of the loyalty of people within a sporting organization. In the same way, the results discussed around the loyalty of amateur footballers in this study are in line with Alexandris et al. (2017), who point out that the quality of the service in the organization of sporting events is aligned with high levels of loyalty of the fans, only in this case, it is required for this variable to interact with emotional attachment investment and with emotional attachment dividend. Thus, the conclusions of Heere and Dickson (2008), who point out that loyalty depends on both internal (affective) factors and external (management) ones, are confirmed.

Finally, in the prediction of identification, it is observed that to obtain high levels of this variable, there are distinct paths that

explain 88% of the cases. The most relevant combination is the interaction between high levels of transformational leadership and high levels of emotional attachment dividend (73%). Then, it is observed that high levels of affective commitment to the club and high levels of both emotional attachment investment and emotional attachment dividend (70%) are also aligned with high levels of identification with the club, as are high levels of transactional leadership and high levels of emotional attachment dividend (69%). These results, just as in the case of the models associated with loyalty, confirm the importance of the emotional variables with their presence in all the models that explain high levels of identification. These results reinforce the ideas stated by Preston and Brown (2004) and Hoyer (2007) that suggest that affective commitment influences the performance of voluntary workers, and this would occur as a consequence of greater stability in their link to these institutions. Distinct to loyalty, identification incorporates a feeling of belonging to the organization (Boehm et al., 2015) that would explain in this case the presence of the emotional variables in all the models associated with high identification. The results also show the relevance of the two types of leadership studied in combination with the emotional variables, confirming what was stated by Miao et al. (2013) and Lee and Ding (2020) who found that leadership increases the trust in the supervision of the leader, and this, in turn, boosts the feeling of belonging.

This study also has certain limitations. The use of questionnaires is the first of them, although it is widely used, can give way to a certain bias of desirability. In addition, the size of the sample, together with the fact that the data only consider Chilean clubs, makes the extracted results very local and not easy to generalize. In spite of this, the results of the study suppose a contribution for managers of sporting entities, offering tools to understand the influence of emotions in the management of organizations and thus be able to obtain adequate levels of identification and loyalty toward them, which supposes a clear benefit in their success and sustainability.

## Contributions and Implications

Looking at the results, the QCA models of analysis seem to be more explicative than the linear models. On the other hand, the results suggest that professionals related with the management of sporting organizations, apart from concentrating on organizational variables, should also focus on emotional variables, such as commitment, emotional attachment dividend, and emotional attachment investment in order to obtain high levels of loyalty and identification.

On the other hand, it has been demonstrated that the use of both methodologies can be very interesting due to the fact that HRM contributes data related to the individual impact of the variables, while the QCA allows for what is known as equifinality, which consists of the possibility that there can be different interactions that can arrive by different paths to the same result (Woodside, 2013; Rey-Martí et al., 2016; Giménez-Espert and Prado-Gascó, 2018).

The results obtained provide tools to understand the influence of emotions in the management of organizations, enabling

managers of sporting entities to promote the success and sustainability of their organizations.

## DATA AVAILABILITY STATEMENT

All datasets presented in this study are included in the article/**Supplementary Material**.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by Scientific Ethics Committee of the Universidad Católica de la Santísima Concepción, Chile. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

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## AUTHOR CONTRIBUTIONS

All authors listed have made a substantial, direct and intellectual contribution to the work, and approved it for publication.

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## SUPPLEMENTARY MATERIAL

The Supplementary Material for this article can be found online at: <https://www.frontiersin.org/articles/10.3389/fpsyg.2020.02218/full#supplementary-material>



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# Future Intentions of Fitness Center Customers: Effect of Emotions, Perceived Well-Being and Management Variables

**Fernando García-Pascual<sup>1</sup>, Vicente Prado-Gascó<sup>2</sup>, Mario Alguacil<sup>3</sup>, Irena Valentine<sup>4</sup> and Ferran Calabuig-Moreno<sup>1\*</sup>**

<sup>1</sup> Department of Physical Education and Sports, University of Valencia, Valencia, Spain, <sup>2</sup> Department of Social Psychology, University of Valencia, Valencia, Spain, <sup>3</sup> Department of Teaching and Learning of Physical, Plastic and Musical Education, Catholic University of Valencia, Valencia, Spain, <sup>4</sup> Department of Sport Management, Economics and Sociology, Lithuanian Sports University, Kaunas, Lithuania

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### \*Correspondence:

Ferran Calabuig-Moreno  
ferran.calabuig@uv.es

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One of the main objectives of fitness center managers is to obtain high levels of loyalty from the customers of these fitness centers. Within the existing literature on fitness center management, previous research has analyzed the importance of the management variables themselves to determine the behavioral intentions of their customers, ignoring other psychological and sociodemographic aspects and focusing on linear relationship models. Therefore, this study, which aims to analyze the impact of different management variables along with psychological (emotions and subjective well-being) and demographic variables (age and sex) on the satisfaction, perceived value (PV) and future intentions (FI) of 398 users (216 men, aged 18–75, Mean = 35.89 ± 14.53) of a fitness center, intends to fill this gap. In this study, two different methodologies are used, i.e., hierarchical regressions models (HRM) and qualitative comparative analysis (QCA). The data were obtained by means of a self-administered questionnaire composed of 69 items that collected different previously validated scales. Considering HRM, the different models proposed explain 52% of the satisfaction variance, 57% of perceived value and 59% of future intentions. In general, it seems that the management variables are better predictors than subjective well-being, emotions and age or gender since their inclusion does not greatly improve the model's predictive capacity. As far as QCA analyses are concerned, it seems that none of the conditions are necessary for high or low levels of satisfaction, perceived value or future intentions. On the other hand, based on sufficiency analyses, there seem to be 8 pathways or combinations of conditions leading to high levels of satisfaction and 13 for low levels, 11 combinations leading to high levels of IF and 10 leading to low levels; however, there are 6 combinations of conditions leading to high levels of PV and 5 leading to low levels. In general, some of the pathways consider only the management variables, although many of them consider the importance not only of the management variables but also of the interactions that these may have with emotional aspects and, to a lesser extent, with age and well-being. When comparing both methodologies, it can be observed that the QCA models are more explanatory than the HRM models and that they take

into account aspects that seem unimportant when observing linear models (such as emotions or age). However, both methodologies should be considered complementary and used simultaneously since, by focusing on different aspects, enriched results are obtained. The results obtained will enable managers to make more efficient use of available resources to increase user satisfaction.

**Keywords:** future intentions, sports center, emotions, well-being, QCA, satisfaction, perceived value, sport management

## INTRODUCTION

In recent times, sports or fitness centers have become predominantly important in the field of sports services. In Spain, the increase in these services has contributed to the country being placed in fifth position within the European context in terms of economic income. Such is the importance, that in 2018, it generated 2,291 million euros, a 2.5% increase over the previous year (Deloitte, 2019). On the one hand, these data reveal the importance of this sector for the economy, but on the other hand, these centers have a very important role in the health of those who use them. Understanding health not only in regard to physiological effects on the body but also psychological aspects, such as subjective well-being or positive emotions caused by the practice of sports, is important.

The increase in the turnover in the fitness sector implies the improvement of the system; the number of competitive sport centers with optimal market shares is increasing, as this quality/price relationship is one of the most observed factors influencing sport center users (Gallardo et al., 2016). In these centers, the customers' needs regarding not only sports but also their social and psychological are satisfied; consequently, the loyalty of the customer is prolonged, which is the aim of all sports services. In their study, Molina et al. (2016) affirm that the emotional value is the variable that most influences the future intentions of fitness centers customers.

The practice of sports is one of the main elements in the physical and psychological well-being of society (Teixeira et al., 2012). According to the latest available survey on sports habits in Spain (2015), the health motive is the third main reason for practicing sport, with women scoring highest on this motive. On the other hand, this same survey explains that more than half of the Spanish society over 15 years of age participates in physical activities at least once every 3 months. At a European level, Eurostat, places Spain above the European Union average in the practice of sport, with 34% of society doing sport more than 2.5 h a week, even ahead of countries such as France and Italy. Therefore, fitness centers are important in satisfying both the physical and psychological needs of sports customers. These sports centers, whose priority objective is customer loyalty, try to strengthen this bond through different service adaptation mechanisms.

In their paper, Gallardo et al. (2016) argue that lack of time, value for money and motivation are the main causes of the drop in attendance at sports centers. Therefore, it is important to adapt these sports services to the demands of the users to further strengthen their feelings of loyalty. Determining which variables

predict loyalty or help loyalty to appear while also helping to strengthen it is a very important task that these sports centers must perform. Within the context of these centers, there are studies (De Knop et al., 2004; Calabuig et al., 2012b; García-Fernández et al., 2012) that have analyzed management variables such as service quality and customer satisfaction. The quality of service is a strong antecedent of customer satisfaction, so these sports services increasingly offer renewed quality systems (García-Fernández et al., 2018a). Thus, they are adjusted to the profiles of the clients who attend the sports center to reinforce the satisfaction that the clients feel with the service. Customer satisfaction has been one of the most frequently analyzed variables in sports management (Alcañiz and Simó, 2004; Yoshida and James, 2010; Baena-Arroyo et al., 2016; Dias et al., 2019) and the significance of this variable is such that the service customer's future behavioral intentions may be highly influenced by unsatisfactory experiences (Morales and Hernández, 2004).

These management variables, as well as the perceived value of the service, have been used to try to measure the customer's perceptions in relation to their future behavior, that is, their intentions to return to these sports centers (García-Fernández et al., 2018a). Therefore, for the sports managers who run these sports facilities, customer loyalty is one of the greatest challenges they face (García-Pascual et al., 2020). Different studies confirm the close relationship between management variables and the future behavioral intentions of sports center customers (García-Fernández et al., 2016; Chiu et al., 2019; Baena-Arroyo et al., 2020).

Proposition 1. Satisfaction is a predictor of future customer intentions. Within sports organizations, Calabuig et al. (2008), argue that customer satisfaction is one of the most analyzed management variables because it offers a result in which the customer, in a subjective way, measures his experience with that organization. Within the existing literature, in the field of sports facilities, there are different studies that confirm the recognized link between customer satisfaction and the future behavioral intentions of the customer (Calabuig et al., 2012a; García-Fernández et al., 2018b; Alguacil et al., 2019). Likewise, Avourdiadou and Theodorakis (2014), in their research, analyze the perceptions of sports center customers in Greece, concluding that customer satisfaction is the main driver of these customers' future behavioral intentions.

Proposition 2. Perceived value is a predictor of the customer's future intentions.

The perceived value of the customer is a variable that is very much analyzed in the literature of sports services (Molina



et al., 2016; Chiu et al., 2019), as well as being a strong antecedent of customer satisfaction. With regard to sports centers, the literature includes different studies that argue that this variable, the perceived value of the customer, is a clear antecedent of the behavioral intentions of customers (Brady et al., 2005; Lu et al., 2011). Likewise, Yu et al. (2014), in their research, analyze this link between these variables, stating that the greater the perception of value, the greater loyalty the service will achieve.

**Proposition 3.** Emotions influence the predicted future behavioral intentions of customers.

Emotions in sport management have mostly been analyzed within the context of sport events, i.e., analyzing the emotional state of the spectators when attending such event (Biscaia et al., 2012; Calabuig et al., 2015; Song et al., 2019).

On the other hand, few studies have been found that focus on sports centers, although there have been recent studies (Biscaia et al., 2012; Molina et al., 2016) analyzing psychological variables, such as life satisfaction, happiness, subjective well-being, and emotions, and their influence on customers' perceptions of a service. Pedragosa et al. (2015) argue that both positive and negative emotions influence customer satisfaction and, consequently, influence future behavioral intentions. Similarly, Ong and Yap (2017) analyze the perceptions of customers of fitness centers in Malaysia, stating that the emotional response seems to have a stronger positive relationship with the behavioral intentions of customers.

**Proposition 4.** Subjective well-being is predictive of future customer intentions.

It is true that, within the literature on sport management, specifically that which studies the perceptions of customers of fitness centers, there are very few studies that deal in any way with the well-being of customers. In recent years, some scholars have analyzed this psychological variable within sports centers (Hamer and Stamatakis, 2010; García-Pascual et al., 2016; Molina, 2016). These studies affirm the close and important relationship between sports practice and personal well-being and that this psychological variable predicts the customers' future behavioral intentions regarding the sports service.

**Proposition 5.** Age and gender influence the prediction of future customer intentions.

On the other hand, several sociodemographic variables have been analyzed in the literature on sport management, such as the ages and genders of customers (González-Cutre and Sicilia, 2012; Borges-Silva et al., 2017; Zamorano-Solís and García-Fernández, 2018). In this sense, García-Fernández et al. (2013) find that it is women and older customers who score highest on the dimensions of quality and loyalty to the service.

Another key aspect in the development of sports services is the segmentation of the users. In the literature, for some time now and due to the increase in the world of fitness, there have been different studies analyzing this segmentation (Elasri Ejjaberi et al., 2016; Campos et al., 2017; Molina et al., 2019; León-Quismondo et al., 2020). These studies aim to establish segmented criteria for each user profile, such as prices and different services, which give the sports center a differentiating added value within the fitness market.

The aim of this paper is to analyze the perceptions of the customers of a private sports center to determine which management variables and which psychological variables (personal well-being and emotions) influence the future intentions of customers, while also incorporating age and gender into the equation. Furthermore, these relationships will be approached from two different methodologies, with one being symmetric (hierarchical regression) and the other being asymmetric (fussy set qualitative comparative analysis).

## MATERIALS AND METHODS

### Participants

The sample was made up of the customers of a private sports center belonging to a town in the province of Valencia, Spain. A non-probabilistic convenience sample was used. The data were collected in person from the customers of the sports facility between October 2018 and April 2019 to obtain the perceptions of the different customers of the same center. Finally, 411 questionnaires were collected, of which 13 were incomplete, resulting in 398 questionnaires completed correctly by customers, including 216 men and 182 women. The average age of the customers surveyed was 35.89 years ( $\pm 14.53$ ). A large proportion of those surveyed had secondary or university educations (84.9%), and almost half of those surveyed (43.7%) attend the sports facility four or more times a week.

### Questionnaire

The questionnaire used in the present research is composed of six scales that have been widely used in the literature, with a total of 69 items using a five-point Likert scale from (1) "Strongly Disagree" to (5) "Strongly Agree." The completion time is 30 min.

The scale measuring the perceived service quality was made up of 36 indicators taken from Ko and Pastore (2005), which was adapted into the Spanish context by Molina (2016). The previous studies confirmed that this scale had good psychometric properties (i.e., Molina, 2016).

Customer satisfaction was measured by two indicators taken from Hightower et al. (2002). The previous studies also confirmed the adequate psychometric properties of the scale (i.e., García-Pascual et al., 2019).

The perceived value by customers was measured through seven indicators (Sweeney and Soutar, 2001). The psychometric properties offered by the scale have been proved (i.e., Pastor-Barceló et al., 2016).

Future intentions were measured by a scale composed of four items from Zeithaml et al. (1996). The previous studies focusing on sports centers confirm the adequate psychometric properties of the scale (e.g., Molina et al., 2016; García-Fernández et al., 2018b).

The scale that measures subjective well-being is made up of eight indicators (Cummins, 2006). The studies in the literature of sports management confirm the psychometric properties of the scale (i.e., García-Pascual et al., 2016).

To measure customers' emotions, a scale composed of 12 items was used (Bigné and Andreu, 2004). The previous studies in the sports context confirm the adequate psychometric properties of this scale (e.g., Molina et al., 2016).

## Data Analysis

First, a descriptive analysis of the sample was performed. Second, two different methodologies were used to analyze the influence of the managerial variables, subjective well-being, emotions, and sociodemographic variables (age and sex) on consumers' satisfaction using three hierarchical regression models (HRM) and six fuzzy-set qualitative comparative analysis models (fsQCA). The descriptive and regression analyses were performed using SPSS (Statistical Package for the Social Sciences, Version 22, IBM), and the fsQCA 2.0 software package (Claude and Christopher, 2014) was used to calculate the fsQCA models.

In the case of HRM, three models (prediction of satisfaction, perceived value and future intentions) with four steps were performed. In the first step, the managerial variables were included, then, in the second step, subjective well-being was included; in the following step, the emotional variables (pleasure and arousal) were included, and in the fourth step, the demographic variables were also included (age and sex).

Regarding fsQCA, as suggested in the literature (Ragin, 2008), the raw data obtained were transformed into fuzzy set responses. First, the data with missing responses were deleted, then different constructs were obtained by multiplying the items that make them up (Giménez-Espert and Prado-Gascó, 2018). Third, the three thresholds of calibration were calculated according to Woodside's (2013) suggestion, as follows: 10% (totally out of the set), 50% (neither in nor out of the set) and 90% (totally in the set). Finally, the values of all the constructs were recalibrated between 0 and 1 (Ragin, 2008) by the automated process of the fsQCA 2.5 software (Claude and Christopher, 2014). Once the data were transformed for analysis into QCA, the necessity and sufficiency analyses were carried out to predict the high levels (presence) or low levels (absence) of satisfaction, perceived value and future intentions.

In QCA, the explained variance of the model is reflected in the coverage of the solution, while a measure of adjustment of the model it is represented through consistency (Prado-Gascó and Calabuig, 2016). A condition is considered necessary in QCA models when its consistency is greater than or equal to 0.90 (Ragin, 2008). Sufficiency analyses allow for three types of solutions, i.e., complex, parsimonious and intermediate (Eng and Woodside, 2012). The intermediate solution is the one recommended in the literature (Ragin, 2008), and it is shown here.

## RESULTS

### Hierarchical Regression Model

Based on the HRM results, the prediction models predict between 52% and 59% of the variables under study (satisfaction:

**TABLE 1 |** Hierarchical regression models of management variables, customer emotions, subjective well-being, age and sex in satisfaction, perceived value, and future intentions.

	Satisfaction		Perceived value		Future intentions	
	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$	$\Delta R^2$	$\beta$
<b>Step 1</b>	0.51***		0.56***		0.58***	
Service quality		0.58***		0.75***		–
Satisfaction		–		–		0.25***
Perceived value		0.17***		–		0.59***
<b>Step 2</b>	0.01		0.01*		0.01**	
Service quality		0.58***		0.72***		–
Satisfaction		–		–		0.24***
Perceived value		0.17***		–		0.55***
Subjective well-being		–0.03		0.08***		0.13***
<b>Step 3</b>	0.01		0.01*		0.01*	
Service quality		0.58***		0.69***		–
Satisfaction		–		–		0.23***
Perceived value		0.17***		–		0.53***
Subjective well-being		–0.02		0.07		0.12***
Pleasure		0.06		0.10**		0.10*
Arousal		–0.09*		0.01		–0.02
<b>Paso 4</b>	0.002		0.01		0.01	
Service quality		0.58***		0.68***		–
Satisfaction		–		–		0.22***
Perceived value		0.18***		–		0.52***
Subjective well-being		–0.02		0.07*		0.12***
Pleasure		0.05		0.11**		0.09*
Arousal		0.08*		–0.01		–0.01
Age		–0.02		0.05		0.05
Man		–0.04		0.05		–0.05
<b>Total <math>R^2_{adj}</math></b>	0.52***		0.57***		0.59***	

$\Delta R^2$ , R-square change;  $\beta$ , standardized beta;  $R^2_{adj}$ , R-square adjusted; \* $p \leq 0.05$ ; \*\* $p \leq 0.01$ ; \*\*\* $p \leq 0.001$ .

$R^2 = 0.52$ ; perceived value:  $R^2 = 0.57$ ; future intentions:  $R^2 = 0.59$ ). In all cases, the management variables substantially improve the predictive capacity of the different models, while the inclusion of psychological or demographic variables improves the models very little.

As seen in Table 1, the sports management variables (SQ, SAT, PV, IF) psychological variables (subjective well-being, pleasure and arousal) and the sociodemographic variables (age and sex) explain 59% (adjusted  $R^2 = 0.59$ ) of the consumers' future intentions. Analyzing the different steps that were carried out in the hierarchical regression more specifically, it can be seen how in the prediction of the future intentions, the inclusion of the sport management variables increases the predictive capacity of the model by a 58% ( $\Delta R^2 = 0.58$ ,  $p < 0.001$ ), while the addition of the subjective well-being in the second step, the emotions (pleasure and arousal) in the third step and the age and sex in the last step scarcely improve the model's prediction ( $\Delta R^2 = 0.01$ ,  $p < 0.001$  in all cases). Considering the results of the last step, the variables that

resulted in significant predictors were SAT ( $\beta = 0.22$ ;  $p < 0.001$ ), PV ( $\beta = 0.52$ ;  $p < 0.001$ ), SWB ( $\beta = 0.12$ ;  $p < 0.001$ ) and, to a much lower extent, pleasure ( $\beta = 0.09$ ;  $p < 0.05$ ).

The ways that the management variables (SQ, VP), psychological variables (subjective well-being, pleasure and arousal) and sociodemographic variables (age and sex) explain 52% (adjusted  $R^2 = 0.52$ ) of user satisfaction were also observed. In the first step, in predicting the level of user satisfaction, the management variables increase the model's prediction by 51% ( $\Delta R^2 = 0.52$ ,  $p < 0.001$ ), observing that in the successive steps, when emotions (pleasure and arousal), subjective well-being and sociodemographic variables are incorporated, the model's prediction increases very slightly ( $\Delta R^2 = 0.01$ ,  $p < 0.001$  in all cases). Observing the last step, the variables that showed significance in predicting the satisfaction of the users of the sports center were SQ ( $\beta = 0.58$ ;  $p < 0.001$ ), PV ( $\beta = 0.18$ ;  $p < 0.001$ ) and arousal ( $\beta = 0.08$ ;  $p < 0.05$ ).

Finally, in the prediction of the perceived value of the users, the management variables (SQ) the psychological variables (subjective well-being, pleasure and arousal) and the sociodemographic variables (age and sex) explain 57% (adjusted  $R^2 = 0.57$ ) of the predicted value. Analyzing the different steps of this hierarchical regression, it is observed that in the first step, the sports management variable increases the predictive capacity of the model by 56% ( $\Delta R^2 = 0.56$ ,  $p < 0.001$ ), and in the following steps, when emotions (pleasure and arousal), subjective well-being and sociodemographic variables are incorporated, the model's prediction increases ( $\Delta R^2 = 0.01$ ,  $p < 0.001$  in all cases). In the last step, the variables that showed significance in the prediction of the users' perceived value are observed, i.e., SQ ( $\beta = 0.68$ ;  $p < 0.001$ ), pleasure ( $\beta = 0.11$ ;  $p < 0.01$ ) and subjective well-being ( $\beta = 0.07$ ;  $p < 0.05$ ).

It is observed that the management variables are those that predict in a differentiated way the dependent variables of this research, with a very slight improvement of the model occurring with the incorporation of the subjective well-being, emotions or the two sociodemographic variables.

## Qualitative Comparative Analysis (fsQCA)

First, the descriptive statistics and the three thresholds for the calibration values of the variables are calculated and then analyzed (Table 2).

Then, the necessity analysis was carried out to determine if there were causal conditions for the presence or absence ( $\sim$ ) of the analyzed variables that were individually necessary. As shown in Table 3, none of the conditions are necessary since the consistency of each one of them does not present results above 0.90 (Ragin, 2008).

Finally, the sufficiency analysis was carried out to determine if the conditions that make up the model are sufficient. Table 4 presents the three most important combinations of condition for the intermediate solution. Analyzing Table 4, it can be seen that the consistencies of the different combinations were adequate, as all are above the minimum recommended cut-off point of 0.75 (Ragin, 2008).

Therefore, considering the sufficiency analysis, the different combinations or paths that result explain the different models. Regarding the future intentions of the customers, 11 combinations explain 84% of FI (coverage solution: 0.84; consistency solution: 0.80); the three main important combinations for the presence of FI are SAT\*PV (raw coverage: 0.66; consistency: 0.90), PV\*Men (raw coverage: 0.39; consistency: 0.85), and SAT\*SWB\*~arousal (raw coverage: 0.36; consistency: 0.87). There are also 10 combinations of conditions that lead (79%) to low levels of FI (solution coverage: 0.79; solution consistency: 0.81); the three most important combinations are  $\sim$ SAT\*~PV\*~arousal (raw coverage: 0.55; consistency: 0.89);  $\sim$ PV\*~SWB\*~AROU\*being younger (raw coverage: 0.42; consistency: 0.89); and  $\sim$ PV\*~arousal\*Men (raw coverage: 0.41; consistency: 0.83).

To measure the customer satisfaction variable, eight pathways or combinations explain 86% of the high levels of SAT (coverage solution: 0.86; consistency solution: 0.79), with three combinations being the most important, i.e., SQ (raw coverage: 0.71; consistency: 0.88),  $\sim$ PV (coverage: 0.68; consistency: 0.86), and AROU\*PLEA\*AGE (raw coverage: 0.32; consistency: 0.80). On the other hand, there are 13 combinations of conditions (72%) indicating low levels of SAT (coverage solution: 0.72; consistency solution: 0.75); the three more important for the absence of SAT are  $\sim$ SQ\*~PV\*MAN (raw coverage: 0.71; consistency: 0.88),  $\sim$ SQ\*~PV\*PWB\*AROU (raw coverage: 0.66; consistency: 0.90), and  $\sim$ SQ\*~PV\*PWB\*~PLEA\*~AGE (raw coverage: 0.66; consistency: 0.90).

Finally, the variable analyzed of the value perceived by the customer results in six combinations of conditions explaining 72% of PV (coverage solution: 0.72; consistency solution: 0.81); the three main important combinations for the presence of PV are SQ\*BS (raw coverage: 0.58; consistency: 0.84), SQ\*PLEA\*AROU\*~AGE (raw coverage: 0.32; consistency: 0.85), and SQ\*AROU\*AGE (raw coverage: 0.30; consistency: 0.84). On the other hand, there are also five combinations of conditions that explain 88% of the low levels of PV (coverage solution: 0.88; consistency solution: 0.77); three main important combinations for the absence of PV are  $\sim$ SQ (raw coverage: 0.81; consistency: 0.82),  $\sim$ PLEA\*~AGE (raw coverage: 0.49; consistency: 0.82), and  $\sim$ PWB\*~PLEA\*~AROU (raw coverage: 0.36; consistency: 0.90).

## DISCUSSION

Within the context of sports centers and their management, customers' perceptions allow information to be obtained about their opinions of the services offered. Therefore, in the literature, during the last decades, management models such as perceived quality, satisfaction or perceived value have been commonly used to predict costumers' future intentions. However, for some time now, there have been variables in different studies that are becoming vitally important in predicting future intentions, among which, we find the emotions-related variables (Pedragosa et al., 2015; Molina et al., 2016; Ong and Yap, 2017). Likewise, these different studies have focused on analyzing, through

**TABLE 2 |** Descriptive statistics and calibration values.

	Age	SQ	SAT	PV	FI	SWB	Pleasure	Arousal
Mean	35,89	361940,89	17,54	18774,54	327,80	22390606,11	5980,56	3110,27
SD	14,53	362997,07	5,70	20976,66	197,81	28275760,86	4894,99	3649,48
Minimum	18	1	1	1	8	4500	36	9
Maximum	77	1562500	25	78125	625	100000000	15625	15625
Percentiles	10	20	46210,2	9	1728	81	838635	1116
	50	32	245367,5	16	11520	256	10266480	4096
	90	58	886936,25	25	50000	625	66249000	15625
							7500	

SD, standard deviation; SQ, service quality; SAT, satisfaction; PV, perceived value; FI, future intentions; SWB, subjective well-being.

**TABLE 3 |** Necessity analysis for satisfaction, perceived value, and future intentions.

	SAT		~SAT		PV		~PV		FI		~FI	
	Cons	Cov	Cons	Cov	Cons	Cov	Cons	Cov	Cons	Cov	Cons	Cov
SQ	0.71	0.87	0.43	0.41	0.78	0.76	0.43	0.52	–	–	–	–
~SQ	0.52	0.54	0.86	0.70	0.51	0.42	0.80	0.82	–	–	–	–
SAT	–	–	–	–	–	–	–	–	0.82	0.76	0.54	0.46
~SAT	–	–	–	–	–	–	–	–	0.42	0.51	0.72	0.78
PV	0.68	0.85	0.44	0.43	–	–	–	–	0.73	0.86	0.39	0.41
~PV	0.55	0.56	0.85	0.67	–	–	–	–	0.50	0.47	0.87	0.74
SWB	0.59	0.74	0.52	0.51	0.67	0.66	0.47	0.58	0.62	0.73	0.48	0.51
~SWB	0.61	0.62	0.74	0.58	0.58	0.47	0.73	0.73	0.58	0.55	0.75	0.64
Pleasure	0.64	0.76	0.54	0.50	0.70	0.66	0.51	0.60	0.67	0.74	0.50	0.51
~Pleasure	0.58	0.62	0.74	0.61	0.57	0.48	0.7	0.74	0.55	0.55	0.74	0.67
Arousal	0.59	0.70	0.57	0.54	0.63	0.60	0.54	0.64	0.60	0.67	0.55	0.56
~Arousal	0.61	0.65	0.68	0.56	0.62	0.52	0.66	0.69	0.61	0.60	0.68	0.61
Age	0.59	0.70	0.57	0.52	0.63	0.59	0.55	0.64	0.61	0.67	0.54	0.54
~Age	0.59	0.64	0.67	0.56	0.61	0.52	0.64	0.68	0.58	0.58	0.67	0.61
Men	0.51	0.53	0.57	0.46	0.53	0.44	0.54	0.55	0.51	0.49	0.57	0.50
~Men	0.48	0.59	0.42	0.40	0.46	0.45	0.45	0.54	0.48	0.55	0.42	0.44

~, absence of condition; Con, consistency; Cov, coverage; SQ, service quality; SAT, satisfaction; PV, perceived value; FI, future intentions; SWB, subjective well-being. Condition needed: consistency  $\geq 0.90$ . –, do not calculated according to the theoretical model.

linear models, these perceptions, without considering if in a combinatorial way there are variables that explain the prediction of an outcome variable more broadly. Some authors have attempted to solve this lack of knowledge about the interaction of variables by combining methodologies, which is why studies such as those of Calabuig et al. (2015) or Alguacil et al. (2019) analyze the sports context by combining HRM and QCA. Specifically, the article by Alguacil et al. (2019) analyses the future intentions of the users of sports services, where, as in this study, the importance of satisfaction and perceived value is confirmed, showing a direct influence on the regression models and also being part of some of the combinations that produce the expected results, as in our case, the improvement of future intentions. This influence of satisfaction and perceived value on future intentions is a connection confirmed throughout the literature (Chen and Chen, 2010). Therefore, in this research, we have used qualitative comparative analysis (fsQCA), a technique that allows one to know the combination of causal conditions that explain a specific outcome (equifinality) since this is a method of intersections where we know the contribution of each variable and the relationship between them in the prediction of a variable. In

recent years, there has been a substantial increase in the number of studies using this methodology as part of the analysis of data in the field of sports management (Prado-Gascó et al., 2017; Alonso-Dos-Santos et al., 2018; Clausen et al., 2018; Väättäinen and Dickenson, 2019).

Later, in the sufficiency analysis, we have seen the role of different variables to achieve the result of interest. Although the analysis of these variables is not very common from this methodological approach, and therefore some relationships do not have references, we do observe some of the relationships proposed coincide with those stated in literature. In these analyzed combinations, we have seen, for instance, that the combination of high satisfaction and a high perceived value of the service by the customers is a background for their future intentions, this influence of satisfaction and perceived value on future intentions has been widely supported in the literature (Murray and Howat, 2002; Alexandris et al., 2006; Calabuig et al., 2015; Hyun and Jordan, 2020) so in this sense, it agrees with our study, although there are few examples in which these variables are analyzed from the methodological approach used in this research (Alguacil et al., 2019). Besides, it has also been



**TABLE 4 |** Three main conditions of sufficiency analysis for satisfaction, perceived value, and future intentions (intermediate solution).

Frequency cutoff: 1	SAT			~SAT			PV			~PV			FI			~FI		
	Consistency cutoff: 0.85			Consistency cutoff: 0.85			Consistency cutoff: 0.83			Consistency cutoff: 0.85			Consistency cutoff: 0.86			Consistency cutoff: 0.85		
	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3	1	2	3
Service quality	●			○	○	○	●	●	●	○			–	–	–	–	–	–
Satisfaction	–	–	–	–	–	–	–	–	–	–	–	–	●		●	○		
Perceived value		●		○	○	○	–	–	–	–	–	–	●	●		○	○	○
Future intentions	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Subjective well-being					●	●	●					○			●		○	
Pleasure			●			○		●			○	○				○	○	○
Arousal			●		●			●	●			○			○			
Men				●										●				●
Age			●			○		○	●		○						○	
Raw coverage	0.71	0.68	0.32	0.45	0.31	0.30	0.58	0.32	0.30	0.81	0.49	0.36	0.66	0.39	0.36	0.55	0.42	0.41
Unique coverage	0.08	0.07	0.01	0.12	0.01	0.02	0.11	0.01	0.01	0.25	0.03	0.01	0.01	0.02	0.02	0.01	0.03	0.01
Consistency	0.88	0.86	0.80	0.77	0.86	0.87	0.84	0.85	0.84	0.82	0.82	0.90	0.90	0.85	0.87	0.89	0.89	0.83
<b>Overall solution consistency</b>			<b>0.79</b>			<b>0.75</b>			<b>0.81</b>			<b>0.77</b>			<b>0.80</b>			<b>0.81</b>
<b>Overall solution coverage</b>			<b>0.86</b>			<b>0.72</b>			<b>0.72</b>			<b>0.88</b>			<b>0.84</b>			<b>0.79</b>

~, absence (low levels) of condition; ●, presence (high levels) of condition; ○, absence (low levels) of condition. SAT, satisfaction; PV, perceived value; FI, future Intentions. –, do not calculated according to the theoretical model. Expected vector for satisfaction: 1.-0.1.-0.1.1.1.1.0 (0: absent; 1: present), expected vector for ~ satisfaction: 0.-0.0.-0.0.0.0.0.1 (0: absent; 1: present), expected vector for perceived value: 1.-.-.-0.1.1.1.1.0 (0: absent; 1: present), expected vector for ~ perceived value: 0.-.-.-0.0.0.0.0.1 (0: absent; 1: present), expected vector for future intentions: -0.1.1.1.1.1.1.0 (0: absent; 1: present), expected vector for ~ future intentions: -0.0.0.0.0.0.0.1 (0: absent; 1: present).

possible to observe the relationship between well-being and future intentions (Alvarez et al., 2012; Mirehie and Gibson, 2020), in line with this study.

On the other hand, the combinations that explain low levels of future behavioral intentions with the sports service, include low levels of satisfaction and perceived value, as well as an absence of positive emotions. In this sense, in the same way that perceived quality and satisfaction predict future intentions, as discussed above, it seems logical, therefore, that low levels of these variables offer low levels of future intentions, in addition to the role of emotions, which throughout the literature have been shown to be related to future intentions (Cho and Lee, 2019; Foroughi et al., 2019; Prayag et al., 2020).

Finally, the relationship of perceived quality and perceived value to satisfaction has also been demonstrated (Shonk and Chelladurai, 2008; Nuviala et al., 2012; Howat and Assaker, 2013; García-Fernández et al., 2018a) as well as the role of perceived value in enhancing the well-being (García-Pascual et al., 2016).

The analysis of the hierarchical regression shows that the management variables have the greatest weight in predicting customers' future intentions, with the perceived value having the greatest weight in this prediction, a result that has also been obtained in different studies (Calabuig et al., 2015). However, this the hierarchical regression result shows the individual contribution of each variable, while the interactions between variables that may occur in the prediction of management models are not known.

On the other hand, observing the fsQCA analysis, none of the conditions analyzed are necessary to predict a dependent variable; however, within the sufficiency analysis, the causal conditions within the different combinations that form the future intentions of the customers are observed, and satisfaction and perceived value are the variables present in all of them. These two variables favor high levels of future behavioral intentions with the sports service, and research within the sports management literature that argues these results has been found (Yacout, 2010; García-Fernández et al., 2018b). Analyzing the results obtained both in the linear model and in the fsQCA, although there are different studies that support the determination of fsQCA to obtain more explanatory results that show indicators, such as the constancy of the model, as far as the methodology within the field of sports management is concerned, and specifically the sports services and the variables that make it up, both methodologies should be used since they are complementary procedures (Crespo-Hervás et al., 2019).

## CONCLUSION

Regarding the conclusions, in the prediction of future behavioral intentions, in both the symmetric and asymmetric methodologies, satisfaction and perceived value are relevant. Even within the asymmetric analysis, it can be seen how both variables are considered as necessary in the prediction of future customer intentions. On the other hand, it is observed that the psychological variables (subjective well-being and emotions) do not play very relevant roles in predicting customers' behavioral

intentions. However, it is observed that within the combination sets analysis (fsQCA), regarding the low levels of future behavioral intentions on the part of the customers of the sport service, these psychological variables do have a participative role. It can be understood that low levels of these psychological variables (emotions and well-being) imply that there are low levels in the perception of loyalty on the part of the customers of the sports center.

These findings indicate that sports managers must propose ways to try to increase the degree of satisfaction of customers, as well as increase the perception of value, in a positive way. On the other hand, as the emotional variables are part of some combinations that achieve the expected result, sports center managers, through employees and programs, must promote activities that emphasize and reinforce positive emotions, as well as achieve positive levels of well-being.

## MANAGERIAL IMPLICATIONS

For sports managers, knowing the extent to which certain variables can affect or not the future intentions of users is a key aspect of ensuring the sustainability of the service. In this sense, analyzing variables, such as those related to emotional aspects, which have not been studied extensively in the literature, clarifies whether some recommendations are as relevant as they might seem. Therefore, this research provides new information for managers, with the intention of understanding the existence of determinants that have not been considered and which may be interesting for improving user behavior. Through studies such as the one carried out here, we contribute by providing information to managers, so that they can make decisions with more elements of assessment.

## LIMITATIONS AND FUTURE RESEARCH LINES

It can be observed that both methodologies significantly argue certain variables in the prediction of the future intentions of the customers of a sports center, but some limitations have also been found in this research. One limitation is the use of a non-probabilistic sample, as not all the population is represented universally. Even so, observing the sample quantity obtained, we estimate that the results obtained represent an approach to the object of study. In this sense, the way that the participants use the service has not been considered, so we cannot know if these emotional factors can be linked to the type of activities they engage in. On the other hand, the data obtained correspond to a specific type of service, without making a comparison with other types of centers, with other characteristics and peculiarities and belonging to different contexts. Therefore, in future research, we propose to extend the sample size, as well as to carry out probabilistic sampling. Similar contexts should also be analyzed, but within the national, even international, scope to observe differences between them, as well as to try to analyze public sports

centers and to observe the main differences between private centers and to observe how their customers behave.

## DATA AVAILABILITY STATEMENT

The raw data supporting the conclusions of this article will be made available by the authors, without undue reservation.

## ETHICS STATEMENT

Ethical review and approval was not required for the study on human participants in accordance with the local

legislation and institutional requirements. Written informed consent to participate in this study was provided by the participants.

## AUTHOR CONTRIBUTIONS

FG-P, IV, and FC-M contributed to the conception and design of the study. FG-P and MA organized the database. VP-G and FC-M performed the statistical analysis. FG-P wrote the first draft of the manuscript. VP-G, MA, FC-M, and IV wrote sections of the manuscript. All authors contributed to manuscript revision, read and approved the submitted version.

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# Bullying Trends Inside Sport: When Organized Sport Does Not Attract but Intimidates

Jolita Vveinhardt<sup>1\*</sup> and Vilija B. Fominiene<sup>2</sup>

<sup>1</sup> Institute of Sport Science and Innovations, Lithuanian Sports University, Kaunas, Lithuania, <sup>2</sup> Department of Sport and Tourism Management, Lithuanian Sports University, Kaunas, Lithuania

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### \*Correspondence:

Jolita Vveinhardt  
jolita.vveinhardt@lsu.lt

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Bullying is acknowledged by scientists as a considerable and still unresolved problem in sport. By triggering stress-related emotions, they determine the behavior of those experiencing bullying and cause various negative effects on their physical and mental health. However, in the presence of the tenacious trend in sports “to put one’s own house in order,” athletes, coaches, teams, and sports organizations themselves often do not emphasize bullying or state that they do not encounter the problem at all, and adheres to the belief that athletes may use negative emotions instrumentally in order to perform tasks given to them more effectively. The aim of this research was to reveal the determinants of the internal environment of sports organizations, causing trends of bullying in organized sport. To achieve the research aim, a qualitative research paradigm was chosen. The empirical study involved eight coaches working in organized sport in Lithuania. The survey was conducted using the semi-structured interview method. Data were analyzed employing inductive content analysis. The presented research results encompass the transcriptions of interviews, which are conceptually divided into three main categories revealing coaches’ opinion on trends of bullying in organized sport, related to the sports organization’s internal environment. Categories identified during the study can be equated to interrelated levels of model of Organizational behavior. The micro level-interrelationships; the mezzo level-sports professionals’ (coaches’) behavior; and the macro level-management of interrelationships. These results revealed which determinants of the sports organization’s internal environment can be favorable for emergence of bullying and its dynamics in both interrelationships among athletes and interrelationships between athletes and coaches. And these trends of bullying, revealed on the basis of the responses of coaches involved in the study, allow us to see harmful principles of coaching, bullying-promoting traditions of team/group leadership, existing in sport, and to predict how this may effect both the athlete himself, his environment and attractiveness of the sporting activity itself.

**Keywords:** bullying, sport, athletes, sports organization, internal environment, coach, bullying behavior, interrelationship

## INTRODUCTION

In the society, sport is often associated with psychological and physical endurance, dramatic and constant struggle, victories. All of this also affects emotional experience of all sport participants: coaches, sports managers, spectators and especially athletes. However, not only positive emotions such as hope, happiness, or joy are experienced in this activity (Jones, 2003;

Woodman et al., 2009). Increasing research also reveals the dark side of sport, which usually stays within a separate sports organization, changing rooms of teams or clubs, workouts and which quite often damages the person's psyche, causing severe emotional consequences. Bullying is one of the subsets of social aggression, which was started to be analyzed more extensively 40 years ago and over the past decade, attracted the increasing interest of researchers in various countries (Smith, 2016). Although research into this phenomenon is conducted in various contexts with research participants belonging to different social and demographic groups, the focus is usually on children's and young people's relationships in the school environment (Gentry and Pickel, 2014; Patton et al., 2017). However, one third of bullying occurs outside the school in other social settings too, including the sports environment (Shannon, 2013). Therefore, it is no accident that in recent years, this phenomenon is particularly attracting the attention of scientists dealing with athletes' interrelationships (Evans et al., 2016; Kerr et al., 2016; Vveinhardt et al., 2016; Fisher and Dzikus, 2017; Vveinhardt and Andriukaitiene, 2017; Nery et al., 2017; Stefaniuk and Bridel, 2018).

However, a clear definition for the term bullying is still missing in the scientific literature. This is related to the traditions of using the concept itself in various languages and cultures, while the very definition is determined by the viewpoint, the circumstances of the emergence of bullying and the contexts of conducted research (Cascardi et al., 2014; Sinkkonen et al., 2014). Nevertheless, it is agreed that bullying is a universal dysfunctional social process (Twemlow and Sacco, 2013) and most definitions of bullying categorize it "as a subset of aggressive behavior that involves an intention to hurt another person" (Phye and Sanders, 2004, p. 4). Such behavior manifests itself as interpersonal aggression or violence, taking many different forms, direct physical violence against the person by shoving, hitting or using psychological violence in the form of name calling, exclusion, humiliation, and rumor-spreading, etc. Such behavioral manifestations most often also damage mental state of the individuals against whom such behavior was directed and due to this cause emotional reactions such as anger, disappointment, fear, anxiety, sadness, shame or demotivation (Jones, 2003; Sampaio et al., 2015). The latter "may mediate and energize subsequent behaviors" (Deci, 1980, p. 85), including worsening sports activities and drop out of sport (Smith, 1986), and in the long run, may have negative impact on health and psychological well-being (Ruiz and Hanin, 2011).

Thus, bullying in sport is increasingly recognized as a particularly undesirable expression of aggressive behavior, which causes stress-related emotions, determines behavior of persons experiencing bullying, and causes various adverse effects on physical and mental health. More often, though, regardless of the type of sport or institutional dependence, there is an increasing tendency in scientific literature to analyze aggressive or violent behavior of persons involved in sport, especially in athlete-coach relationships (Stefaniuk and Bridel, 2018), rather than its manifestation through bullying. In any case, bullying, regardless of the stated lack of research (Evans et al., 2016; Fisher and Dzikus, 2017), exists in sport. On the other hand, most of the results and conclusions of conducted research are

based on athletes' opinion (Tamminen et al., 2013; Risner, 2014; Cervin et al., 2017; McPherson et al., 2017), and quite scarcely the phenomenon of bullying is analyzed on the grounds of the position of coaches as the key persons in the formation of interpersonal relationships in sport (Piper et al., 2013; Fathynah and Syahirah, 2015). However, some studies analysing the field of social relationships in organizations emphasize the role of interactions between different levels-micro, mezzo, and macro (Jeurissen, 2005; Appelbaum et al., 2009; Kadic-Magljalic et al., 2019), although it is not entirely clear how this manifests itself in the sports environment.

Therefore, more extensive research, involving coaches in it, can provide valuable knowledge which could serve as a basis for reviewing the policy of training and leadership of sports teams and bullying prevention which, unfortunately, is often insufficiently effective (Shannon, 2013).

The need for such research is also increased by understanding that athletes' emotional experiences are related to their performances (Ruiz and Hanin, 2011), which, unfortunately, is often based on the approach of coaches and other organizers of sports activities that athletes may use negative emotions instrumentally in order to perform tasks given to them more effectively. The *aim of this research* is to reveal the determinants of the internal environment of sports organizations, causing trends of bullying in organized sport.

## THEORETICAL BACKGROUND

Bullying as a subset of interpersonal aggression is considered to be a major public problem associated with a series of negative outcomes that eventually affect physical and mental health of victims. It is stated that athletes who have experienced bullying suffer from a lack of motivation, bad mood, fear, headache, they are wearied of chronic fatigue, increased heart rate (Lazarević et al., 2015). Other authors point out victims' experienced emotional and/or physical suffering (Dussich and Maekoya, 2007), psychosomatic health disorders (Smith, 2015) and other negative consequences for the athlete's development, health condition and his/her sports career (Lazarević et al., 2015). The problem is also sharpened by quite high probability for the victims to experience bullying further in life, revealed by research (Curwen et al., 2011). Various negative consequences are also experienced by the bullies themselves (Evans et al., 2016), while their behavior can lead to other forms of violence (Fisher and Dzikus, 2017). All the mentioned problems and their emergence in sport are also deepened by tolerating and even promoting aggressive behavior in interpersonal relationships. According to Krishnaveni and Shahin (2014), aggression is part and parcel of any contemporary sport. Often aggression or anger in sport is understood not as behavior that is intended to harm another person who is motivated to avoid that harm (Bushman and Huesmann, 2010), but as an outcome of the competitive struggle, suppressing the opponent's desire to win or attain the best possible sports results (Oliva-Mendoza et al., 2012; Gencheva, 2015). There is also a trend in sport that alongside with the athlete's excellence growth coaches increasingly justify athletes'

aggressive behavior that often manifests itself as anger (Loughead and Leith, 2001; Maxwell, 2004). As a result, aggressive acts repeat and other athletes, watching them, start behaving aggressively as well (Sacks et al., 2003). Therefore, we can speak about certain existing trends of perceiving aggression and anger in sport, which directly and indirectly promote and maintain bullying in athletes' interrelationships.

Data on links between aggression or anger and bullying in the sports environment are so far controversial. On one hand, it has been noticed that sport participation is the activity where the person's aggressiveness may reduce (Shachar et al., 2016), while sport may become a protective environment that helps to protect oneself from various subsets of aggression, including bullying (Collot-D'Escury and Dudink, 2010; Kentel and McHugh, 2015). The results of other studies show that the influence of participation in sports activities on bullying behavior is not as positive as we can expect (Melim and Pereira, 2013). This means that the sporting activity itself does not eliminate the risk of bullying behavior in the sports environment. This is confirmed by still scarce studies, but their results are often influenced by chosen research methodologies or employed instruments (Fisher and Dzikus, 2017), while the fully unpurified conception of bullying causes difficulties in recognizing this phenomenon (Mishna, 2004).

Studies show that the prevalence of the bullying phenomenon in sport may vary depending on the target group. For example, Nery et al. (2017), who have studied 1458 male adolescent athletes from nine sports in Portugal, found that 10 percent of the athletes reported as being victims, 11.3 percent as bullies, 34.6 percent as bystanders and 44 percent of respondents did not report bullying. The study conducted in Canada by Evans et al. (2016) showed that bullying had been experienced by a slightly larger percentage of research participants; i.e., 14 percent of adolescent athletes. Research conducted in Lithuanian sport revealed even greater levels of bullying. The research conducted by Vveinhardt et al. (2016), dealing with bullying and harassment cases in the teams of Lithuanian schoolchildren's basketball league, identified that one quarter of all 14–18-years-old athletes who participated in the study had experienced bullying and harassment. A significantly higher number of bullying victims was identified among elite female basketball players: 32.9 percent (Vveinhardt and Andriukaitiene, 2017). The frequency of 50 percent of homophobic bullying was identified in the United Kingdom, which occurred both on the sport field and in the changing rooms (Brackenridge et al., 2007).

The existence of bullying in sport and its specificity is also stated in the results of qualitative studies. For example, Tamminen et al. (2013), who investigated the situation among elite female athletes, found that bullying victimization from teammates was observed in sport. Other studies disclose not only peer bullying, but also draw attention to the coach as a bully (Cense and Brackenridge, 2001; Peltola and Kivijärvi, 2017), while relational aggression is the most frequently reported form of bullying (Kerr et al., 2016). Hence, bullying can acquire not only horizontal (athlete-athlete) but also vertical (coach-athlete) character. However, the results of single studies

are not sufficient to provide a comprehensive picture of the extent of the problem in different sport branches in order to distinguish causes and risk factors determining bullying behavior in sport. This means that there is still a lack of comprehensive data needed to draw up bullying prevention and intervention programs. This problem is also confirmed by Stefaniuk and Bridel (2018), who have analyzed how Canadian national sport organizations addressed peer-to-peer bullying through policy.

Perhaps it is hardly possible to fully avoid physical and psychological harm in sport (Slobounov, 2008), but situations where athletes are unable to recognize bullying (Lazarević et al., 2015), do not realize that they are the victims of abuse and, having encountered coaches' negative behavior, are inclined to think that they rightly deserve punishment (Lazarević et al., 2014), should not occur. That is, certain negative actions are often perceived as a certain phenomenon that is "normal" and tolerable in sport. Therefore, the problem also arises due to violence used by the coaches (Wilson, 2017) or his/her bullying behavior (Cense and Brackenridge, 2001; Peltola and Kivijärvi, 2017), identified in research. In this context, it makes sense to continue research to evaluate how adequately sports organizations are prepared to respond to bullying in sport (Slobounov, 2008; Vardanyan and Ruskina, 2013; Mountjoy et al., 2016). All the more so that in the context of organizational behavior, according to Ashkanasy and Dorris (2017), every level-individual (micro), group (mezzo) and organizational (macro)-affects striving to create a healthier and more productive environment, to ensure psychological well-being and satisfaction of members of the organization (Grobler and Joubert, 2020), and in the opinion of Privitera et al. (2015), to become a prevention of violence. This is also stated in the classic ecological theory that is often used as a basis for analysing risk and protective factors related to involvement in bullying at a young age (Espelage, 2014). In this case, the interaction between the components of the close environment-the micro system is called the mezzo system and can provide insights into how the interactions between different systems can affect the experiences of bullying (Espelage, 2014; Cross et al., 2015; Thornberg, 2015).

## MATERIALS AND METHODS

In order to answer research questions, the empirical study was constructed, employing the qualitative research strategy, which provides a possibility to view of the problem from the holistic standpoint, focusing on unique human experience in the aspect of the analyzed phenomenon, and to understand its peculiarities. The study is grounded on a constructivist-interpretive paradigm (Creswell, 2007). According to it, there is less focus on phenomena in themselves and more interest in how the phenomenon under analysis is seen (Harper, 2011); i.e., the approach is followed that reality is perceived as a human construct formed from the research participant's cultural and personal life and does not exist without it. Meanwhile, since the research participant is part of the same reality, his/her and the researcher's method of interpreting this reality are constructed (Charmaz, 2014).



The study was conducted using the qualitative content analysis approach which is extremely well-suited to analysing data on the multifaceted, sensitive phenomena (Elo and Kyngäs, 2008). This is a method that consists of three main phases: preparation, organization, and reporting of results, where the first, preparation phase consists of data collection method, sampling strategy, and the selection of a suitable unit of analysis; the organization phase includes open coding, creating categories, and abstraction and reporting phase, in which results are described by the content of the categories describing the phenomenon using a selected approach (Elo et al., 2014).

## Participants

The research sample was drawn up using the criterion sampling. In this case, the research sample selects all cases that meet some criterion and helps to ensure the quality of the research data (Patton, 2002). Research participants were sports coaches who worked in amateur sports organizations and trained athletes representing different age groups—adolescents and young adults (10–29 years old). The sampling criteria for coaches were as follows: representation of all three groups of sports: team, combat and individual sports; popularity of sports in Lithuania according to the data of the Lithuanian Official Statistics Portal (2017); representation of different generations; gender differences. The study involved eight coaches: five men and three women and each of them receive a Code (e.g., 1I, 2I etc.) in the transcribed texts. The age of the target group was from 23 to 65 and the seniority of coaches in full-time jobs was from 4 to 30 years (Table 1).

Two coaches from all coaches who took part in the survey train three (5I) and four (6I) teams, other coaches simultaneously train one-two teams or groups. With regard to trained athletes, coaches worked only with girls or young women (1I), only with boys and young men (2I; 4I; 5I; 8I) or trained mixed groups (3I; 6I).

## Data Collection

The research data was collected using the semi-structured interview method. Such type of interview was chosen because of its freedom, immediacy and flexibility; i.e., because of created conditions to change the order of given questions, their wordings, to give additional questions, purposefully orientating the participants in the direction of the research phenomenon and consistently deepening the researcher's perception of the research object. Besides, this type of interview is based on general guidelines to ensure that all interviewees are subject to similar stimuli, thereby allowing a common base for data analysis (Flick, 2009).

To conduct the interviews, interview guides were prepared following guidelines proposed by H.J. Rubin and Rubin (2011) and had introductory, main and summary questions. The first, introductory section consisted of questions about the backgrounds of participants and were intended for making a contact with the subject. The main part of the interview consists of open problem questions arising from the main themes: the importance of interpersonal relationships in the turnover of athletes ("What trends of athletes' turnover are observed in sports?"), standards of ethical conduct ("What standards of ethical behavior exist in sport?"), the coach's

observation/awareness and the position of the organization's leader (management) in cases of bullying-harassment ("What are the coach's and the organization leader's (management's) position with regard to bullying?") Summary questions were directed to address minor uncertainties, additional statements, and advice.

These themes and questions were constructed based on scientific literature related to bullying in a general sense and to the analysis of these phenomena in sport as a guide and on authors' conducted quantitative study, which has revealed experiences of organized sport participants ( $N = 382$ ) (Vveinhardt and Fominienė, 2019) with regard to bullying and harassment. Prior to final data collection, a preliminary interview guides were pilot-tested on one participant—the coach of team sport. This allowed the researchers to ensure the comprehensibility of the questions given in the main study, stability of data collection and solving potential problems with the interview guide (Sparkes and Smith, 2013). Semi-structured interview guide were prepared and conducted in national language.

## Procedure

The study was ethically approved by Lithuanian Sports University Ethics Committee of Social Sciences. Data were collected in January 2019, employing individual semi-structured face-to-face interviews with coaches. The average length of one interview was from 39:14 min to 1:27:90 min.

Before conducting every interview, research participants' received in writing an informed consent form, kurioje buvo paaiškinta kaip tyrimo metu jų privacy, confidentiality and anonymity were ensured. The participants were introduced to the principles of usefulness and fairness of the research; the research aim, protection of the collected data and the use of future results were also presented to research participants. Research participants had to give their verbal agreement that they did not mind recording of the interview on a dictaphone. The interviewer would give pre-formulated questions, adding new questions emerging while listening to the participant. Audio-recordings were transcribed verbatim by one of the authors. All features enabling to identify the surveyed coach were removed by giving a separate code to every coach and this code is referred to in the "Results" section. Afterward, transcribed texts were sent to coaches to check to ensure that no statements had been misinterpreted or wrongly rewritten (Patton, 2002).

## Data Analysis

Data analysis in this research was executed by using hand/human-coding method, according to a predefined coding scheme (Neuendorf, 2019). The whole transcribed text consisted of 41346 words; i.e., 236226 characters. However, this article presents only that part of research results which pertains exclusively only to the position of the organization and the coach on bullying and harassment issues. The transcribed interview text of this part of the study contains 18,029 words; i.e., 103,983 characters.

Inductive content analysis situated within the epistemological position of social constructivism served as the basis for the data analysis (Creswell, 2007). Such method of data analysis was chosen due to of its usefulness for identifying core consistencies

**TABLE 1** | Characteristics of research participants-coaches.

Coach's code characteristics	1I	2I	3I	4I	5I	6I	7I	8I
Sports group	Team sports/ Basketball	Team sports/ Basketball	Combat sports/ Wrestling	Team sports/ Football	Team sports/ Basketball	Combat sports/ Boxing	Individual sports/ Swimming	Team sports/ Handball
<b>Work experience as a full-time coach</b>								
Years	18	5	10	4	18	6	30	20

and meanings from a large quantity of qualitative data (Patton, 2002). Data analysis was performed in January–February, 2019.

The qualitative content analysis was performed according to the following order: (1) choice of meaning units for the analysis, (2) immersion into research data, (3) open coding, (4) categorization, (5) abstraction, (6) preparation of the research report (Elo and Kyngäs, 2008). In the first stage of data analysis, authors independently read all original transcripts and divided the text into smaller meaning units: the constellation of words or statements that relate to the same central meaning (Graneheim and Lundman, 2004). Afterward, the “open coding process” was carried out; i.e., each identified meaning unit was marked with a code that can be understood according to the context. Based on the study design, codes were generated inductively. In the next stage, subcategories and categories-groups of content that shares a commonality-were distinguished (**Figure 1**).

Here, at varying levels of abstraction, subcategories were both sorted and abstracted into the category or some categories were broken down into subcategories (Graneheim and Lundman, 2004). A total of fifty-seven codes emerged from the initial coding of data. Analysis generated twelve subcategories and three categories.

The study was conducted following the principles of anonymity, confidentiality, participant security, voluntariness, and authenticity of the research data (De Vos et al., 2011; Leedy and Ormrod, 2014). That is, research participants were assured that the data collected during the data-collection would not reveal their identity: name, surname, workplace or other identifiable information (De Vos et al., 2011). Research participants were also thoroughly acquainted with the purpose of the research, the course and content of the research, and were informed about the use of research data in publicizing the obtained results. Research participants took part in the study voluntarily and were given the opportunity to withdraw from the study at any time (Leedy and Ormrod, 2014).

In order to ensure the trustworthiness and credibility of the study and to reduce the risk of bias, all researchers were involved in the analytic process, the topics purified were comprehensively discussed, and the interpretations provided were based on exhaustive quotations. Besides, detailed interview guides prepared prior to the study ensured that the same questions would be given to investigated persons, this way avoiding interview bias.

The research data collected were not modified, corrected, and were accepted as valuable data that could affect any study outcome unforeseen prior to the study.

## Methodological Rigor

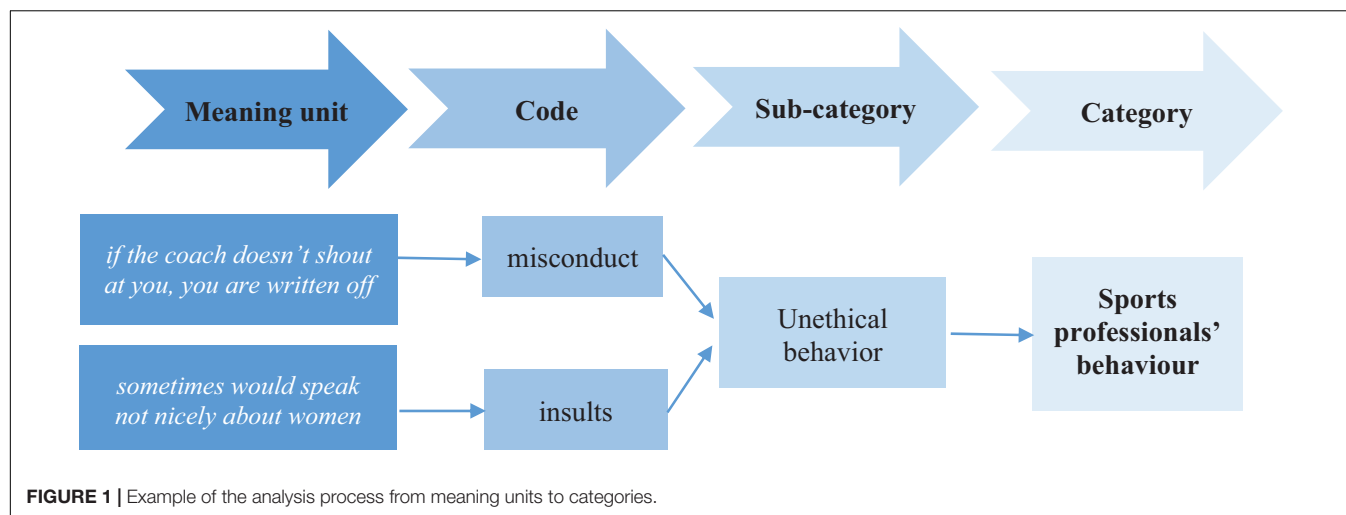
Every qualitative study and its findings should be of high quality. To achieve this, qualitative research must be rigorous (Tracy, 2010), that is to say, rigorous methodological procedures should be used. One of the commonly used criteria for the qualitative research is trustworthiness, as it allows to determine if research findings are actually trustworthy. In our study, trustworthiness and its different aspects such as credibility, dependability and transferability were considered to ensure that the research findings were of high quality.

Credibility is related to the study itself and refers to confidence in how the data obtained during the research and the data analysis process correspond to the selected research. Primarily, the credibility of this study can be proved by the selection of the research context, participants and the approach to gathering data (Graneheim and Lundman, 2004).

Research participants chosen in this study were interviewees with different perspectives, which contributed to richer variations of the phenomena under study. The semi-structured interview as the most appropriate method of data collection enabled to collect the necessary amount of data that is required to answer the research question in a credible way (Graneheim and Lundman, 2004). The fact that the research data were analyzed by two researchers separately and that full agreement on data grouping was reached only after critical discussions, while comprehensive quotations were provided in the report for the purpose of supporting the interpretations, enable to state that the findings represent a credible interpretation of the data (Thomas and Magilvy, 2011). Analysing the research data, it was sought to ensure that the chosen most suitable meaning unit would be neither too broad nor too narrow and the example of the analysis process from meaning units to categories, given in the study (see **Figure 1**), could facilitate judging credibility of the findings. The literature review performed in the study allowed to evaluate compatibility between the research findings.

Another aspect of trustworthiness is dependability. That aspect is an assessment of the quality of the integrated processes of data collection, data analysis, and theory generation and how well the research findings are supported by the data (Thomas and Magilvy, 2011). In the study several strategies were employed to address these issues.

The use of the purposive sampling strategy ensured appropriate choice of research participants who have diverse experience, which led to rich, thick and detailed description of the phenomena. Researchers' deep understanding of the field of study before conducting the interviews and remaining “outsiders” facilitated acceptance and rapport with coaches



during the interviews. Prepared and tested research guidelines enabled to ensure that participants were asked the same question to attempt to prevent bias between interviews (Sparkes and Smith, 2013). Seeking to ensure consistency during data collection, the period of months was chosen, considering saturation of the data collected in order to avoid extensivity of data. All transcribed texts are stored by researchers as part of the audit trail.

One more aspect of trustworthiness is transferability, which is related to the approach that the findings of the conducted research can be applied in other settings or groups. However, only readers of the study can make a decision about transferability of findings to another context (Graneheim and Lundman, 2004). To this end, the literature review and the discussion part contain detailed information on the research context.

## RESULTS

Content analyses of interview transcripts were conceptually grouped into 12 subcategories and 3 main categories revealing coaches' opinion regarding elements of the internal environment that exists or is being formed in organized sport, which can be favorable for emergence and dynamics of bullying (Table 2).

The analysis of responses shows that the category "Interrelationships" encompasses the attitude to the athlete from the perspective of interpersonal relationships, existing in sport, which encourages greater turnover of athletes. This category is detailed by sub-categories such as "Conveyor" principle, Pursuit of the "collective good," Athlete's personal qualities, Bullying as "natural selection." The names of some of the sub-categories are expressed in metaphors, this way emphasizing the long-standing traditions of the attitude. The category "Sports professionals' behavior" is associated with behavioral patterns of sports organization's employees, which are favorable to the existence of bullying. This category consists of sub-categories such as Unethical behavior, Systems of punishments, Denial of bullying and Changing the connotation. The third category "Management of interrelationships" reveals

managerial practices within sports organizations, contributing to escalation of bullying or making prevention ineffective. This is related to Refusal/transfer of responsibility, Ineffective staff improvement activity, Uncertainty of rules and Limited understanding of bullying management.

## Interrelationships

The coaches' demonstrated attitude came to prominence, showing that they could treat the athlete as a "product" that they use in their work activities to reach the organization's or their aims:

*"...first-graders come, learn for four or six years and they leave. Again, I get novices and my vicious circle. There is natural selection in my work. I raise the product, give it away, take the new product again, again I grow it, give it away. Everything goes naturally" (1I).*

In other words, the depersonalized attitude toward the athlete comes to prominence, and the coaching process turns into the implemented "conveyor principle." Athletes change each other, and such attitude eventually becomes more and more acceptable personally to the coach, because personal responsibility for the process of athletes' drop out disappears. The explanation of participant 5I shows that during training, coaches are not that much encouraged to look for specific reasons but to justify the turnover as the "natural process":

*"...because you would start looking for something that you might be doing wrong that some team members leave, others come"; " $< \dots >$  but both in all workshops and trainings, it's really natural so-called change: "don't worry, coaches"; " $< \dots >$  this [withdrawal] is based on curiosity, interest in sport types at a certain age period: boys still want to try out one or another area until they find their favourite area and the like" (5I).*

Such approach, like a refrain, is also repeated in the responses of participants 3I and 4I, suggesting a well-established simplified thinking tradition, which may hinder an adequate evaluation of the influence of bullying on athletes' decisions to leave the team. The athlete's depersonalization is related to the logic of the "collective good" -yet another trend of the "simplified" approach

**TABLE 2 |** Trends of manifestation of bullying in organized sport.

Category	Interrelationships	Sports professionals' behavior	Management of interrelationships
Sub-category	"Conveyor" principle	Unethical behavior	Refusal/transfer of responsibility
	Pursuit of the "collective good"	Systems of punishments	Ineffective staff improvement activity
	Athlete's personal qualities	Denial of bullying	Uncertainty of rules
	Bullying as "natural selection"/expulsion from the team	Changing the connotation	Limited understanding of bullying management

to coaching and relationships in the team. This trend is most clearly revealed in the explanation of participant 2I:

*"...there were several withdrawals during this year, when you see that if you withdraw that player from the team, the collective will become more harmonious and, to sum up, the results will be better. You have to do this because the player does not tune to the team, he is separated from all, doesn't integrate into the collective and you see that it will sooner or later influence the results on the court. ..."* (2I).

The participant transfers the responsibility for "integration" to the athlete himself. Creating "good" for the collective, this is most often associated with the image of the strong team or winner, and the latter is inseparable from understating of the weaker. The coach, who can make decisions as to who will stay for training with him, plays a considerable role in this change. This may be influenced by the subjective assessment of the young athlete, performed considering his talents: *"... either he must be that super-boxer, so that I am guaranteed that he will become the European champion, then okay. Then you would try to manage him. ..."* (6I). That is, the presumed "value" of the athlete determines the relationships with the athlete; therefore, at the same time, there appears the danger of indulging the promising athlete for his/her behavior. Moreover, the coach's attitude may also be influenced by the opinion formed among athletes about individual team members, as illustrated by statements of participant II:

*"...because they are weaker. Come, see that oh, I took the wrong road, I still have to learn a lot here. And gets that kind of response, that, well, coach, it's not that we're disturbed here, but. And she sees, I got into the wrong medium. I need a step lower or, well, I need to withdraw from here. So, that's it. Natural here, I think, selection. Natural. Weaker is weaker. ..."* (II).

In this process of change, in the coach's opinion, an important role is played by the athlete's personality traits determining resistance to emerging or existing destructive relationships in sport. Only the strongest athletes firmly remain in the athlete's role; therefore, coaches particularly emphasize athletes' psychological weakness, which often leads to departure from the team *"... he isn't physically weak, and he is a gifted child, but he is psychologically weak. He is very weak psychologically"* (6I). There is an attitude that having encountered bullying, only psychologically firm athletes can remain, in whose behavior coaches envisage manifestations of aggression that are desirable to the athlete:

*"...when the child comes to the first training session, most often, if he is more sensitive, he is sneered at, of course, sneering is not that*

*sharp, maybe he may not come to the next training session, but the child who is slightly stronger, as I say, psychologically, he comes and, as I say, this is such slight bullying, naturally selects those children in martial arts, it is not a bad thing this because the child must have some character traits-of the fighter, if he surrenders, then. ..."* (3I).

In other words, bullying tends to be justified and treated positively as "natural selection". In other words, bullying tends to be justified and treated positively as "natural selection". The turnover may be also caused by degrading mastery in the presence of other persons: *"... finally, shouting that you can't, don't do, some sort of shouting at some other leader, teammate can expel him instantaneously"* (5I). That is, this negative communication is used instrumentally, in order to expel the athlete from the team.

## Sports Professionals' Behavior

Coaches' experiences related to bullying in sport also highlighted the specific behavior of coaches or sports organization's leaders, determined by sports context. However, although the behavior "favorable" for manifestation of bullying in sport can be described as intolerable, it exists in sport, and top managers of sports organizations get involved in it. This is revealed by the sub-category "Unethical behavior". I1 participant's answer gives prominence to the opinion that the shouting coach is the norm: *"... and how we say: if the coach doesn't shout at you, you are written off"*, which implies that such coach's behavior is permanently demonstrated during training sessions and competitions. The top managers of the organization himself demonstrates unethical behavior, manifesting itself by disrespect to people around him:

*"...and sometimes I didn't really like him (top manager) that he would use some kind of swear words in the presence of those, my teenagers. So, he would use these curse words and this way sometimes would speak not nicely about women. ..."* (7I).

On the one hand, this way, such offensive utterances form an intimidating environment and are legitimized as a certain norm in the eyes of athletes; on the other hand, the message is sent that similar attacks from team members will not be addressed at the management level. Intolerable behavior in sport is also revealed through the "system of punishments" existing in every team. The system of punishments and rules can be dictated by the coach or his delegated team captain, and they may be related to the efficiency or usefulness of the team member's participation in the workouts and the play. The statements of participant 2I shows that both rulemaking and decisions are left "to themselves", trusting formal leaders:

*"...these rules are formed by team coaches, the team captain and there already they, after that, in the collective those punishments, if they are late or something, they settle themselves"* (2I).



However, the punishments applied are not defined in the written form but performed at the discretion of the coach:

*“...because of bad behaviour just can be expelled from the team, suspended within the limits of a certain norm, certain sanctions in the team’s internal management: to miss the match, miss the tournament and the like. Bad behaviour, disrespect to the coach-please leave the gym, from the team go home, out of the gym. Comes, if apologizes, discussion, etc. . .” (51).*

It is stated that punishments are applied for breaches of public conduct rules, but it is significant that sanctions are differentiated by age: age gives the privilege not to follow rules: *“... well, there you seat him for five to ten minutes to watch the workout. Such punishments, gentle, non-physical. < . > Of course, older is older, but in the team of small ones very strictly with that” (41).* In addition, the choice and application of punishments depend on the situation and are ambiguous. For example, the athlete who violated rules misses only that match that seems unimportant to the coach. As shown by the explanation of 51, there are no rules and the system of punishments clearly described for everyone:

*“...to exclude players from the team composition in the unimportant match, not to allow to play, to see what the player likes a lot or is waiting for some tournament or other things. preventive these things. It works very well. Especially leader players who, you see that they love that sport but violate ethics” (51).*

That is, more freedom of behavior is given even in negative aspects, especially if the athlete is considered beneficial to the team. This paves the way to the abuse of the existing position. In addition, it becomes clear that the rules of “ethical” behavior apply to athletes only during the training: *“... the children themselves then understand that we will be able to watch, talk to each other afterwards, later” (41).* This way, unethical behavior is merely transferred from the public to the private space. Another related aspect of the problem is avoidance to recognize the existence of bullying in the team by diverting attention to other teams. This comes to prominence in the response of participant 11:

*“...but in my work, in my team, there is no such. Such event, cases. No. Maybe you should look in the boys’ group. For sure they curse at each other and everything there” (11).*

Besides, it is aimed to understate bullying itself, trying to change the connotation of the bullying action *“... of course, sneering is not so sharp” (31)* or to reduce its significance, relating to age:

*“...in the older age, bullying somehow, maybe sneering exists but it takes a very different form than in children’s sport, where those children react much more sensitively. < . > Bullying in the older age greatly alters the form and goes to the background” (31).*

In other words, bullying among children and young people is treated as natural and it is believed that this is resolved naturally when athletes grow up. This demonstrates that the nature and role of bullying in the sport team are insufficiently perceived and such attitude on one hand, can be the means of

disguising incompetence and on the other hand, creates favorable conditions for existence of bullying.

## Management of Interrelationships

The subcategory distinguished in this category is “Transfer of responsibility” indicating the trend to transfer responsibility for the sports training as a psychosocial process of interaction to other persons. Often the quality of emerging interpersonal relationships and its consequences are not important for sport organization management. This is evidenced by the coach’s observations that responsibility for that is given over to others, and, first and foremost, to the coach, and the latter transfer responsibility to parents:

*“...I don’t know in this organization, we, the educators are familiar with these manifestations and preventions, and, I think that management probably trusts us” (11).* *“... in that period up to the age of sixteen, parents have to bear that burden, because parents primarily must teach that they can’t jeer, can’t jeer at the smaller ones and that they have to show a good example during the match themselves. They can’t shout using swear words at opponents’ children or somehow otherwise. They can’t let children write on Facebook what they want and how they want. It’s purely parental responsibility, because the coach’s job is to train him, parents educate” (21).*

In other words, the significance of athletes’ negative behavior is perceived, but responsibility is not shared-it is refused by transferring it to others. Therefore, measures that could help to solve the problem of bullying remain unfulfilled. In order to avoid bullying in sport, it is very important to have rules governing sports participants’ behavior in the organization and follow them. The sub-category Uncertainty of rules reveals how and what rules are developed in organized sport; i.e., in a particular sport type or organization. Often there are no written rules of conduct, which possibly gives freedom to behave negatively, because *“... it’s important that only the goal is achieved” (11).* In such case, the rules are formed by every coach personally *“... and they exist everywhere” (61).* Hence, so many coaches, so many rules. The absence of uniform written rules usually allows to interpret them freely, especially when the regulatory power is delegated to athletes depending on the status defined by their age:

*“Well, first of all, it is I who sets those rules. I tell how they should behave during training sessions, matches regarding respect to the opponent, to the judge” (11).* *“... what is not permitted, of course, only the coach. The coach stops. Well, actually, among those older ones there are cases when they are stopping each other: “Will you stop here? What you, what are you doing here?” There are cases when he comes after school tired, tired of everything, and you see that he is in a bad mood, so if you. if you still him. . . If in addition to that you say something, then the reaction becomes totally angry, then I see that these older ones themselves are already halting: “Will you finish, what’s wrong with you, go home to rest, you’ll come the next day” (81).*

Absence of objective rules defined by the organization paves the way to subjective use of power, which does not guarantee impartiality and fairness. While coaches are creating rules, a

peculiar philosophy also comes to prominence, dominated by “... thinking that there must be tough environment in the team so that they (athletes) harden and so that afterward they show the result on the court” (2I). In other words, violent actions can be perceived as a pedagogical measure. Such environment naturally allows the formation of negative relationships grounded on bullying of the weaker ones. This is a stagnated culture of athletes’ development:

*“...no coaches have changed for almost thirty years. And you have already seen many generations of these learners. And now you see those generations” (2I).*

The latter can be associated with coaches mentioned insufficient staff improvement in the sports organization (distinguished sub-category “Ineffective staff improvement activity”):

*“...educators are given more attention, all educators, but in physical education, sports centres such as seminars or still something else, no, there are not that many tools as at school” (3I).*

This leads to the situation in which the ability to envisage bullying taking place among athletes and effectively manage them becomes the matter of every coach. However, the prerequisite for that is the very coach’s wish: “... we are just improving ourselves if we want. We’re raising our qualification. Listening to seminars or lectures on that subject. But such, well, from management, that word special, there is no such really. Nothing like gathering sports centres and conducting something like that, no” (1I). However, the “wish” highlighted by 2I is, unfortunately, not equally strong with all coaches:

*“...actually, all that burden to avoid bullying depends on the coach’s competencies. And there are various coaches. Coaches are of one or another type, and I really know that they make the environment favourable to bullying, but you can’t solve somehow without proofs. Such mentality, such thinking that the environment in the team must be tough, so that they harden, so that they then show the result on the court. ...” (2I).*

In principle, this corresponds to the stereotype in the society that the army or sport, where relationships grounded on bullying exist, is a kind of “school of masculinity.” In organized sport, this also determines coaches’ individual understanding of bullying management. Coaches’ willingly presented personal insights on bullying management methods disclose a distinct lack of knowledge. It is stated that bullying prevention requires educational measures, but it is evident that they are not guided by such measures in their team and do not familiarize their trained athletes with that, as shown in the explanation given by 1I:

*“...well, only by education, of course. By explanation about consequences, what may be bad. Well, that, well, not only bad for you, but that you, that you were offended by someone, but for that offender too, he also has to feel bad. Should feel because he is also problematic. I don’t know, I relate this to education and explanation. And that well, well, that’s the coach’s key role. The coach’s, parents” (1I).*

According to coaches, it is necessary to involve parents, although it is recognized that there is no clear system and

knowing how to do this: “... a personal conversation with the athlete, being not afraid to involve parents too, if they are willing to speak with you” (8I). Naming other measures to guide bullying prevention, it is attempted to imply that these may be talks taking various forms “... we need to talk, for example, to them both together and with each separately” (4I) or organized joint events “...some celebrations should also be arranged” (4I). During the interview, the coach’s understanding about bullying as intolerable behavior comes to prominence (sub-category “Limited understanding about bullying management”); therefore, based on the authority right given by the coach’s role, attempts are made to simulate preventive actions:

*“...we, how, say, at the micro level, coaches-team leaders are responsible for that prevention, for those individual programs. Each of us can prepare them, action plans individually: we will organize events, social and the like to reduce bullying, some meetings with athletes and the like. ...” (5I).*

Coaches do not underline the organization’s responsibility for interpersonal relationships in the sport performance, besides, efforts to hide emerging conflict situations from the organization’s management come to prominence.

*“...I really can’t answer what is going on at the sports school’s level. I haven’t encountered that, I try to figure it out myself, within the team, so somehow I don’t even know if there is anything there. ...” (8I).*

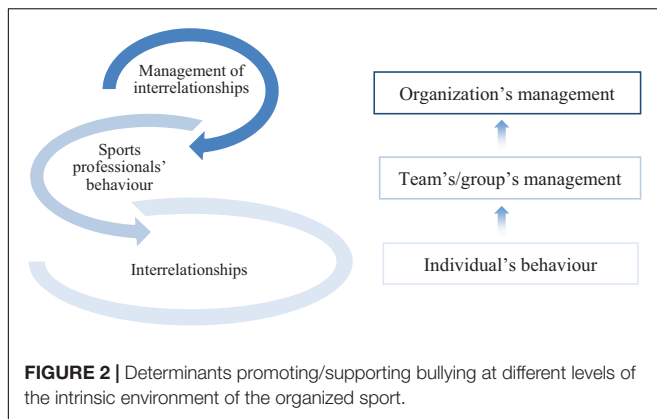
This creates a vicious circle where the organization does not care about the development of coaches’ competencies in the field of bullying management, does not establish uniform rules, transferring responsibility to the coach, who is interested in hiding incidents from the organization’s management.

## DISCUSSION

This study confirms that the quality of coach-athlete interpersonal interactions depends on a broader organizational context (Lazarević et al., 2015; Stefaniuk and Bridel, 2018; Parent and Fortier, 2018; Kerr et al., 2019). The results of the study enabled to distinguish the determinants promoting bullying in sport, which can be relatively divided into groups covering three different levels (**Figure 2**).

These three interrelated levels that crystallized during the analysis respond to a widely accepted model of organizational behavior, which can help to discover solutions enabling to improve the performance of the organization as a whole (Ashkanasy and Dorris, 2017). In addition, the above-mentioned three levels are also analyzed in various business ethics (Jeurissen, 2005; Kadic-Magljalic et al., 2019) and organizational leadership (Kollenschner et al., 2018) issues, which is also relevant in the context of this study.

At the first, the micro level, attention is drawn to the individual’s behavior, and specific interrelationships along with the resulting athletes’ turnover in teams are revealed. This level is also supported by the very conception of



bullying, which reveals that bullying occurs when individuals establish permanent relationships. However, the social context is particularly important for that as well, as without it, bullying acts are not possible (Cook et al., 2010). Although a considerable share of scientific literature states the benefit of sport as a social context for the young athlete's versatile development, not all sport participants state having gained positive experience (Bruner et al., 2017). The existing coaches' attitudes toward athletes, grounded on the pursuit of the highest possible athletic performance, and the desire to educate athletes who are psychologically strong and only this way able to achieve high athletic performance, analyzed in the study, allowed to distinguish several key determinants of athletes' turnover due to existing interrelationships: coaches' behavior directed toward maximum performance, which is logically related to the search for the best athlete and competition-based relationships between teammates.

In the first case, the coach's behavior is oriented to the search for the most useful athlete, pushing out unsatisfying candidates. To achieve this, the coach uses both psychological impact measures to get rid of the unwanted athlete and the dynamics of bullying taking place in the team, which he implicitly approves of. Approval comes to prominence in the attempts to understate the harm of bullying in stereotypical attitudes, justifying the winner's priority. In this context, the winner's image is associated with the so-called psychological strength, which is perceived as the competitors' psychological crushing or the ability to resist such crushing. In the second case, unfair competition among athletes, seeking to push out the unwanted person, shows up.

Therefore, the constant turnover of athletes, noticed at the micro level, can signal bullying-related problems existing in the team. Other studies analysing key determinants of drop out of sport also distinguish behavior of coaches and teammates (Fraser-Thomas et al., 2008; Hassan et al., 2017). Seeking victories and educating psychologically strong athletes, coaches do not avoid shouting, shoving, hitting them (Narwal, 2014; Peltola and Kivijärvi, 2017), while athletes interacting with teammates who are weaker or whose sports mastery is lower do not shy away to mock at them (Steinfeldt et al., 2012). This trend is also particularly supported by the approach that

negative behavior in sport is simply mandatory in order to achieve results (Stirling and Kerr, 2014), and often it takes the form of bullying (Fisher and Dzikus, 2017). However, our study accentuates a dangerous approach that conflicts taking place at the micro level, including bullying, are perceived instrumentally as processes that are natural and useful for sport, enabling to get rid of unwanted persons "naturally." Similar trends are also recorded in other studies emphasizing that the social context plays a fundamental role in the dropout of the sports process (Sarrazin et al., 2002). Unfortunately, only a few studies link the athletes' dropout process to the existence of bullying in sport and analyze its causes (Baiocco et al., 2018).

The second, mezzo level is directed to the team's/group's management that is implemented through sports professionals' (coaches') behavioral strategies. They are entrenched by an authoritarian governance style and require a justification for rude behavior. The learning theory explains why bullying can remain viable in the organizational environment (Altman, 2010), and the striving to justify the coach's unethical behavior not only hinders change in the situation but can also promote a universal denial of bullying.

Such behavior of the sports professional can be explained by the power of authority given to him/her; i.e., coaches are considered "an authority figure and often must be firm and exercise that authority" (Narwal, 2014, p. 112), but their lack of competence can lead to unsuccessful prizewinning relationships or ineffective caring and helpful relationships (Jowett, 2005). This seems to be not a problem of individual sports organizations—it can be treated as a part of a flawed tradition. Although the links between the coach's unethical behavior and bullying in the sport context are not often analyzed, research in other contexts such as the academic environment or workplace reveals such links (Pörhölä et al., 2006; Aleassa and Megdadi, 2014) and states that only the creation of the supportive and safe environment through ethical communication can reduce bullying. Still, this study shows that coaches acting at the mezzo level are creating a specific environment of athletes' interrelationships, which is based on the traditions existing in sport and individual intentions of coaches themselves. Bullying in sports is a culturally (through coaching traditions) entrenched problem, which is erroneously understood in the coaching practice as bottom-up practice: athletes-coaches, when coaches perform only the function of controlling athletes' behavior, where the perpetrator is the athlete, his character and his closest environment.

Finally, the third, macro level shows the lack of management practices of the sports organization implementing organized sports activities, related to interrelationships management. Although recent research emphasizes the problem of bullying in sport and the need for effective prevention and intervention (Mountjoy et al., 2016), leaders of sports organizations often do not give prominence to it, which determines the absence of appropriate bullying response protocols (Shannon, 2013). Our research results demonstrate that the coach being at the mezzo level of the sports organization and directly encountering athletes' interpersonal relationships is a key person who can make a

significant impact on bullying prevention and apply intervention measures. However, he requires support at the organization's macro level. However, although coaches formally act in the sports organization, the latter tends to delegate all responsibility regarding interrelationships to coaches. Often, coaches tend to delegate responsibility for athletes' behavior and discipline in the team to their parents or other team leaders. This trend prevents effective resolution of bullying-related problems, since, according to Wilson (2017), only regular cooperation between sports organization's staff and athletes, their families or friends can contribute to the solution of the problem.

The lack of interpersonal relationship management practice is also determined by the ineffective coach development system, the gaps of which are also reasoned by the lack or even absence of coaches' knowledge related to the protection of rights of children playing sports, found by research (Eliasson, 2015). A better understanding of the topic of bullying by coaches of athletes can ensure effective prevention of bullying (O'Neill et al., 2014; McCloughan et al., 2015; Kowalski, 2017). However, the existing position of the sports organization with regard to staff development, continuing to prevent coaches from gaining knowledge and abilities to identify and manage bullying, leads to every sports participant's individual understanding of what bullying is, how it should be managed and whether it should be managed at all.

## CONCLUSION

This study deepens the understanding of the reasons for the viability of bullying in the sports organization and explains its durability from the perspective of the well-established coaching culture. Therefore, the evaluation of the conditions that support and promote bullying in the sports environment enables to take further actions to ensure the environment that is safer for athletes and more favorable for their training.

Creation of such environment requires to pay attention to the critical factors manifesting themselves at three levels. The constant change of athletes, noticed at the micro level, can signal problems existing in the team, which should be divided into two generalized groups: unfair competition among athletes, seeking to push out the unwanted person, and the coach's behavior orientated to the search for the most useful athlete, pushing out unsatisfying candidates. In this case, the coach uses both psychological impact measures to get rid of the unwanted athlete and the dynamics of bullying taking place in the team, which he implicitly approves of. Coaches acting at the mezzo level are creating a specific environment of athletes' interrelationships, which is based on the traditions existing in sport and individual intentions of coaches themselves. Along with that, the research discloses the lack of ethics and athletes' interrelationships management competencies, which is not eliminated by the organization keeping itself aloof. Although coaches formally act in the sports organization, their expressed position and the lack of regulation signal the peculiarly existing autonomy

at the mezzo level, tolerated by the organization's aloof management, which assesses the team's performance as a final result of activities but does not take responsibility for internal processes.

In summary, it can be stated that the results of the study pose managerial and ethical challenges, as organizations must change well-established attitudes and take responsibility for the creation of the safe sports environment that becomes a priority for coordinated actions of the coach and the organization's management.

The insights of this study can serve as a basis for more detailed research on the bullying phenomenon in sports organizations. This study highlighted the use of bullying by coaches as an illicit instrument seeking to eliminate unwanted athletes; therefore, in the future, more detailed studies should be conducted to explain the causes of this trend, related to the regulations of team formation, sports organization's management and the principles of submitting appeals regarding coaches' behavior. It also makes sense to further explore why athletes who have experienced team members' and coaches' unethical behavior withdraw and how the organizations' anti-bullying policy influences that. The study was conducted in Lithuanian sports organizations; therefore, in the future, it would make sense to repeat it in other countries, highlighting cultural variables.

## DATA AVAILABILITY STATEMENT

The datasets presented in this article are not readily available because they are collected in Lithuanian. Requests to access the datasets should be directed to author of the article JV, jolita.vveinhardt@lsu.lt.

## ETHICS STATEMENT

The studies involving human participants were reviewed and approved by the Lithuanian Sports University Ethics Committee of Social Sciences. Written informed consent for participation was not required for this study in accordance with the national legislation and the institutional requirements.

## AUTHOR CONTRIBUTIONS

Both authors participated and contributed in study design, data collection, analysis and interpretation, writing and original draft preparation.

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**Conflict of Interest:** The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

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