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Sport fans and flourishing: Examining the mediating role of sport fan well-being in predicting flourishing

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Abstract

Sport spectatorship has been viewed as a relatively passive leisure activity, but has the potential to provide a multitude of well-being benefits to individuals. To bridge the gap between sport spectatorship and human flourishing, defined as a state of positive functioning in both individual and social life, we focused on the role of context-specific fan well-being and conducted a two-year predictive study using three-wave panel data (n = 417) in professional baseball. The results showed the effects of team identification and fan engagement behavior at Time 1 on future flourishing at Time 3 was fully mediated by context-specific fan well-being at Time 2. Moreover, the effect of team identification (t_1) on flourishing (t_3) was sequentially mediated first through fan engagement behavior (t_1) and then through fan well-being (t_2). The findings reinforce the importance of sport-specific fan well-being for leading fans to flourish in daily life.

Keywords: mental health, flourishing, context-specific well-being, fan engagement, sport fan, team identification

Introduction

Flourishers are individuals with high levels of mental health and positive functioning in life (Keyes, 2002). In the past three decades, flourishing, defined as a state of positive functioning in the pursuit of human excellence (Ryff & Singer, 1998), has emerged as a useful construct to explain one's overall evaluation of life as a psychosocial concept (Diener et al., 2010). Flourishing is theoretically important because it reflects positive functioning in both individual and social life and allows for an enduring, long-term evaluation of well-being. Flourishing differs from emotional well-being (also called hedonic well-being) which addresses people's well-being based on the temporary experience of positive emotional states in a short-term period (Diener et al., 2010; Ryan & Deci, 2001). It is also conceptually distinct from eudaimonic well-being, defined as positive psychological functioning and focuses primarily on a person's healthy mental state (Ryan & Deci, 2001). Flourishing is a broader concept than eudaimonic well-being because it reflects individuals' perceived success in both psychological (e.g., self-esteem and purpose) and social (e.g., social relationships) aspects (Diener et al., 2010). From a more comprehensive perspective, Seligman (2011) developed the PERMA model of flourishing, in which human flourishing is defined in terms of five core domains of well-being: positive emotion, engagement, relationships, meaning, and achievement[1].

In the sport management literature, a considerable amount of research has been devoted to studying well-being in spectator sport (e.g., Doyle et al., 2016; Inoue et al., 2017; Kim & James, 2019; see Table 1). Recently, scholars have begun to apply flourishing to the sport consumption context and investigated how sport fans' engagement behavior (Yoshida et al., 2024), nostalgic

[1]Positive emotion is defined as having feelings of joy, satisfaction, and happiness (Seligman, 2011). Engagement is the act of becoming intensely absorbed and highly focused on an activity (Seligman, 2011). Relationships refer to feeling socially supported and accepted by others (Seligman, 2011). Meaning is a sense of purpose and direction in life (Seligman, 2011). Achievement reflects a sense of success through attaining important goals (Seligman, 2011).

feelings (Cho et al., 2021), and sport-specific well-being (Oshimi & Kinoshita, 2022) enhance flourishing. One conclusion drawn from the existing literature is that flourishing can serve as a lens to examine how sport consumers' psychology and behavior contribute to their general well-being in everyday life. However, a limited amount of research has been conducted to examine flourishing as an outcome in sport management. As far as the authors have ascertained, no previous work has investigated flourishing in a predictive manner employed by the current study.

Although sport management researchers have recently been interested in flourishing, at least two opportunities are available to extend previous research. First, there is a lack of research to explore what mediating variables exist and increase the predictive ability of fans' psychological (e.g., team identification) and behavioral (e.g., fan engagement behavior) responses on flourishing. To date, team identification (Unanue et al., 2022; Wann et al., 2017) and fan engagement behavior (Reysen et al., 2022; Yoshida et al., 2024) have been identified as antecedents of well-being. However, the size of their effects ranged from small to moderate (Oh et al., 2022; Yoshida et al., 2024), with some evidence indicating the direct effects of team identification on well-being outcomes (e.g., life satisfaction and happiness) are nonsignificant (Inoue et al., 2017; Jang et al. 2017). There is still much to learn about potential mediating variables that may amplify the impact of sport spectatorship and team identification on general well-being.

In this regard, one possible explanation is context-specific fan well-being mediates the relationships between team identification, fan engagement behavior, and flourishing. The underlying rationale is the bottom-up theory of well-being (Newman et al., 2014). This theory suggests domain experiences first increase domain-specific well-being, which in turn contributes to general well-being. A person's well-being as a sport fan is largely characterized by domain

experiences embedded in their team identity (e.g., an activated sense of self as a sport fan when following a favorite team) and specific sport consumption practices such as participating in fan-to-fan social interactions in fan communities and finding meaning in sport spectatorship by learning about one's favorite team (Delia et al., 2022; Doyle et al., 2016). This domain-specific fan well-being perspective, however, has been limited largely to qualitative inquiry on its specific elements such as close relationships, mental health, social justice, and the five pillars of the PERMA model (Delia et al., 2022; Doyle et al., 2016, 2021). Although a few studies have quantitatively tested the antecedents and consequences of sport-specific fan well-being (Oshimi & Kinoshita, 2022; Sato et al., 2023) in spectator sport, their focus was on how team identification and sport media viewing were associated with overall well-being through fan well-being, neglecting the impact of unique sport domain experiences (e.g., fan engagement behavior) on this relationship. Therefore, further examination is required regarding the specific mediating mechanisms underlying the relationships between team identification, fan engagement behavior, context-specific fan well-being, and flourishing.

Second, the predictive effect of fan well-being on future flourishing is unclear. In the past decade, sport management scholars have recognized the importance of sport-specific fan well-being (see Table 1; Delia et al., 2021; Doyle et al., 2016; Jang et al., 2017; Oshimi & Kinoshita, 2022; Sato et al., 2023). For instance, applying Seligman's (2011) PERMA model to spectator sport, Doyle et al. (2016) suggested the four dimensions of positive emotion, relationships, meaning, and achievement can be activated by specific sport consumption experiences and eventually boost flourishing. More recently, Oshimi and Kinoshita (2022) showed sport-specific well-being characterized by PERMA in the professional baseball context was positively associated with flourishing. However, these studies relied on cross-sectional data collected at a

single point in time, which prevented them from demonstrating the predictive effect of contextualized fan well-being on future flourishing. The predictive approach is vital for well-being research because both domain-specific well-being and general well-being evolve over time (Cho & Tay, 2016; Hu et al., 2021), include long-lasting elements, such as personal growth, meaning in life, and positive social relationships (Doyle et al., 2016; Ryff & Singer, 2008). In the sport context, assessing the long-term effect of sport-specific fan well-being on future flourishing is imperative because it serves as confirmation that fan well-being is enduring and enables fans to flourish over time even if their favorite teams/athletes' athletic performance is unpredictable and often unstable across seasons. Thus, a time separation is necessary for examining these relationships (Sato et al., 2022; Sato et al., 2023; Schotanus-Dijkstra et al., 2016).

Given the limitations of previous studies, a more comprehensive predictive model is needed to identify factors enhancing future flourishing through spectator sport consumption. Therefore, the first purpose of this study is to develop a theoretical model that illustrates the predictive effects of team identification and fan engagement behavior on flourishing through fan well-being. Second, based on our theoretical model encompassing (a) predictor, (b) mediator, and (c) outcome variables, we aim to investigate and understand the proposed sequential relationships using three-wave panel data corresponding to three different time points (t_1, t_2, t_3).

To achieve these purposes, we use a predictive research design that integrates team identification and fan engagement behavior in the first-half of a season (t_1) with fan well-being at the end of the season (t_2) and flourishing one year after the measurement of fan well-being (t_3). It is worth noting this is not a longitudinal study[2] because our investigation does not assess how

[2]Longitudinal research is a type of research that repeatedly measures the same constructs over time and aims to explain the dynamic nature (e.g., changes) of the relationships between the constructs (Kunkel et al., 2016).

changes in the predictor variables will result in changes in flourishing over time. Flourishing represents the enduring, long-term aspect of well-being conceptually (Diener et al., 2010) and statistically (Rudaz et al., 2023), indicating it does not fluctuate over time. In addition, team identification and fan engagement behavior are relatively stable and enduring in a long time period (Lock et al., 2014; Dessart et al., 2016). These characteristics of our focal constructs make the use of a predictive research design suitable for addressing our purposes.

We focus on the professional baseball context and attempt to examine the impact of the predictor (t_1) and mediator (t_2) variables in the 2022 season on the outcome variable (t_3) in the 2023 season. This predictive research design allows us to test the predictive effects of team identification (t_1), fan engagement behavior (t_1), and fan well-being (t_2) on flourishing (t_3) across the two (2022 and 2023) seasons. To assess the predictive power of our model considering the unpredictable nature of team performance over time, we (1) collect data from both winning and losing teams' fans in the 2022 season (t_1 and t_2) and (2) control for the effect of team quality (e.g., win/loss records) on flourishing in the 2023 season (t_3). Thus, our predictive model accounts for variations in team performance across two seasons. To the best of the authors' knowledge, no research has been conducted to examine the effects of team identification (t_1), fan engagement behavior (t_1), and fan well-being (t_2) on flourishing (t_3) using time-lagged data (see Table 1). More details on the sampling procedure and data collection are presented in the method section.

We attempt to make three theoretical contributions to the sport management literature on transformative sport service research concerning the relationship between sport services and well-being (Inoue et al., 2020; Su et al., 2022). First, this study contributes to the sport management literature by identifying the key spectator sport-related predictors of human

flourishing. Previous studies have mainly explained how sport spectatorship is associated with hedonic (e.g., happiness, subjective well-being, positive affect, and life satisfaction) and social (e.g., sense of belonging and social life satisfaction) well-being outcomes (Inoue et al., 2017; Inoue et al., 2022; Jang et al., 2017; Kim & James, 2019; Wann et al., 2017). Given the entertaining and social nature of spectator sport (Funk & James, 2001; Holt, 1995), the link between sport fandom and the hedonic and social aspects of well-being is implicit. However, the link between spectator sport consumption and long-term well-being (eudaimonic and flourishing) remains largely unexplored. Although recent studies have provided evidence for the effects of sport spectatorship on eudaimonic well-being (Reysen et al., 2022) and flourishing (Cho et al., 2021; Oshimi & Kinoshita, 2022), their findings are based on cross-sectional surveys completed by respondents at a single point in time, which potentially overestimate the relationship between the predictor and outcome variables due to common method bias (Podsakoff et al., 2003). Thus, we reinforce the relationship between sport spectatorship and flourishing in a predicative way with a multi-wave data collection.

Second, our predictive investigation extends this literature by testing how fan well-being mediates the effects of sport fans' psychological (team identification) and behavioral (fan engagement behavior) reactions on future flourishing, thereby providing more accurate and comprehensive insights into the psychological mechanism to enhance flourishing among sport fans. Third, we demonstrate the effects of team identification and fan engagement behavior at Time 1 on fan well-being at Time 2 and flourishing at Time 3. Hence, this study extends previous cross-sectional research, contributing a new theoretical approach to the long-term effects of team identification and fan engagement behavior on future well-being outcomes. The long-term effects of our predictor variables on future flourishing concern the predictive ability of

fan psychology (i.e., team identification and fan well-being) and behavior (i.e., fan engagement behavior) for long-term positive functioning in life and allow us to address the relationship between sport spectatorship and the more stabilized and enduring aspects (e.g., personal growth and relationship maintenance) of well-being. Below, we develop hypotheses to predict flourishing through fan well-being.

Theoretical Model and Hypotheses

Figure 1 shows our theoretical model guiding this research and including two types of well-being: fan well-being and flourishing. We define *fan well-being* as an optimal state of healthy psychological functioning that arises from the hedonic, eudaimonic, social, and physical aspects of a sport-oriented lifestyle shaped by sport fan experiences (Inoue et al., 2020; Inoue et al., 2022; Yoshida et al., 2023). Based on the literature reviewed, fan well-being is a multidimensional construct and includes hedonic, eudaimonic, social, and physical dimensions (Inoue et al., 2015; Inoue et al., 2020; Wann, 2006). In this study, hedonic fan well-being is defined as sport fans' feelings of positive emotions (e.g., pleasure, satisfaction, and happiness) when following their favorite teams (Inoue et al., 2020; Ryan & Deci, 2001). Eudaimonic fan well-being is a state of positive functioning (e.g., personal growth, self-realization, and self-actualization) as a sport fan in seeking excellence through the challenge of sport competitions (Inoue et al., 2020; Ryan & Deci, 2001). Social fan well-being reflects sport fans' perceptions of the quality of social relationships (e.g., sense of belonging and social ties) with others who follow the same team (Inoue et al., 2022; Keyes et al., 2008). Physical fan well-being is defined as sport fans' capability to build and maintain physical health that allows for performing mild-to-moderate physical activities (e.g., walking, standing, and singing) and healthy food consumption when watching games (Chang, 2021; Inoue et al., 2015; Yoshida et al., 2023).

In addition, *flourishing* is an ideal state of well-being that reflects positive psychosocial functioning in life (Diener et al., 2010). Our model posits that team identification and fan engagement behavior at Time 1 (t_1) have long-term effects on flourishing at Time 3 (t_3) directly and indirectly through fan well-being at Time 2 (t_2), thereby enabling us not only to examine more accurate sequential relationships including predictor (t_1), mediator (t_2), and outcome (t_3) variables, but also to control for common method bias among these variables (Podsakoff et al., 2003). First, we present hypotheses (H1a, H1b, H2a, and H2b) pertaining to the effects of team identification (t_1) and fan engagement behavior (t_1) on fan well-being (t_2) and flourishing (t_3). Then, we propose hypotheses (H3, H4a, H4b, and H4c) pertaining to fan well-being (t_2) and its mediating mechanisms.

Team identification and well-being

Team identification refers to a sense of group membership that is formed by feeling psychologically intertwined with a specific sport team (Ashforth & Mael, 1989; Gwinner & Swanson, 2003). Based on the literature reviewed, team identification fosters sport fans' well-being outcomes such as consumer happiness (Sato et al., 2023), life satisfaction (Unanue et al., 2022), global well-being (Unanue et al., 2022), subjective vitality (Yoshida et al., 2023), and meaning in life (Wann et al., 2017). According to basic psychological needs theory (Deci & Ryan, 2000), one of the basic psychological needs is the need for relatedness, which can be fulfilled by a psychological sense of team identification in spectator sport (Yoshida et al., 2021a). Basic psychological needs theory (Deci & Ryan, 2000) further suggests the fulfillment of the need for relatedness is associated with greater well-being because it represents an essential aspect of healthy human functioning and well-being (Ryan & Deci, 2001). Therefore, we anticipate that team identification is positively associated with enhanced well-being.

In the current study, we extend team identification scholarship by formulating its impact on future fan well-being and flourishing. Conceptually, team identification is an enduring construct that is stable over a long period of time (Lock et al., 2014). Because of its enduring social characteristics (e.g., group membership and self-definition as a sport fan) that are beneficial for individuals, team identification has been found to have long-term positive effects on both domain-specific spectator happiness (Sato et al., 2023) and general well-being (Unanue et al., 2022) in the future. These arguments support the impact of team identification on future well-being. In this study, we identify fan well-being (domain-specific) and flourishing (overall) as outcome variables to develop a more comprehensive model of well-being. The inclusion of these two types of well-being is in line with the bottom-up theory of subjective well-being that clearly distinguishes between domain-specific and general well-being (Newman et al., 2014). Therefore, we hypothesize the following:

H1a: Team identification (t_1) has a positive long-term effect on fan well-being (t_2).

H1b: Team identification (t_1) has a positive long-term effect on flourishing (t_3).

Fan engagement behavior and well-being

Fan engagement behavior is defined as "a consumer's voluntary contribution to the success and welfare of a sport team through value-adding behaviors, going beyond the mere consumption of sport products such as ticket purchase and television viewing" (Yoshida et al., 2024, p. 135). Fan engagement behavior positively influences flourishing because engaging in sport consumption as a leisure activity is a key necessary ingredient for general well-being (Newman et al., 2014; Yoshida et al., 2024). Engaging in leisure activities can satisfy multiple needs such as autonomy, affiliation, mastery, meaning, and detachment-recovery and help people become fully functioning and self-actualizing in a specific leisure domain (Newman et al., 2014).

Thus, fan engagement behavior in spectator sport boosts context-specific fan well-being. Also, from the social identity approach (Haslam et al., 2009; Jetten et al., 2017), fan engagement behavior is viewed as an act of exchanging social support (e.g., actions to support the collective benefits of an in-group and its members), which contributes to the well-being of individuals who share group membership, such as fans of the same sport team (Inoue et al., 2017). In line with this theoretical perspective, we expect fan engagement behavior to have a positive association with flourishing.

We further contend that fan engagement behavior will exert long-term effects on future fan well-being and flourishing. One way to explain these effects is to consider that fan engagement behavior is a relatively enduring experiential state (Dessart et al., 2016) and entails stable behavioral habits, such as fan learning, fan sharing, and fan rituals (Huettermann et al., 2022; Yoshida et al., 2024). To engage in fan experiences, individuals need to spend a significant amount of time following sport news, discussing various issues with others, and using knowledge and resources (e.g., time, money, and social networks) to support their favorite teams (Huettermann et al., 2022; Yoshida et al., 2024). Viewing fan engagement behavior as a stable habitual experience allows us to relate it with future well-being. In alignment with the bottom-up theory of subjective well-being (Newman et al., 2014), we use future fan well-being and future flourishing as measures of domain-specific well-being and general well-being, respectively. In summary, we propose the following hypotheses:

H2a: Fan engagement behavior (t_1) has a positive long-term effect on fan well-being (t_2).

H2b: Fan engagement behavior (t_1) has a positive long-term effect on flourishing (t_3).

Fan well-being and flourishing

A suggestion from the bottom-up theory of subjective well-being (Newman et al., 2014) is

human flourishing is an ideal state of well-being in one's life and stems from the cumulative evaluation of specific life domains such as family life, work life, social life, and leisure life. Sport management researchers have shown that domain-specific well-being in the spectator sport context is positively associated not only with current life satisfaction and flourishing (Oshimi & Kinoshita, 2022), but also with future overall happiness (Sato et al., 2023). Based on means-end chain theory (Gutman, 1982), it is posited that individuals consider their desired state of sport fandom—a societal connection between oneself and the world of sport (Wann, 2006)—as a means for achieving the ultimate goal of happiness. Recently, the impact of sport fandom on psychological well-being has been confirmed among fans of diverse entertainment products including spectator sport (Reysen et al., 2022). These theoretical explanations together imply that fan well-being in spectator sport represents an important pathway to future flourishing. This reasoning assumes that fan well-being is a stable and sustained construct based on sport fans' cumulative experiences and acts as a predictor of future flourishing. Thus, the following hypothesis is proposed:

H3: Fan well-being (t_2) has a positive long-term effect on flourishing (t_3).

Mediating role of fan well-being

Some devoted sport fans who are high in team identification and fan engagement behavior are unhappy, as evidenced by the dark side of sport fandom demonstrated in the literature (Gordon & Arney, 2017; Larkin & Fink, 2019; Wakefield & Wann, 2006). For example, highly identified fans tend to exhibit dysfunctional behaviors (e.g., trash talk, hostile aggression, and excessive alcohol consumption; Larkin & Fink, 2019; Wakefield & Wann, 2006). These fans also have the tendency to show high levels of engagement in negatively valanced responses specifically on social media, such as posting negative comments, sharing negative news stories,

and spreading negative word-of-mouth communications (Dolan et al., 2016; McDonald et al., 2022). To bridge the gap between team identification, fan engagement behavior, and human flourishing, we posit that fan well-being plays an important mediating role. The claim is made that fan well-being should induce sport fans to exhibit behavior that reinforces moral principles (e.g., respect, sportspersonship, and fair play) and limit (and even eliminate) instances of dysfunctional fan behavior (e.g., abusive language, hostile aggression, and excessive drinking). Specifically, our operationalization of eudaimonic well-being includes the notion of becoming a better person through sport fandom as well as its positive value and worthwhileness. Further, and to a lesser degree, the social well-being aspect highlights how the fan community is a "good place" for fans. Taken together, the psychological and social aspects of well-being involve ethical thinking and socially desirable behavior such as expressing meaningful opinions, helping others, and living well as a person (Ryan & Deci, 2001; Keyes, 1998). We view fan well-being as a positive conduit among team identification, fan engagement, and flourishing. Stated differently, fan well-being will act as a mediator to convert team identification and fan engagement behavior into the state of optimal human flourishing, encouraging sport fans to flourish through spectator sport consumption in a socially meaningful way. From this logic, we hypothesize the following predictions:

H4a: Over time, fan well-being (t_2) mediates the relationship between team identification (t_1) and flourishing (t_3).

H4b: Over time, fan well-being (t_2) mediates the relationship between fan engagement behavior (t_1) and flourishing (t_3).

In our theoretical framework, team identification influences flourishing indirectly through fan engagement behavior and fan well-being. This indirect effect arises through the combined

explanations of team identification and competence development in the leisure domain. First, team identification motivates fans to engage in unselfish, prosocial, and extra-role behavior to support their favorite team by finding similarities between their personal values and the team's characteristics (Bhattacharya & Sen, 2003; Yoshida et al., 2024). In addition, a suggestion from basic psychological needs theory (Deci & Ryan, 2000) is team identification represents the fulfillment of the basic need for relatedness in spectator sport and fosters intrinsic motivation to engage in sport consumption activities. Thus, team identification will facilitate fan engagement behavior.

Second, the effect of team identification on flourishing may be sequentially mediated first through fan engagement behavior, and then through fan well-being. Applying the bottom-up theory of subjective well-being to the leisure domain, previous research established the sequential relationships between domain experiences, domain-specific well-being, and general well-being (Hu et al., 2021). Theoretically, fan engagement in spectator sport can be viewed as leisure domain experiences (Hu et al., 2021). It also involves fans' efforts enhancing various competences such as specialized knowledge, analytical techniques, conversation skills, ritualistic fan behavior, personalized consumption practices, and their own preferences necessary to engage in rich fan experiences (Holt, 1995; Yoshida et al., 2024). Such competence development is conceptually consistent with the dimensions of eudaimonic, social, and physical fan well-being that capture the psychological (e.g, personal growth), social (e.g., interpersonal skills), and physical (e.g., ritualized cheering and chanting in the stands) competence of sport fans (Inoue et al., 2020; Yoshida et al., 2023). According to basic psychological needs theory (Deci & Ryan, 2000), developing one's competence (e.g., knowledge, skills, and abilities) is essential for enhancing well-being and human flourishing. These explanations generate a prediction

concerning the relationships between fan engagement behavior (domain experience), fan well-being (competence development), and flourishing (general well-being). Simply put, sport team fans will experience flourishing if they cultivate competence-related fan well-being by engaging in competence-enhancing sport consumption activities.

Collectively, team identification is expected to first affect fan engagement behavior, which in turn influences flourishing through fan well-being. Thus, our final hypothesis is derived as follows:

H4c: Over time, team identification (t_1) is sequentially related to flourishing (t_3), first through fan engagement behavior (t_1) and second through fan well-being (t_2).

Established effects

In addition to the hypothesized effects, we include some previously established effects in our model (see Figure 1). First, we replicate the direct effect of team identification (t_1) on fan engagement behavior (t_1). Empirical support for this effect is provided by previous research that suggests highly identified fans engage in a wide range of sport consumption practices and prosocial behaviors due to the meaningful connections that they have with their favorite teams (Delia et al., 2022; Yoshida et al., 2024). Second, we measure life domain satisfaction which represents six life domains (i.e., satisfaction with social life, leisure life, family life, work life, health, and self-actualization) at Time 3 and examine the influences of the six life domain satisfaction factors on flourishing (t_3). We control for the impact of life domain satisfaction (t_3) on flourishing (t_3) because human flourishing is a form of overall well-being that is evaluated globally based on the fulfillment of specific life domains (Newman et al., 2014). In addition, we examine the impact of team quality (t_3) on flourishing (t_3) because successful teams provide their fans with a sense of excellence, superiority, and achievement, leading to higher levels of

psychological well-being (Yoshida et al., 2023).

Methods

Study setting and design

For our study setting, we chose professional baseball in Japan. Nippon professional baseball (NPB) schedules the regular season games (143 games and several playoffs) from late March to late October. From 2022 to 2023, we conducted a predictive study and analyzed three-wave panel data gathered from fans of five professional baseball teams based in Hokkaido, Chiba, Saitama, Osaka, and Fukuoka at Time 1 (t_1), Time 2 ($t_2 = t_1 + 5$ months), and Time 3 ($t_3 = t_2 + 12$ months). Methodologically, selecting optimal time lags in multi-wave panel data research should be determined by considering "when events occur" (Mitchell & James, 2001, p. 545). The professional baseball season starts in the spring and ends in the fall. In the sport management field, 5-6 months are typically used for in-season predictive studies (Sato et al., 2023; Yoshida et al., 2023). Thus, the first two time points (June 2022 and November 2022) to measure the predictor (t_1) and mediator (t_2) variables were appropriate (Mitchell & James, 2001).

In addition, we selected a one-year time separation between time 2 and time 3. The specification of a time lag depends on "the phenomenon one tries to measure (e.g., a 1-year time lag to assess the effects of annual performance appraisals)" (Griep et al., 2021, p. 2). Professional baseball in Japan operates every year, with teams competing for end-of-year standings and the league title. The one-year time interval between time 2 (fan well-being) and time 3 (flourishing and team quality) variables enabled us to assess the long-term effect of fan well-being (t_2) on future flourishing (t_3) by controlling for the impact of end-of-year team quality (t_3) which can be influenced by teams' final standings and their overall season performance. Consequently, this time lag was deeded suitable for our examination of the relative effects of fan well-being (t_2) and

end-of-year team quality (t_3) on future flourishing (t_3).

Our predictive research design allowed us to operationalize our predictor, mediator, and outcome variables corresponding to the three time points (t_1, t_2, t_3). In addition, this design alleviated the issue of common method bias, which occurs in cross-sectional research and inflates the relationships between predictor and outcome variables by relying on data collection at a single point in time (Podsakoff et al., 2003).

Data collection

To obtain three-wave panel data, we worked with an Internet research company in Japan. We used the company's online platforms to collect data from the same research panel at three time points: (1) late June 2022 (t_1), approximately three months after the beginning of the 2022 season; (2) early November 2022 (t_2), a week after the end of the 2022 season; and (3) early November 2023 (t_3), a week after the end of the 2023 season. In June 2022, approximately 50,000 individuals who lived in the hometown areas of the five baseball teams including both winning and losing teams were invited to answer two screening questions: (1) "*do you follow one of the following five teams?: Hokkaido Nippon-Ham Fighters, Chiba Lotte Marines, Saitama Seibu Lions, Orix Buffaloes, and Fukuoka Softbank Hawks*" and (2) "*did you attend at least one game of your favorite team in the past twelve months?*" This screening survey was carried out until 5,000 respondents fulfilled these criteria. Next, we sent invitation emails to these 5,000 individuals to ask them to participate in the first survey and answer questions about team identification and fan engagement behavior. From June 24 to June 26, a total of 1,124 participants completed the online questionnaire at Time 1.

Time 2 data were collected in early November 2022. After the conclusion of the 2022 national championship games in late October 2022, we recruited the respondents (1,124

individuals) of the first survey to answer the questions concerning the hedonic, eudaimonic, social, and physical dimensions of fan well-being. We collected data from 635 respondents over three days. In addition, at Time 3, a week after the 2023 national championship games took place (approximately one year after the second survey), we further asked the 635 respondents of Time 2 survey to rate their flourishing, life domain satisfaction, and team quality. The third survey was completed by 417 individuals over three days at the beginning of November 2023. Through these procedures, we gathered three-wave panel data from a usable sample of 417 baseball fans (37.1% of Time 1 respondents).

Of our sample, 70.7% of the respondents were men, while 28.8% were represented by women (0.5% preferred not to answer the gender orientation question). The average age along with the standard deviation (SD) of the sample was 48.86 ± 12.40 years. The participants also fell into the following age groups: 20-29 (7.4%), 30-39 (16.5%), 40-49 (25.9%), 50-59 (30.7%), 60-69 (13.9%), and ≥70 years (5.5%). The average number of games watched at the home stadiums of the respondents' favorite teams was 5.91 (SD ± 11.71) in 2022 and 7.34 (SD ± 13.43) in 2023, respectively. The representativeness of our data was evaluated by comparing our sample characteristics with those of other projects that gathered data from spectators attending a Japanese professional baseball game (Yoshida et al., 2021b) and Japanese residents in a large survey (n = 3,000; Sasakawa Sports Foundation, 2016). The gender distribution of our sample (men = 70.7%, women = 28.8%) was equivalent to stadium attendees at a professional baseball game (men = 68.7%, women = 31.3%; Yoshida et al., 2021b). The average age of our sample (M = 48.9) was parallel to the age of those attending various sport events at least once a year (M = 46.9; Sasakawa Sports Foundation, 2016). Thus, this predictive study was conducted in a sample representative of Japanese sport spectators.

Measures

Table 1 details the survey items to measure our constructs. We measured *team identification* using adapted items from Mael and Ashforth's (1992) organizational identification scale. In addition, our measures of *fan engagement behavior* were adapted from the active engagement scale of Keller's (2003) brand equity pyramid model. The construct validity of Keller's (2003) scale has been established in previous sport marketing research (Gordon & James, 2017; Tsordia et al., 2018; Yoshida et al., 2024). Both constructs were assessed at Time 1.

At Time 2, we modeled *fan well-being* as a second-order latent construct consisting of its first-order dimensions. This hierarchical approach was deemed appropriate because well-being is a superordinate higher-order construct consisting of its component (first-order) dimensions (Abbott et al., 2008; Gallagher et al., 2009; Kumai et al., 2024). To measure hedonic, eudaimonic, and social fan well-being, we adapted items from previous research: five items for hedonic fan well-being (Butler & Kern 2016; Keyes et al. 2008), five items for eudaimonic fan well-being (Butler & Kern 2016; Keyes et al. 2008), and four items for social fan well-being (Keyes et al. 2008). Physical fan well-being was measured using a four-item scale adapted from Ware et al. (1998) and Kofodimos (1993). To measure the four dimensions of fan well-being, a total of 18 items were administered with the following opening statement in the questionnaire: "*In the 2022 season, how did you feel about the following items? For each item, please choose the number that best reflects your feeling*."

At Time 3, we measured flourishing and the control variables explained above (i.e., satisfaction with six life domains). *Flourishing* was assessed by the Japanese version (Sumi, 2014) of Diener et al.'s (2010) flourishing scale. *Life domain satisfaction* was measured by six

items representing six life domains: social life, leisure life, family life, work life, health, and self-actualization (Sato et al., 2017; Yoshida et al., 2024). We also measured *team quality* using Yoshida et al.'s (2023) four-item scale.

To measure the proposed psychological constructs, we used a 7-point Likert-type scale, ranging from "*strongly disagree* (1)" to "*strongly agree* (7)." An exception to this was life domain satisfaction, which was measured by an 11-point scale ranging from "*strongly dissatisfied* (0)" to "*strongly satisfied* (10)" (Sato et al., 2017). All survey items (except for the flourishing items for which the validated Japanese translation was available) were first generated in English and then translated into Japanese. To ensure the accuracy of the translation, we used the back-translation method (Brislin, 1970) and compared the original English items with the back-translated items. Based on this comparison, we determined that the two versions were equivalent.

Results

Measurement model

To estimate our measurement model, we performed a confirmatory factor analysis using Mplus Version 7.31 (see Table 2). The results show acceptable model fit: $\chi^2/df = 2.13$, comparative-fit index = .96, Tucker-Lewis index = .96, root mean square error of approximation = .052 (Hu & Bentler, 1999). All factor loadings are above 0.70. The composite reliability and average variance extracted values are greater than 0.70 and 0.50, respectively (Bagozzi & Yi, 1988; Fornell & Larcker, 1981). Furthermore, demonstrating discriminant validity, the average variance extracted value for each factor exceeds the squared correlations with the other factors (see Table 3). These results provide evidence for the construct reliability, convergent validity, and discriminant validity of the measures (Fornell & Larcker, 1981; Hair et al., 2006).

Hypothesis testing

As shown in Figure 2, we tested the hypothesized relationships using structural equation modeling (SEM). The proposed structural model fits the data well: $\chi^2/df = 2.19$, comparative-fit index = .95, Tucker-Lewis index = .94, root mean square error of approximation = .053 (Hu & Bentler, 1999). In hypothesis testing, we operationalized fan well-being as a higher-order latent construct (Abbott et al., 2008; Gallagher et al., 2009) and found the relationships between the first-order dimensions and the second-order construct were positive and strong as their path coefficients ranged from .87 to .98.

Flourishing is a comprehensive picture of general well-being (Diener et al., 2010) and reflects a composite of satisfaction with key life domains (Newman et al., 2014). Also, team quality has been found to be positively associated with sport fans' well-being (Yoshida et al., 2023). Thus, in addition to the hypothesized effects, we included the influences of life domain satisfaction (t_3) and team quality (t_3) on flourishing (t_3). The results show satisfaction with leisure life ($\beta = .17$, $p < .01$), family life ($\beta = .12$, $p < .05$), work life ($\beta = .21$, $p < .01$), self-actualization ($\beta = .22$, $p < .01$), and team quality ($\beta = .10$, $p < .05$) positively affected flourishing (t_3).

After controlling for the effects of life domain satisfaction and team quality, we found that team identification (t_1) and fan engagement behavior (t_1) had positive effects on fan well-being (t_2) which in turn positively influenced flourishing (t_3), supporting H1a, H2a, and H3 ($\beta_{\text{team identification}} = .18$, $p < .01$; $\beta_{\text{fan engagement behavior}} = .36$, $p < .01$; $\beta_{\text{fan well-being}} = .15$, $p < .01$). Team identification (t_1) was also positively associated with fan engagement behavior (t_1) ($\beta_{\text{team identification}} = .73$, $p < .01$). However, the direct effects of team identification (t_1) and fan engagement behavior (t_1) on flourishing (t_3) were not significant ($\beta_{\text{team identification}} = .10$, n.s.; $\beta_{\text{fan engagement behavior}} = .01$, n.s.), rejecting H1b and H2b. The variances explained in the outcome

variables by the predictor variables were evaluated by R^2 values. The R^2 values for fan engagement behavior (t_1), fan well-being (t_2), and flourishing (t_3) were .54, .26, and .66, respectively.

In addition, we investigated the hypothesized mediation effects by estimating the path coefficients obtained from 5000 bootstrap resamples (Preacher & Hayes, 2008; see Table 4). We analyzed the indirect effects of team identification (t_1) and fan engagement behavior (t_1) on flourishing (t_3) through the two mediating variables: fan engagement behavior (t_1) and fan well-being (t_2). The results demonstrated that the 95% confidence intervals for the indirect effects of team identification (t_1) and fan engagement behavior (t_1) on flourishing (t_3) through fan well-being (t_2) did not include zero, confirming significant indirect effects ($0.03_{\text{team identification}\rightarrow\text{fan well-being}\rightarrow\text{flourishing}}$, $p < .05$; $0.05_{\text{fan engagement behavior}\rightarrow\text{fan well-being}\rightarrow\text{flourishing}}$, $p < .05$), in support of H4a and H4b. In addition, the 95% confidence interval for the indirect effect of team identification (t_1) on flourishing (t_3) through fan engagement behavior (t_1) and fan well-being (t_2) excluded zero (0.04, $p < 05$). Thus, H4c was supported. Combining the findings of the structural relationships (Figure 2) with the mediation results (Table 4), our evidence suggests that (1) fan well-being (t_2) fully mediates the effects of team identification (t_1) and fan engagement behavior (t_1) on flourishing (t_3); and (2) significant sequential relationships exist between team identification (t_1), fan engagement behavior (t_1), fan well-being (t_2), and flourishing (t_3).

Discussion

Theoretical implications

This study shed light on the key mediating variables in a bottom-up process of how sport fans enhance overall well-being through spectator sport consumption. Our predictive model and its empirical test using a three-wave data set explained 66% in the variance of future flourishing.

Because of the predictive validity established in this study, our findings provide three theoretical implications that extend previous research dealing with sport spectatorship and well-being.

First, we advance the bottom-up theory of well-being (Newman et al., 2014) in the spectator sport context. To date, little effort has been devoted to presenting a specific bottom-up approach to bridge the gap between sport fans and flourishing (Oshimi & Kinoshita, 2022; Sato et al., 2023). Our results suggest that both team identification (t_1) and fan engagement behavior (t_1) do not directly predict future flourishing (t_3). However, they predict flourishing (t_3) indirectly through fan well-being (t_2) based on individuals' cumulative evaluations of contextualized fan experiences in a certain period of time (e.g., one season). By conducting a two-year predictive study, we empirically established an accurate bottom-up process of sport spectatorship through which highly identified and engaged fans flourish in life by psychologically, socially, and physically experiencing a desirable state of positive functioning as a sport fan. This explanation is important because it develops a comprehensive and accurate understanding of the mediating role of context-specific fan well-being in predicting future flourishing. Although previous research examined this mediating relationship, it relied on cross-sectional data, did not produce evidence over time, and did not account for the simultaneous effects of team identification, fan engagement behavior, and fan well-being on flourishing (Doyle et al., 2016; Oshimi & Kinoshita, 2022).

We addressed these voids and extended the sport management literature by showing the fully mediating role of fan well-being in a bottom-up process of enabling sport fans to feel good by doing well as a fan, and eventually to flourish as a person. Further, it is worth noting that flourishing is a comprehensive construct for understanding individuals' well-being in both their personal and social life. Although flourishing is an important, yet understudied well-being

concept in the sport management field (see Table 1), our study established evidence not only for the construct validity of the eight-item scale in spectator sport, but also for the nomological validity of this well-being outcome by confirming its relationship with sport-specific fan well-being. Although recent cross-sectional research finds that team identification is associated with flourishing indirectly through sport-specific fan well-being (Oshimi & Kinoshita, 2022), we extend this finding by providing additional support for the long-term indirect effects of team identification and fan engagement behavior on future flourishing through sport-specific fan well-being. Our findings on these predictive relationships offer new theoretical insights into a bottom-up approach to human flourishing through spectator sport.

Second, we present a new theoretical perspective on the relationships between fan engagement behavior, fan well-being, and flourishing. Based on psychological needs theory (Deci & Ryan, 2000), we elaborate this perspective by considering fan engagement behavior and fan well-being as competence-enhancing experiences and competence development, respectively (Hu et al., 2021). In support of this perspective, we found that fan engagement behavior (t_1) positively influenced fan well-being (t_2) which in turn affected flourishing (t_3). An implication from this finding is that engaging consumers in competence-enhancing fan experiences (e.g., fan learning, fan conversations, and fan rituals) is insufficient. Rather, facilitating the fan well-being represented by mental (i.e., hedonic and eudaimonic), social, and physical competence through competence-enhancing fan experiences fosters human flourishing. If highly identified fans engage in dysfunctional fan behavior (e.g., abusive language and hostile aggression) or excessive sport consumption which results in some negative consequences (e.g., uncontrolled food consumption, financial difficulty, and family tension), spectator sport consumption would not contribute to human flourishing, but might result in the greater ill-being of sport fans (e.g., anger,

depression, negative thinking, physical exhaustion, and burnout). Our results identified a plausible route (fan engagement behavior → fan well-being → flourishing) for illuminating how context-specific fan well-being enables engaged sport fans to enhance their competence in a mentally, socially, and physically ideal manner, and eventually to experience an increase in their flourishing.

Third, team identification (t_1) was found to be unrelated to flourishing (t_3), but indirectly influenced flourishing (t_3) through fan engagement behavior (t_1) and fan well-being (t_2). One possible explanation is that team identification is a cognitive sense of group membership in team sport (Gwinner & Swanson, 2003; Lock & Heere, 2017) and mainly promotes social well-being (Inoue et al., 2022; Wann et al., 2011; Wann et al., 2017); however, it is unlikely to directly boost human flourishing in a broader sense. Based on our findings (see Table 4), we argue providing people with engaging fan experiences will help them achieve a desired state of well-being as a sport fan and ultimately flourish in daily life. This view is consistent with previous research that suggests PERMA domains in spectator sport enable individuals to flourish in everyday life (Doyle et al., 2016; Oshimi & Kinoshita, 2022). Conceptually, fan engagement behavior reflects the engagement aspect of the PERMA model while team identification is relevant to the dimension of relationships. The other dimensions of positive emotions, meaning, and achievement are related to the hedonic (e.g., positive emotions) and eudaimonic (e.g., meaning and achievement) fan well-being in this study. Unlike prior studies, this predictive research is one of the first attempts to elucidate the complex, sequential mediating roles of fan engagement behavior and fan well-being in the relationship between team identification and flourishing in a single framework. Our empirical results suggest that fan well-being is more effective than team identification and fan engagement behavior in predicting flourishing in the

context of Japanese professional baseball.

Another reason for the nonsignificant effect of team identification on future flourishing might be attributable to the difference in team identification between Japanese and American baseball spectators. According to James et al. (2009), professional baseball fans in the United States have higher levels of team identification than in Japan. Over the past three decades, some of the most talented players in Japanese professional baseball (e.g., Shohei Ohtani, Yoshinobu Yamamoto, Shota Imanaga, Yu Darvish, Hideki Matsui, and Ichiro Suzuki) have moved to Major League Baseball (MLB). The player movement from Japan to the Unites States "may signal to some consumers a decline in the quality of Japanese baseball" (James et al., 2009, p. 362), leading to a tendency among Japanese baseball fans to have a moderate level of team identification. In contrast, Unites States baseball fans tend to highly identify with their favorite teams and attend more games due to the high levels of athleticism and skills performed by MLB players (James et al., 2009). Therefore, one interpretation of our results is that, because of a moderate level of team identification among Japanese baseball fans, team identification did not directly contribute to flourishing in life but it still had an indirect effect through fan well-being.

Managerial implications

The results of our study provide meaningful new insights for sport teams regarding the role that sport spectatorship can play in the enhancement of fan well-being and overall flourishing. While active leisure opportunities have been linked to an enhancement in overall well-being (Sonnentag et al., 2017), our study not only provides implications for domain-specific well-being and overall well-being, but also illustrates how fan engagement behavior can impact flourishing indirectly through fan well-being. Specifically, fan engagement behavior plays in an important function in influencing long-term fan well-being which in turn positively impacts flourishing.

Therefore, it is incumbent upon sport organizations to continue to provide experiential pathways for fans to channel their engagement via fan festivals, player-fan meet and greets, and virtual content initiatives. Providing these vital pathways serve to enhance fans' competency development to enhance their fan experience (Yoshida et al., 2024) and is a necessary precursor to enhance well-being and flourishing (Deci & Ryan, 2000). Nowhere is this more evident than in Major League Baseball (MLB) where changes have been made to the core product (i.e. pace of play and style of play rule changes), partnerships have been formed with prominent influencers (i.e. MD Motivator's inspirational videos), and stadium improvements such as mixed-use ballpark districts (i.e. Ballpark Village in St. Louis) and enhanced social gathering spaces (i.e. The Rooftop at Coors Field) have been implemented to not only target younger audiences but also to further engagement among existing fans (Castrovince, 2024).

The MLB initiatives not only can foster further fan engagement, but they can also impact multiple facets of fan well-being. For example, a focus on speeding up the pace of play and enhancing play style by eliminating the infield shift may prompt more fans to attend events as well as enhance their enjoyment of the core product thus positively impacting their physical (Jang et al., 2017; Yoshida et al., 2023) and hedonic (Oshimi & Kinoshita, 2022; Unanue et al., 2020) well-being. This would be an illustration of how an organizational (league-wide in this case) adaptation can enhance happiness and pleasure among fans, a key component of well-being (Ryan & Deci, 2001). Partnerships with prominent influencers who share inspiring messages such as MD Motivator may boost fan's personal growth, enhance relationships with others, and positively boost their overall mental state which in turn will affect their eudaimonic well-being (Misener, 2020). Further, the results of this study also answer the call for more research into the relationship between transformative sport services and eudaimonic well-being (Inoue et al.

2020). Finally, an emphasis on enhancing the social interaction in and around the ballpark has been a focus of MLB teams recently. Providing space in the facility for social interaction and building surrounding districts for pre- and post-game social endeavors could be aimed at bolstering fans' social well-being. This approach highlights the importance of enhancing existing relationships and forming new bonds to enhance well-being through the vehicle of sport consumption (Doyle et al., 2016). The results of our study indicate that providing diverse experiential engagement pathways can enhance multiple facets of fan well-being in a desirable way which in turn fully mediates the relationship between engagement and fan flourishing according to the results of this study.

Limitations and Directions for Future Research

Despite this study's new insights into sport well-being research, it is not without limitations. First, this study tracked individuals in a predictive data set over two years in a specific context: professional baseball in Japan. Future studies should examine and replicate our findings in other spectator sport setting. It is also important to note the findings of this study need to be replicated in other countries (e.g., western countries) because the current study was conducted in Japan. In this regard, a suggestion for future research is to examine how cultural differences between western and eastern countries influence (moderate) the proposed relationships.

Specifically, long-term orientation (Hofstede & Minkov, 2010), the fifth dimension of Hofstede's national culture, might influence our model results. Long-term orientation refers to the extent to which a society places importance on future-oriented values such as persistence and thrift (Hofstede & Minkov, 2010). According to empirical data, Japanese people are long-term oriented (Hofstede & Minkov, 2010), which may strengthen the long-term effect of fan well-

being (t_2) on flourishing (t_3). Thus, we recommend that future studies examine the moderating effect of long-term orientation on the relationship between fan well-being and future flourishing across long-term (e.g., East Asia) and short-term (e.g., Latin America) oriented countries. According to Hofstede and Minkov (2010), Anglo-Saxon countries, such as the United States, are relatively short-term oriented, suggesting that our hypothesized long-term effects may differ between Japan and the United States.

Second, the current study relied on human flourishing as an outcome variable at Time 3. There are other well-being outcomes in the general life area, including life satisfaction (Diener et al., 1985), subjective happiness (Lyubomirsky & Lepper, 1999), psychological well-being (Ryff, 1989), subjective vitality (Ryan & Frederick, 1997), and meaning in life (Steger et al., 2006). Therefore, future research to investigate the effect of fan well-being on these outcome variables should be considered.

Third, future research should explore more specific aspects of competence-enhancing activities, dividing fan engagement behavior into more explicit experiences relevant to competence-development. Examining fan experiences in more details will help scholars explain how specific sport consumption experiences act as competence-enhancing activities and contribute to the enhancement of fan well-being through sport spectatorship. Similarly, in this study, we did not directly measure competence, but considered fan well-being as competence development because it reflects an ideal state of fan competence in terms of psychological functioning, social harmony, and physical health as a fan. It will be interesting to adapt and extend our model by conceptualizing and testing sport fans' competence (e.g., knowledge, skills, and ability).

Fourth, this study omitted additional variables related to our theoretical framework. For

example, although we consider team identification and fan well-being as the fulfillment of the basic needs for relatedness and competence respectively, we did not measure other basic needs such as autonomy and detachment from work (Kim & James, 2019). Also, we did not examine vicarious achievement which is a sense of accomplishment by witnessing the success of one's favorite team (Trail et al., 2003) and reflects the achievement domain of the PERMA model. We suggest that future research should include these factors as predictor variables when testing fan well-being and flourishing.

Finally, we did not employ an experimental research design to examine a cause-and-effect relationship between fan well-being and flourishing. Future research should carry out experimental research to compare the effect of fan well-being with and without a particular spectator sport consumption experience and demonstrate how flourishing significantly changes between the pre- and post-periods among the experimental group versus those who are not exposed to the spectator sport consumption experience (control group).

Conclusion

The current study provides clarity on the bottom-up mechanism to enhance flourishing among sport fans by explaining the mediating role of context-specific fan well-being in the relationships between team identification, fan engagement behavior, and flourishing in a predictive way. In the past decade, the complexity of sport-related social (Lee et al., 2013), environmental (Wicker & Thormann, 2022), and moral (Walzel et al., 2018) issues has transformed the sport management discipline, broadening the conceptual and theoretical importance of well-being (Inoue et al., 2020). Sport-specific fan well-being, in particular, will offer new opportunities to sport management researchers by bridging the gap between human flourishing and sport spectatorship which includes both the bright and dark sides of sport

fandom. To capitalize on such new opportunities, we encourage scholars to extend this research by considering additional possibilities of the bottom-up mechanisms triggered by spectator sport consumption in the contemporary era of public health and social welfare.

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Table 1

Comparison of this study with previous studies

Type of well-being	Exemplar studies	Context	Relationships examined	Different aspects of well-being	Sport-specific fan well-being	Predictive study (time-lagged data used)	Flourishing as an outcome	Flourishing examined in a predictive manner
PERMA	Doyle et al. (2016)	Australian rules football	Yes[a]	Yes	Yes	No	No	No
Life satisfaction and emotional support	Inoue et al. (2017)	Multiple sport leagues	Yes	No	No	Yes	No	No
Subjective vitality and spectator happiness	Jang et al. (2017)	International soccer matches	Yes	Yes	Yes	No	No	No
Global well-being	Kim et al. (2017)	FIFA World Cup	Yes	No	No	Yes	No	No
Sense of belonging and presence of meaning	Wann et al. (2017)	College basketball	Yes	No	No	No	No	No
Positive affect, negative affect, and life satisfaction	Kim and James (2019)	Diverse spectator sport consumption	Yes	Yes	No	No	No	No
Flourishing	Cho et al. (2021)	Professional soccer	Yes	No	No	No	Yes	No
Meaning in life and happiness	Delia et al. (2022)	Professional basketball	Yes[a]	Yes	Yes	No	No	No
Life satisfaction	Oh et al. (2022)	Professional baseball	Yes	No	No	No	No	No
Psychological well-being	Reysen et al. (2022)	Leisure activities (e.g., sport, music, media, etc)	Yes	No	No	No	No	No
Global, evaluated, and experienced well-being	Unanue et al. (2022)	Copa America	Yes	Yes	No	Yes	No	No
PERMA, life satisfaction, and flourishing	Oshimi and Kinoshita (2022)	Professional baseball	Yes	Yes	Yes	No	Yes	No
Spectator happiness and overall happiness	Sato et al. (2023)	Professional soccer and baseball	Yes	Yes	Yes	Yes	No	No
Flourishing	Yoshida et al. (2024)	Professional baseball	Yes	No	No	Yes	Yes	No
Fan well-being and flourishing	This study	Professional baseball	Yes	Yes	Yes	Yes	Yes	Yes

[a]Relationships were observed in qualitative research.

Figure 1

Theoretical model and hypotheses

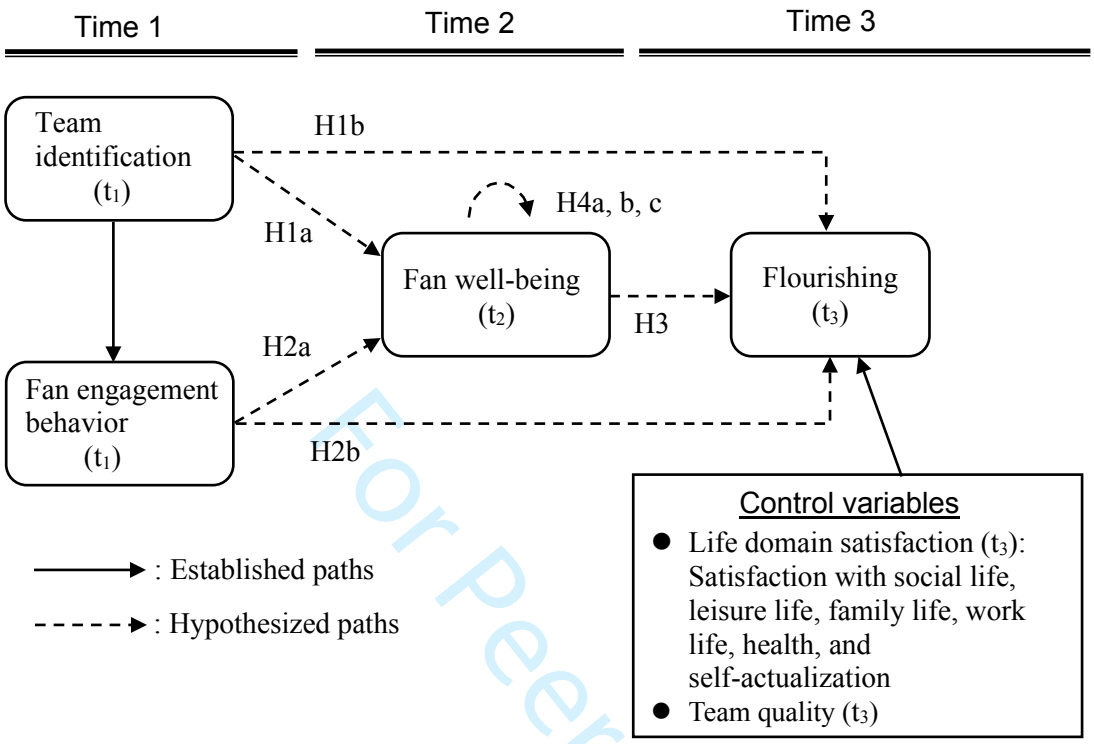


Table 2

CFA results (n= 417)

Construct	Items	λ	CR	AVE
Team identification (t_1)			0.92	0.69
1.	When someone criticizes [team name], it feels like a personal insult.	0.78		
2.	When I talk about [team name], I usually say "we" rather than "they."	0.84		
3.	[team name]'s successes are my successes.	0.90		
4.	When someone praises [team name], it feels like a personal compliment.	0.86		
5.	If a story in the media criticized [team name], you would feel embarrassed.	0.77		
Fan engagement behavior (t_1)			0.94	0.73
1.	I regularly talk about [team name] with others.	0.83		
2.	I learn a lot about [team name] at the team's games.	0.87		
3.	I regularly purchase merchandise with [team name]'s name on it.	0.82		
4.	I often let others know I passionately support [team name].	0.88		
5.	I follow news about [team name] closely.	0.87		
6.	I frequently visit [team name]'s Web site.	0.85		
Hedonic fan well-being (t_2) [a]			0.97	0.85
1.	I felt happy to be a fan of [team name].	0.92		
2.	I felt interested in life by being a fan of [team name].	0.87		
3.	I felt satisfied to be a fan of [team name].	0.93		
4.	I felt joyful to be a fan of [team name].	0.94		
5.	I felt very positive to be a fan of [team name].	0.94		
Eudaimonic fan well-being (t_2) [a]			0.96	0.83
1.	I felt that I could become a better person by being a fan of [team name].	0.89		
2.	I felt confident to express my own ideas and opinions as a fan of [team name].	0.89		
3.	I felt that I had a sense of meaning in my life because of my sport fandom.	0.93		
4.	I felt that what I did as a fan of [team name] added purpose and meaning to my life.	0.92		
5.	I felt that what I did as a fan of [team name] was valuable and worthwhile.	0.93		
Social fan well-being (t_2) [a]			0.96	0.86
1.	I felt that I belonged to the fan community of [team name].	0.92		
2.	I felt that [team name]'s fan community was a good place for all fans.	0.93		
3.	I felt that I had something to contribute to the fan community of [team name].	0.93		
4.	I felt that the way [team name]'s fan community was organized made sense to me.	0.93		
Physical fan well-being (t_2) [a]			0.94	0.80
1.	I felt that my health did not limit me from engaging in vigorous activities such as clapping, standing, and singing at all.	0.92		
2.	I felt that my health did not limit me from walking around and inside the stadium at all.	0.92		
3.	I felt that my health did not limit me from climbing stairs at the stadium at all.	0.90		
4.	I felt satisfied with eating food and drinking beverages in moderation when watching the games of [team name].	0.85		
Flourishing (t_3)			0.95	0.71

1. I lead a purposeful and meaningful life.	0.85		
2. My social relationships are supportive and rewarding.	0.86		
3. I am engaged and interested in my daily activities.	0.89		
4. I actively contribute to the happiness and well-being of others.	0.88		
5. I am competent and capable in the activities that are important to me.	0.89		
6. I am a good person and live a good life.	0.85		
7. I am optimistic about my future.	0.68		
8. People respect me.	0.82		
Team quality (t_3)		0.88	0.65
1. [Team name] have a good history.	0.70		
2. [Team name] have star players.	0.84		
3. [Team name] are a high quality team.	0.91		
4. [Team name] have good win/loss records.	0.75		
χ^2 (df)	1522.60(751)		
χ^2/df	2.03		
CFI	0.96		
TLI	0.96		
RMSEA	0.050		

Note. t_1, t_2, and t_3 denote three time points.

[a]To measure the four dimensions of fan well-being, we used a seven-point Likert-type scale ranging from "strongly disagree (1)" to "strongly agree (7)" at the end of the 2022 season by asking: "*In the 2022 season, how did you feel about the following items? For each item, please choose the number that best reflects your feeling*."

Table 3

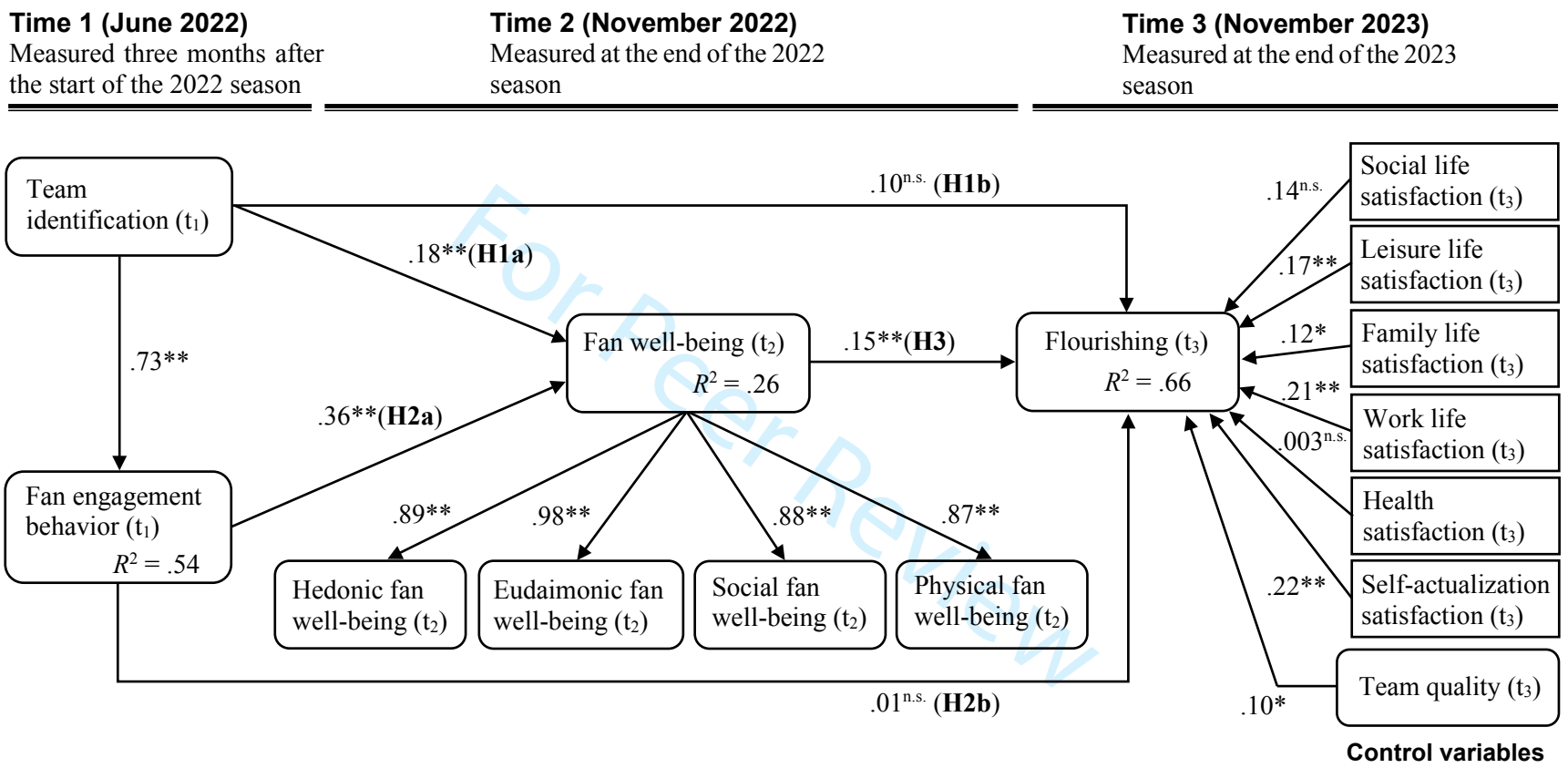
Descriptive statistics and correlations

Construct	ϕ matrix (n = 417)							
	1	2	3	4	5	6	7	8
1. Team identification (t_1)	***0.69***	0.53	0.08	0.20	0.24	0.11	0.11	0.05
2. Fan engagement behavior (t_1)	0.73	***0.73***	0.15	0.24	0.21	0.19	0.11	0.09
3. Hedonic fan well-being (t_2)	0.29	0.39	***0.85***	0.78	0.55	0.63	0.19	0.32
4. Eudaimonic fan well-being (t_2)	0.45	0.49	0.88	***0.83***	0.76	0.70	0.23	0.25
5. Social fan well-being (t_2)	0.49	0.46	0.74	0.87	***0.86***	0.67	0.24	0.20
6. Physical fan well-being (t_2)	0.34	0.44	0.80	0.84	0.82	***0.80***	0.23	0.20
7. Flourishing (t_3)	0.33	0.33	0.44	0.48	0.49	0.48	***0.71***	0.26
8. Team quality (t_3)	0.22	0.29	0.57	0.50	0.45	0.45	0.51	***0.65***
M	3.95	4.31	4.67	4.31	4.04	4.36	4.62	4.88
SD	1.54	1.53	1.58	1.59	1.65	1.59	1.17	1.28

Note. The average variance extracted values are shown in bold and italics on the diagonal. Squared correlations appear in the upper triangle of the ϕ matrix. We calculated the mean scores and standard deviations (SDs) for the latent constructs using IBM Statistical Package for the Social Sciences (SPSS) 28.0. All correlation coefficients shown in the lower triangle of the ϕ matrix are statistically significant at the .01 level ($p < .01$).

Figure 2

Hypothesis testing: structural relationships (n = 417)



Note. χ^2 (df) = 2204.44 (1007), χ^2 /df = 2.19, comparative-fit index = .94, Tucker-Lewis index = .93, root mean square error of approximation = .054, * $p < .05$, ** $p < .01$, n.s. = not significant. The 95% confidence interval for the effect of health satisfaction (t_3) on flourishing (t_3) is presented in the third decimal place because this effect is below 0.01.

Table 4

Indirect effects for the hypothesized model (n = 417)

Indirect effect	Bootstrap estimate			95% CI	
	Standardized effect	Unstandardized effect	SE	Lower	Upper
Team ID (t_1) → Fan WB (t_2) → Flourishing (t_3) (**H4a**)	0.03*	0.02*	0.01	0.002	0.052
Engagement (t_1) → Fan WB (t_2) → Flourishing (t_3) (**H4b**)	0.05*	0.04*	0.02	0.015	0.079
Team ID (t_1) → Engagement (t_1) → Fan WB (t_2) → Flourishing (t_3) (**H4c**)	0.04*	0.03*	0.01	0.011	0.062

Note. The 95% confidence intervals for the indirect effects are presented in the third decimal place because some values are very low. Team ID (t_1) = team identification (t_1), Engagement (t_1) = fan engagement behavior (t_1), Fan WB (t_2) = fan well-being (t_2), SE = standard error, CI = confidence interval, * $p < .05$