



# Investigating consumer preferences and perceptions of brands across men's and women's sport: a brand architecture approach

Jason P. Doyle, Yiran Su, Sarah Jane Kelly, Kevin Filo & Thilo Kunkel

**To cite this article:** Jason P. Doyle, Yiran Su, Sarah Jane Kelly, Kevin Filo & Thilo Kunkel (2025) Investigating consumer preferences and perceptions of brands across men's and women's sport: a brand architecture approach, *Sport Management Review*, 28:2, 370-395, DOI: [10.1080/14413523.2024.2442188](https://doi.org/10.1080/14413523.2024.2442188)

**To link to this article:** <https://doi.org/10.1080/14413523.2024.2442188>



Published online: 22 Dec 2024.



[Submit your article to this journal](#)



Article views: 1252



[View related articles](#)



[View Crossmark data](#)



Citing articles: 2 [View citing articles](#)



# Investigating consumer preferences and perceptions of brands across men's and women's sport: a brand architecture approach

Jason P. Doyle <sup>a</sup>, Yiran Su <sup>b</sup>, Sarah Jane Kelly <sup>c</sup>, Kevin Filo <sup>a</sup> and Thilo Kunkel <sup>d</sup>

<sup>a</sup>Department of Tourism, Sport and Hotel Management, Griffith University, Southport, QLD, Australia; <sup>b</sup>Mark H. McCormack Department of Sport Management, Isenberg School of Management, University of Massachusetts Amherst, Amherst, MA, USA; <sup>c</sup>Graduate School of Business, Queensland University of Technology, Brisbane, Australia; <sup>d</sup>School of Sport, Tourism and Hospitality Management - Sport and Recreation Management, Temple University, Philadelphia, PA, USA

## ABSTRACT

Understanding consumers' perceptions of sport brands has received widespread scholarly attention, however most of this work has focused on men's sport. The current research considers brand architecture to examine the preferences, perceptions and attitudinal loyalty of individuals who support men's and women's professional sport. We explore if, and to what extent, consumer-based brand association perceptions attached to men's and women's teams within the same club vary. Data were collected using an online survey from Australian consumers who indicated following a men's and women's league ( $N = 525$ ). Almost half ( $N = 231$ ) followed the same team across men's and women's sport and in each case the brands used by these teams were the same. Confidence interval and Random Forest analyses determined if consumers' perceived brand associations differently across their favourite men's and women's teams, and the importance of the brand association sets to attitudinal loyalty in each case. Results indicated the brand association sets possessed similar predictive power for attitudinal loyalty in the men's (55%) and women's (51%) contexts, and the same five brand associations (emotions, socialisation, esteem, nostalgia, and escape) emerged as the most important across both. Results outline the utility of a branded house approach to achieve brand selection, whilst demonstrating the need to manage brand extensions as distinct entities. Findings extend past work by examining consumer patterns across men's and women's sport concurrently, and by exploring respondent gender differences. These findings have implications for sport organisations pursuing brand extensions more broadly in an increasingly entrepreneurial and global market, as well as practitioners managing multi-brand portfolios.

## KEYWORDS

Brand equity; sport consumption; women's sport

## Introduction

Sport is a multi-billion-dollar industry attracting significant global attention (Manoli, 2018). Estimates placed the worldwide value of the sports industry at over \$501 billion

(USD) in 2022 with this forecast to surpass \$707 billion (USD) by 2026 (The Business Research Company, 2022). The effective positioning of brands within an organisation's portfolio reflects an integral part of brand management strategy, necessitating that sport organisations understand how to best introduce and manage new brands when they are brought to market (Manoli, 2024). Sport organisations are increasingly investing in women's sport as a strategic opportunity to further engage with consumers and to capture new markets, with numerous examples of new women's leagues and teams being established around the world. Likewise, consumer interest in women's sport continues to grow globally as demonstrated by the 2022 Women's European Championship hosted in England and the 2023 FIFA Women's World Cup (WWC) hosted in Australia and New Zealand. The 2022 Women's European Championship final hosted 87,192 fans, breaking the attendance record for any previous men's or women's final (Brennan, 2022), whilst the 2023 FIFA WWC exceeded projected tournament attendance figures by over 500,000 (Needelman, 2023).

Despite the rapid growth of, and increased consumer attention directed towards women's sport, the media, commercial sponsors, and researchers continue to disproportionately focus on men's sport (Delia et al., 2021, 2022; Fenton et al., 2023). Consequently, scholars have called for further examinations of women's sport (Sveinson & Hoeber, 2016; Thomson et al., 2022), with a spotlight placed on deriving knowledge on how women's sport brands can be effectively created, managed, and commercialised (Qian et al., 2023). Recent scholarship advocates that brands should not be studied in isolation, and consideration must be given to the role of other related brands in shaping consumer perceptions towards brands (Cornwell et al., 2023; Kunkel & Biscaia, 2020). This notion is particularly salient in sport given the close relationships that exist between separate yet interconnected brands operating at the federation, league, team, and athlete levels, along with linkages with sponsoring brands and charities (Baker et al., 2022).

Concurrently, scholars outline how strategic brand management must consider a consumer-focused approach, as consumers represent a key stakeholder and purchaser of the brand (Manoli, 2024). Hence, how organisations position their brands is important, and must be understood by how such positioning is interpreted by consumers. To date, sport organisations have demonstrated different strategic branding approaches for investing in women's sport. In the US professional sport market, the equivalent men's and women's sport teams tend to be managed as separate brands (Doyle et al., 2021). For example, none of the 30 men's Major League Soccer (MLS) nor 14 National Women's Soccer League (NWSL) teams share the same branding. Conversely, the predominant approach across Australia and Europe is to manage men's and women's teams as part of the same brand portfolio. More specifically, the newer women's teams have been introduced as brand extensions of the pre-existing men's teams, as demonstrated by Arsenal FC fielding men's and women's teams using the same branding across the English Premier League (EPL) and Women's Super League (WSL). Yet, scholarship has not yet examined how adopting the branded house approach in introducing women's professional sport teams impacts how these brands are perceived by consumers. We capitalise on this opportunity to advance knowledge related to how women's sport brands can be created, and subsequently managed (Qian et al., 2023).

The purpose of this research was to examine the extent to which consumers possess preferences for men's and women's sport teams from the same branded house and to

subsequently determine if and how, perceptions and attitudinal loyalty exhibited towards these brands differ. The present research builds on previous work which has begun to contrast consumers of men's and women's sport teams at a national representative level. For example, Clarke et al. (2022) compared the motives, team identification, and behaviours exhibited by England's men's and women's football team fans, finding similar patterns across the two consumer groups. Whereas Clarke et al. (2022) focused on consumers of national teams and utilised two independent samples in their analysis, the present research focuses on the professional sport context and draws upon a sample of individuals who follow both men's and women's sport teams from within the same brand portfolio.

This context allows us to respond to calls for research to go beyond the typical approach of studying how women/men consume and perceive women's/men's sport in isolation by considering the influence of gender at both the team and consumer level (Wear et al., 2022). This approach further answers Baker et al.'s (2022) research directive for work "assessing perceptions of men's and women's sport brands concurrently and acknowledging that these co-exist within the same sport ecosystem, rather than seeing these as two separate research streams" (p. 10). Addressing these research opportunities creates the ability to identify specific factors that uniquely or similarly influence support for each team, allowing for an improved understanding of sport consumer behaviour patterns across men's and women's sport. Such insights can be leveraged by practitioners to create targeted marketing campaigns promoting the brands in their portfolios individually and collectively.

## Literature review

### *Sport brands*

The proliferation of sport brands and advancements in technology have combined to compel sport organisations to adopt an increasingly strategic approach to their marketing (Manoli, 2024). Today's sport brands represent some of the most highly recognisable and valuable global brands, with ongoing debate surrounding the best practice to manage brands that elicit high emotional involvement from consumers and other stakeholders (Baker et al., 2016). Hence, understanding how and why sport consumers select their preferred brands has been a long-standing goal for sport management scholars and practitioners alike (Funk & James, 2001; Stewart et al., 2003). Scholarship has centred on determining factors underpinning the establishment, maintenance, and extinguishment of team support for decades (c.f., Cialdini et al., 1976; Lock et al., 2011; Wann et al., 1996). More recently, researchers have focused on various aspects of the team-consumer connection including establishing why consumers choose to follow expansion teams entering new markets (Davies et al., 2022; Doyle et al., 2017). This is an important area of research given most professional sports are well established and the creation of new teams typically involves their integration into existing leagues. For instance, Doyle et al. (2017) focused their work on a new men's Australian Rules football team created in a region where the Australian Football League (AFL) had not been previously represented. Elsewhere, Davies et al. (2022) examined expansion within the US sport market focusing on the men's National Hockey League (NHL) and the case of the Seattle Kraken being

introduced almost a century after the previous Seattle-based team – The Metropolitan – had folded.

Whilst such scholarship has canvassed how consumers respond to sport brands being introduced under various market conditions, opportunities exist to extend this focus to include consumers of women's sport (Delia et al., 2021, 2022). Work to date has focused on determining the similarities and differences between supporters of a men's and women's national football team. Clarke et al.'s (2022) research on consumers of England's men's and women's national football teams demonstrated that whilst there was nuance in terms of the motives important to driving support for each respective team, the team identification and behavioural characteristics of these groups displayed many similarities. However, this research design assessed separate consumer samples rather than individuals who followed both teams, meaning any interrelationships between these brands could not be fully explored. Similarly, brand association perceptions, which provide a detailed understanding of consumer's evaluations of a brand, were not measured, creating an opportunity to advance this line of research. We employ brand architecture, discussed next, to underpin this research and to consider how professional sport organisations can manage women's and men's sport brands concurrently.

### **Brand architecture**

Brand architecture provides a lens to understand how any one brand may be impacted by the organising structure of the brands that surround it (c.f., Aaker & Joachimsthaler, 2000). Across most professional sports, the prevailing brand architecture consists of a league acting as a master-brand and subsequently providing the platform for teams, conceptualised as sub-brands, to compete (Kunkel & Biscaia, 2020; Kunkel et al., 2013). The hierarchical nature of the relationship between the league and its teams, and the horizontal relationship between the teams, inherently link them with each other in the eyes of the consumer. The thoughts, feelings, and beliefs an individual holds towards one brand can therefore spill-over and impact how other associated brands are perceived (Cobbs et al., 2016; Doyle et al., 2021) and their overall brand equity (Cornwell et al., 2023). Consequently, Keller (2014) noted that how an organisation structures its brands provides the roadmap for the brand's successes and helps to determine the overall value and equity of the brand.

Aaker and Joachimsthaler (2000) characterised the different ways that brand architecture can be employed, describing two main approaches that sit at opposite ends of a brand strategy spectrum. First, an organisation may structure its offerings according to the "house of brands" approach introducing and managing brands with different names (Keller, 2014). Unilever offers a good illustration of this approach as they own and manage brands in numerous consumer categories and market these under their own distinct brand names including Ben & Jerry's, Dove, and Rexona. Second, an organisation may pursue the "branded house" strategy where its respective products and/or services use the same brand across each (Keller, 2014). An example is demonstrated by the Virgin structure, which holds representation across numerous categories and assembles each brand under the Virgin moniker (e.g., Virgin Airlines, Virgin Money, and Virgin Mobile).

It is important to note the selection of a branding strategy depends on myriad considerations and in the case of the above applications of brand architecture, both

have benefits and drawbacks (Keller, 2014). According to associative networking theory, consumers evaluate and understand brands based on associative links and information they have encountered over time (c.f., Anderson, 1990). In terms of benefits of each approach, the house of brands strategy provides organisations with more latitude and creativity in terms of developing a distinct brand image for their brand extensions, whereas the branded house approach enables a given brand to capitalise on the existing awareness and brand equity that the brand has already accrued (Keller, 2014). In terms of drawbacks, any negative associations attached to a brand may spill-over to brand extensions introduced to a branded house, whereas a house of brands strategy initially creates a brand extension with low awareness and an absence of associative links formed by prior consumer experiences to draw upon (Anderson, 1990; Cornwell et al., 2023). Thus, brand managers need to consider the merits of each approach when introducing brands into their portfolios, such as when a sport organisation with an established men's team also creates a women's team. Likewise, it is crucial for researchers to chart how certain strategies impact consumers in terms of awareness, preferences, and loyalty, particularly in markets seldom studied.

### *Sport brand architecture*

Kunkel et al. (2013) suggested that professional sport brands typically adopt mixed-branding aspects between a house of brands and a branded house approach as evidenced in the relationships between leagues and member teams. For example, Major League Baseball as the higher-level master brand promotes games of the New York Yankees, representing a brand in the portfolio of the league. Subsequent work has documented how multiple brands combine to form the sport brand ecosystem and environment (Baker et al., 2022; Doyle et al., 2023; Kunkel & Biscaia, 2020). Consistent with associative networking theory (Anderson, 1990), Su et al. (2020) explained that consumers evaluate brands using the context in which they encounter them, alongside any direct experiences they have had with a given brand. As sport brands exist within a multi-layered hierarchy, spill-over influences exist both vertically and horizontally within the sport brand ecosystem (Kunkel & Biscaia, 2020). In other words, relationships between master-brands and sub-brands (e.g., league and team, or team and athlete) and between multiple sub-brands (e.g., two teams within the same league) become salient and provide cues as a consumer evaluates a given brand.

Research has demonstrated how professional sport teams can derive consumer-based brand equity from associations with the master-brands that govern them (e.g., the league's brand) as well as from other teams (i.e., sub-brands) they compete with in the league (Kunkel et al., 2017; Tyler & Cobbs, 2017). Thus, the perceptions a consumer associates with a given brand are derived from their direct experiences with that brand, alongside other brands associated with the target brand (Cornwell et al., 2023). Within collegiate sport settings, scholars have shown the impact of university identification on team identification (Heere et al., 2011) and vice-versa (Katz & Heere, 2016). Further work has explored the relationship between leagues and their representative team brands (Kunkel et al., 2013, 2017), how league and team brands influence consumer perceptions of associated athlete brands (Hasaan et al., 2018; Su et al., 2020), and how athlete brands

can conversely exert influence on consumer perceptions of team, league, and event brands (Daniels et al., 2019; Shapiro et al., 2017).

Whilst brand architecture has been employed to understand numerous brand relationships, opportunities remain to better understand consumers who follow both men's and women's sport and their subsequent selection and perceptions of teams from within a single portfolio. This is pertinent given the proliferation of women's sport brands in recent times, and as research suggests sport consumers often follow multiple teams (Fujak, 2021). Brand associations, discussed next, provide a basis to understand how consumers evaluate and perceive sport brands (Wear & Heere, 2020) and guide brand management strategy (Manoli, 2024).

### ***Brand associations and brand equity outcomes***

Brand associations represent key determinants of consumer-based brand equity and have been used extensively in sport consumer research (Daniels et al., 2019; Gladden & Funk, 2002). Understanding the strength of the brand associations which contribute to overall brand perceptions is important to help sport organisations differentiate their brands and build connections with consumers (Bauer et al., 2008; Kunkel et al., 2016). Scholars have identified key associations consumers link to sport teams, creating scales to measure the attributes and benefits perceived by consumers (e.g., Bauer et al., 2008; Gladden & Funk, 2001; Ross et al., 2006) and demonstrated the utility of brand associations to explain a significant proportion of sport fans' attitudinal loyalty, which is one key variable sport managers must monitor in their pursuit in building and maintaining supporter bases. For instance, past work has demonstrated the ability of brand association sets in predicting between 57–59% of variance in the attitudinal loyalty displayed towards sport teams (Doyle et al., 2013). The collective contributions of this work have advanced theory in terms of understanding the range of associations consumers attribute to sport team brands and in guiding managers to develop distinct brands which garner favourable attitudinal responses from consumers. Yet, as much of the existing work has focused on men's sport and brand associations are context-specific, further work is needed (Daniels et al., 2019). In particular, understanding how brand associations can predict attitudinal loyalty within expanding sport portfolios and determining which associations possess the most importance in predicting loyalty, reflects knowledge which can inform theory and guide managers charged with marketing said brands.

Although research has predominantly concentrated on men's sports, women's sports are gaining increased attention from branding scholars. Qualitative research focused on exploring the consumer-based brand associations held towards women's sport brands uncovered five new associations (i.e., funding, media coverage, new opportunities, role models, and inclusivity) not previously established in men's sport (Doyle et al., 2021). These additions reflect many of the challenges and opportunities women's sport brands face in terms of their commercialisation and management (Delia et al., 2021) but are yet to be measured or compared across contexts. Hence, further work is needed to examine sport brands across different settings and brand environments. Similarly, brand association research considering multiple sport brands is needed to better reflect how consumers encounter these brands in an integrated, rather than isolated, manner as occurs in the real world

(Baker et al., 2022; Cornwell et al., 2023). The growth of women's sport in recent years provides an opportunity to determine if, and how, brand association perceptions for an organisation's men's and women's teams in the same branded house may differ. Whilst the branding used to present both teams may be the same, the men's teams are typically more established. For example, in Australia, the Collingwood Magpies play in the men's AFL and the women's AFL, but the men's team was established 125 years earlier (1892) than the women's team (2017).

Ross (2006) conceptualised that both the awareness and the brand associations consumers attribute to sport organisations are influenced by the organisation's marketing efforts, information provided by other market sources, and direct experiences that consumers have with the brand. Subsequent research has supported this theorising and demonstrated that brand associations can fluctuate, both positively and negatively, based on the changing circumstances surrounding any given team (Kunkel et al., 2016; Wear et al., 2022). Daniels et al. (2019) demonstrated contextual factors like a team's success or a star player's outstanding performance were influential in determining how consumers viewed the attributes and benefits linked to their chosen teams. Ross (2006) suggested that the consumers' direct experience with a sport brand operates as a primary driver for consumer-based brand equity, challenging researchers interested in settings void of such opportunity.

Doyle et al. (2017) found consumers held salient brand associations towards a newly established AFL team six months prior to the team's first match, indicating the importance of early marketing communications and news coverage as sources that consumers rely on to develop their perceptions of new sport teams. More recent research examining a team in an even earlier stage of its lifecycle has further demonstrated brand association development can occur with limited direct experiences. Davies et al. (2022) noted brand associations were formed towards the National Hockey League's (NHL) new Seattle franchise before the team had even revealed their Seattle Kraken brand. In this case, consumers largely drew on their perceptions of the NHL's league brand and their knowledge of the Seattle sports market when evaluating the nascent NHL Seattle brand. These findings support the tenets of brand architecture and illustrate how consumers' evaluations of a given brand are influenced by the brands which surround it (Baker et al., 2022; Kunkel & Biscaia, 2020) and how brand equity can transfer from one brand to other related brands (Cornwell et al., 2023). To extend this exploration and consider the interplay between men's and women's sport, the following research questions were developed:

**RQ1:** To what extent do consumers develop a preference for the same teams across men's and women's sport?

**RQ2:** How do team brand association perceptions vary for consumers who follow the same teams across men's and women's sport?

**RQ3:** What differences, if any, exist between the team brand associations most important to predicting consumers' attitudinal loyalty across men's and women's sport?

## Method

### *Research context*

The Australian sport landscape was selected as an appropriate context for the current research for two main reasons. First, Australia hosts several professional men's and women's sport leagues. Second, and more importantly, several clubs within these leagues house both men's and women's teams. At the time of this research there were 40 women's teams competing across the Australian Football League Women's (AFLW; 14), National Rugby League Women's (NRLW; 4), A-League Women's (ALW; 9), Women's Big Bash League (WBBL; 8) and Super W (5) competitions; compared to 57 men's teams across the AFL (18), National Rugby League (NRL; 16), A-League Men's (ALM; 11), Big Bash League (BBL; 8) and Super Rugby (4) competitions. Amongst these 40 women's teams, 38 were brand extensions of the men's teams, representing a 95% adoption of the branded house strategy. Whilst the branded house strategy means the brands are consistent across the men's and women's teams, other conditions are not as comparable. Each of the existing men's leagues, and their respective teams, predate the women's leagues oftentimes by over a century. As previously mentioned, the Collingwood Magpies introduced a women's team into the AFLW in 2017, electing to adopt the branding used by the men's AFL team which has been competing since 1892. The shared branding, but disparity in opportunity to consume the women's team as a brand when compared with the men's team provided a suitable context for this research.

### *Procedure*

A panel provider (Qualtrics) was engaged to assist with data collection. This provider distributed a questionnaire to individuals in their database who fit the following criteria. First, they had to be based in Australia and therefore more likely than someone overseas to be familiar with and follow Australian sport. Second, individuals had to have previously indicated an interest in Australian sport. Invitations to complete the questionnaire were sent by Qualtrics to individuals on their database who fit both criteria. To ensure the recruitment of consumers interested in women's sport, we first asked respondents to identify their favourite Australian women's league and team, if any. If a respondent reported that they did not follow women's sport, they were directed to the end of the questionnaire and were not included in the sample.

Individuals who nominated a favourite women's team were asked a series of questions about their perceptions of, and attitudes towards, this team. This process was then followed asking the respondent to identify their favourite men's league and team, if any. Following completion of the survey, data were downloaded and imported into SPSS. A data cleaning process removed cases with incomplete data. Next, we refined the dataset by retaining individuals who indicated having both a favourite women's and men's league ( $N = 525$ ). Finally, we identified respondents who reported following the same team across both men's and women's offerings ( $N = 231$ ). We utilised these two datasets to address our research questions.

## Participants

Participants with a favourite Australian men's and women's league ( $N = 525$ ) were represented by slightly more females (52.3%) than males (46.9%). The sample ranged between 18–86 years old with a mean of 50.2 years ( $SD = 17.5$ ). Just under half of the respondents (47.7%) reported earning between \$25,001–\$75,000, while 23% earned between \$75,001–\$125,000 per annum. Most of the sample reported having children (69.3%). Approximately half (54.3%;  $N = 285$ ) of these respondents reported a favourite women's and men's league from the same sport; and most of these consumers (81%;  $N = 231$ ) held a preference for the same men's and women's team. The demographic data reported by these respondents for age (range = 19–81;  $M = 54$ ,  $SD = 16.6$ ), annual household income (54.8% earned between \$25,001–\$75,000; 20% earned between \$75,001–\$125,000) and having children (74.3% have at least one child) aligned with the larger sample. Notably, the refined samples' ( $N = 231$ ) gender characteristics changed with more males (54.8%) than females (44.3%) retained in the final study sample.

## Materials

Respondents were asked to indicate their level of agreement or disagreement with statements representing 23 brand association items (See Table 1). Respondents were asked to rate each brand association whilst thinking of their favourite

**Table 1.** Brand association and attitudinal loyalty items.

<b>Brand Associations</b>	
Success	The [Team] are a successful team on the field.
Star Players	[Team] have star players in the team.
Head Coach	The head coach of the [Team] does a good job.
Management	The [Team] are led by a management team who make good decisions.
Logo and Colors	I like the logo design and colors of the [Team].
Stadium	The stadium/venue [Team] plays in adds to their appeal.
Product Delivery	The [Team] play with an exciting playing style.
Tradition	The [Team] have a rich and proud history.
Culture and Values	The [Team] promote positive values.
Inclusivity	The [Team] are an inclusive organization.
Role Models	The [Team] have players on the team who are great role models.
Funding	The [Team] are given the funding and resourcing they need.
Media Coverage	The [Team] get an appropriate level of media coverage.
Pride in Place	The [Team] help to elevate the image of their region.
Escape	Following the [Team] helps me to temporarily forget about some of life's problems.
Esteem	When I hear someone praise the [Team] it feels like a personal complement.
Nostalgia	I have fond memories of following the [Team].
Peer Group	Following the [Team] helps me gain acceptance from my friends or family.
Acceptance	
Socialisation	Supporting [Team] has helped me to develop or strengthen my relationship with others.
Community	The [Team] have shown a commitment to giving back to their fans and community.
Engagement	
Emotions	Supporting the [Team] makes me feel strong emotions.
Entertainment	The [Team] provide me with a great source of entertainment.
New Opportunities	The [Team] support the growth and future of [women's/men's] sport in general.
<b>Attitudinal Loyalty</b>	
	I am committed to supporting [Team]
	I intend to keep supporting [Team] over other teams
	I plan to watch [Team] games on television or on a smart device, even when I could make other plans

women's team and then repeat this process with their favourite men's team in mind. Eighteen of these items have been validated and utilised previously across quantitative enquiries focused on men's sport. Twelve items (*Star Players, Head Coach, Management, Logo and Colors, Stadium, Product Delivery, Tradition, Pride in Place, Escape, Esteem, Nostalgia, and Peer Group Acceptance*) were adapted from Gladden and Funk (2002), two items (*Success and Community Engagement*) were adapted from Ross et al. (2006), and four items (*Culture and Values, Socialization, Emotions and Entertainment*) were from Bauer et al. (2008). The remaining five brand associations (*Inclusivity, Role Models, Funding, Media Coverage, and New Opportunities*) were operationalised from recent qualitative work focused specifically on the consumption of women's sport teams (Doyle et al., 2021). Given the large number of associations tested and to limit respondent fatigue and attrition, we followed the protocol employed in previous studies and assessed each using one item (Kunkel et al., 2016) as they capture the core of each brand association (Rossiter, 2002). This approach was deemed appropriate as research demonstrates the utility of single items, which operate similarly to multi-item scales (Kunkel et al., 2022).

To measure the intensity of support for one's favourite teams, we asked respondents to self-report their overall level of fandom for both their men's and women's team selections. We did this by asking them to indicate where they felt their fandom measured ranging from casual observer [1] to hardcore fanatic [7] (Kunkel et al., 2022). Next, a three-item attitudinal loyalty scale adapted from previous research (see Doyle et al., 2013) assessing the strength of connection between a respondent and their favourite men's and women's teams was included. Each item was measured on a 7-point Likert scale ranging from 1-strongly disagree to 7-strongly agree. Finally, respondents were asked to provide demographic data. Table 1 contains a list of the brand association and attitudinal loyalty items included in the study.

## Data analysis

Data analysis first involved profiling consumers' favourite leagues across both women's and men's sport. Next, we determined the extent to which team preferences were from within the same branded house. This process enabled the appropriate consumers to be identified and this data was used to address Research Question 1. Next, in response to Research Question 2, comparisons of the brand association sets were made. Specifically, we first conducted a confidence interval analysis (Cumming, 2014) to determine if significant differences were present across the 23 brand associations when considering the women's and men's teams selected across the whole sample of respondents. Next, we tested for respondent gender to assess if male and female consumers evaluated the brand associations attached to their favourite women's and men's team differently for a more granular understanding of the results. Finally, to address Research Question 3, Random Forest (RF) analyses were conducted to determine which associations were most important to consumers' attitudinal loyalty across their favourite men's and women's teams. These processes are further described below.

### Compare means: bootstrap confidence interval estimation

To mitigate the issues of multiple comparison problems and false discovery, the bootstrap interval estimate method was used (Cumming, 2014). This non-parametric approach is well-suited for analysing data obtained from Likert scales, where normality assumptions may not hold (Banjanovic & Osborne, 2019). To ensure robustness and reliability, all results were reported and interpreted via interval estimation utilising a 95% bootstrap confidence interval, with bootstrap samples of 10,000 rather than utilising p-values (Cumming, 2014; Dragicevic, 2016). The utilisation of confidence intervals not only offers insight into the statistical significance of the results, but also serves as a means of assessing the precision of the estimates (DiStefano, 2004). Furthermore, these intervals provide a range within which the true effects of the study may reasonably be expected (DiStefano, 2004). The interval analysis employing a bias-corrected-and-accelerated (BCa) bootstrap method was performed using R package *boot* and *bootES* (Kirby & Gerlanc, 2013).

### Brand association importance and attitudinal loyalty: random forest analysis

To further investigate the importance of consumers' brand associations in relation to attitudinal loyalty, a Random Forest (RF) algorithm was utilised (Breiman, 2001). The RF algorithm is a non-parametric ensemble method known for its effectiveness in handling regression and classification problems (Verikas et al., 2011). The RF utilised a decision tree method that has inherent advantages over competing methods as it selected relevant variables for prediction without relying on any functional or distributional assumptions (Biau, 2012). Moreover, RF was selected in place of conventional multiple linear regression (MLR) or structural equation modelling (SEM) due to its ability to identify the key brand associations that influence attitudinal loyalty among consumers of both men's and women's sports. We employed RF for this reason and for the technique's ability to efficiently manage many predictor variables whilst remaining robust to overfitting, making it ideal for our exploratory analysis purposes.

The RF algorithm develops many decision trees using a random subset of variables obtained independently and with replacement from the original dataset, providing benefits over linear regression analysis where dominant items can mask individual and collective impacts of other variables (Janitza et al., 2016). Therefore, RF is particularly useful for exploratory analysis aimed at uncovering the importance of predictors (Cieśliński et al., 2021). Moreover, RF's ability to capture nonlinear relationships and handle high correlation among variables sets it apart from traditional linear regression models (Simsekler et al., 2021). In contrast, MLR does not primarily focus on determining the importance of variables directly. Instead, it aims to model the relationship between variables and predict outcomes. As a result, larger standardised coefficients in MLR may not always signify greater importance due to potential confounding effects, where the relationships between variables are influenced by the presence of other variables (Grömping, 2015; Nimon & Oswald, 2013). While SEM is capable of handling both single-item and multi-item constructs, the validity of single-item measures in SEM remains a subject of debate (Petrescu, 2013).

To fit the RF model, we used the leave-one-out cross-validation approach (Vabalas et al., 2019), which repeatedly trains models based on ( $n-1$ ) dataset and tests on the left-out one observation for ( $n-1$ ) times and averages the resulting test errors. These steps help to ensure that the model is not overfitted. The models were fitted with the Caret (Kuhn, 2008) and Party R package (Hothorn & Zeileis, 2015) with default hyperparameters. The model performance was evaluated via the R-squared statistic, root mean squared error (RMSE), and mean absolute error (MAE) (Hyndman & Koehler, 2006). We used RF modelling to first identify the brand associations that most strongly influenced attitudinal loyalty across consumers' favourite men's and women's sports teams. The goal was not to compare individual variables between the two types of teams, but to identify and rank the most critical factors affecting loyalty in each category. This approach facilitated identifying and ranking the associations that most significantly impacted loyalty among fans of different team types.

## Results

Research Question 1 aimed to determine the extent to which consumers choose their favourite men's and women's team from the same branded house. Findings revealed that of the 525 individuals who indicated they had both a favourite men's and women's sport league, approximately half ( $N = 285$ ; 54.3%) selected these from the same sport (e.g., AFLW and AFL). Results at the team level demonstrated individuals who have the same league preferences typically also supported the same women's and men's teams ( $N = 231$ ; 81%). When asked about their overall level of fandom, respondents indicated that they were significantly stronger fans of the men's team ( $M = 5.58$ ) than the women's team ( $M = 4.77$ ; *Mean Differences* =  $-0.81$ , 95% CI [ $-0.978, -0.667$ ]).

Research Question 2 determined how many brand associations were perceived differently across the men's and women's sport contexts. We first conducted analyses for the whole sample without considering respondent gender. The results showed consumers evaluated the associations attributed to the men's teams more favourably than the women's teams except for head coach (95% CI [ $-0.242, 0.061$ ]), culture and values (95% CI [ $-0.143, 0.095$ ]), and new opportunities (95% CI [ $-0.274, 0.000$ ]), where no significant differences were observed. For a full list of association comparisons, please see [Table 2](#).

We then assessed if there were any differences whilst considering respondent gender, finding significant differences across two associations. Female respondents evaluated the stadium for the men's team better than the stadium for women's team by 0.275, when compared to male respondents' evaluations with a 95% BCa bootstrap CI from  $-0.521$  to  $-0.030$ . Similarly, female participants evaluated the socialisation opportunities offered by the men's team more favourably than the opportunities afforded by the respective women's team by 0.337, when compared to the male participants' evaluation with a 95% BCa bootstrap CI from  $-0.650$  to  $-0.037$ . [Table 3](#) contains the full list of brand associations measured and relevant results for each.

Next, we conducted analyses comparing male and female respondents, across both team selections. We first examined support for the women's team, followed by support for the men's team. In terms of support for their favourite women's team, male participants rated the head coach (0.246 higher, 95% CI [ $-0.487, -0.006$ ]), peer group acceptance (0.559 higher, 95% CI [ $-0.936, -0.152$ ]) and socialisation (0.406 higher, 95% CI [ $-0.788, -0.056$ ]) associations more favourably than their female counterparts did. Regarding support of the men's team, the male

**Table 2.** Comparative analysis of brand associations for women's and men's teams.

	Women's Team Mean (SD)	Men's Team Mean (SD)	Mean Difference	CI (Low)	CI (High)	SE	Effect Size
Success*	5.55 (1.05)	5.78 (1.13)	-0.23	-0.39	-0.07	0.08	-0.21
Star Players*	5.75 (0.93)	6.01 (0.98)	-0.26	-0.39	-0.14	0.07	-0.28
Head Coach	5.64 (0.98)	5.73 (1.17)	-0.09	-0.24	0.06	0.08	-0.08
Management*	5.50 (1.04)	5.68 (1.27)	-0.18	-0.34	-0.04	0.08	-0.16
Logo and Colors*	5.91 (0.94)	6.11 (1.00)	-0.21	-0.32	-0.11	0.05	-0.21
Stadium*	5.65 (1.07)	6.02 (1.08)	-0.37	-0.49	-0.26	0.06	-0.35
Product Delivery*	5.67 (1.01)	5.95 (1.08)	-0.28	-0.42	-0.15	0.07	-0.27
Tradition*	5.69 (1.12)	6.08 (1.11)	-0.39	-0.54	-0.26	0.07	-0.35
Culture and Values	5.84 (0.94)	5.87 (1.02)	-0.02	-0.14	0.09	0.06	-0.02
Inclusivity*	5.76 (1.05)	5.94 (1.03)	-0.18	-0.30	-0.07	0.06	-0.17
Role Models*	5.86 (0.98)	6.01 (0.99)	-0.16	-0.29	-0.04	0.06	-0.16
Funding*	5.29 (1.20)	5.58 (1.25)	-0.29	-0.45	-0.17	0.07	-0.24
Media Coverage*	5.19 (1.30)	5.67 (1.23)	-0.49	-0.65	-0.39	0.08	-0.38
Pride In Place*	5.74 (0.98)	6.02 (0.95)	-0.29	-0.41	-0.18	0.06	-0.29
Escape*	5.03 (1.44)	5.33 (1.48)	-0.30	-0.44	-0.17	0.07	-0.21
Esteem*	4.99 (0.09)	5.22 (1.59)	-0.22	-0.36	-0.09	0.07	-0.14
Nostalgia*	5.26 (0.09)	6.02 (1.07)	-0.76	-0.94	-0.61	0.08	-0.64
Peer Group Acceptance*	4.39 (0.10)	5.01 (1.43)	-0.62	-0.79	-0.46	0.08	-0.42
Socialisation*	4.49 (0.09)	5.04 (1.41)	-0.55	-0.71	-0.41	0.08	-0.38
Community Engagement*	5.55 (0.07)	5.92 (1.04)	-0.37	-0.49	-0.26	0.06	-0.37
Emotions*	5.07 (0.09)	5.51 (1.34)	-0.43	-0.59	-0.30	0.07	-0.32
Entertainment*	5.62 (0.07)	5.97 (1.06)	-0.35	-0.48	-0.23	0.07	-0.33
New Opportunities	5.93 (0.06)	6.04 (1.00)	-0.12	-0.25	0.00	0.06	-0.12

\* Denotes significant differences, as the corresponding confidence interval does not encompass zero.

**Table 3.** Comparative analysis of brand associations for women's and men's teams: differential responses from female and male consumers.

	Female Consumers (Mean Difference)	Male Consumers (Mean Difference)	Differences between Female and Male Consumers	CI (Low)	CI (High)	SE	Effect Size
Success	-0.23	-0.23	0.01	-0.32	0.33	0.17	0.01
Star Players	-0.24	-0.29	0.06	-0.19	0.32	0.13	0.06
Head Coach	-0.17	-0.01	-0.16	-0.47	0.14	0.16	-0.14
Management	-0.28	-0.13	-0.15	-0.46	0.15	0.15	-0.13
Logo and Colors	-0.28	-0.16	-0.12	-0.32	0.10	0.11	-0.14
Stadium*	-0.53	-0.25	-0.28	-0.52	-0.03	0.12	-0.30
Product Delivery	-0.39	-0.21	-0.18	-0.45	0.11	0.14	-0.17
Tradition	-0.36	-0.44	0.07	-0.21	0.36	0.15	0.07
Culture and Values	0.08	-0.15	0.23	-0.01	0.45	0.12	0.27
Inclusivity	-0.18	-0.19	0.02	-0.22	0.27	0.13	0.02
Role Models	-0.21	-0.16	-0.05	-0.29	0.18	0.12	-0.05
Funding	-0.42	-0.21	-0.22	-0.53	0.07	0.15	-0.19
Media Coverage	-0.56	-0.44	-0.11	-0.45	0.22	0.17	-0.09
Pride In Place	-0.30	-0.26	-0.04	-0.28	0.20	0.12	-0.05
Escape	-0.33	-0.29	-0.05	-0.34	0.22	0.14	-0.05
Esteem	-0.19	-0.25	0.07	-0.21	0.35	0.14	0.06
Nostalgia	-0.83	-0.72	-0.12	-0.46	0.19	0.17	-0.10
Peer Group	-0.78	-0.50	-0.28	-0.63	0.04	0.17	-0.22
Socialisation*	-0.73	-0.39	-0.34	-0.65	-0.04	0.16	-0.29
Community Engagement	-0.44	-0.35	-0.09	-0.34	0.15	0.13	-0.10
Emotions	-0.38	-0.48	0.10	-0.20	0.39	0.15	0.09
Entertainment	-0.34	-0.35	0.01	-0.27	0.28	0.14	0.01
New Opportunities	-0.17	-0.10	-0.06	-0.32	0.18	0.13	-0.07

Mean differences refer to the average variation in consumer responses between women's teams and men's teams.

\*Denotes significant differences, as the corresponding confidence interval does not encompass zero.

and female participants reported no significant differences in their perception of any brand associations. Tables 4 and 5 depict the brand association comparisons for women's and men's sport respectively.

**Table 4.** Comparative analysis of mean brand association scores for women's teams: female vs. Male consumers.

	Female Consumers Mean (SD)	Male Consumers Mean (SD)	Mean Difference	CI (Low)	CI (High)	SE	Effect Size
Success	5.61 (0.99)	5.54 (1.03)	0.07	-0.18	0.33	0.13	0.07
Star Players	5.76 (0.96)	5.78 (0.89)	-0.02	-0.26	0.23	0.12	-0.02
Head Coach*	5.54 (1.03)	5.79 (0.81)	-0.25	-0.49	-0.01	0.12	-0.27
Management	5.39 (1.11)	5.61 (0.96)	-0.22	-0.49	0.05	0.14	-0.21
Logo and Colors	5.89 (0.91)	5.93 (0.96)	-0.04	-0.28	0.20	0.12	-0.04
Stadium	5.52 (1.11)	5.75 (1.04)	-0.23	-0.51	0.05	0.14	-0.22
Product Delivery	5.61 (1.08)	5.75 (0.88)	-0.14	-0.39	0.12	0.13	-0.14
Tradition	5.71 (1.11)	5.69 (1.12)	0.01	-0.28	0.29	0.15	0.01
Culture and Values	5.84 (1.03)	5.84 (0.84)	0.00	-0.26	0.24	0.13	0.00
Inclusivity	5.74 (1.09)	5.80 (0.99)	-0.07	-0.34	0.19	0.14	-0.06
Role Models	5.78 (1.07)	5.93 (0.89)	-0.15	-0.41	0.09	0.13	-0.16
Funding	5.15 (1.27)	5.41 (1.14)	-0.26	-0.56	0.06	0.16	-0.21
Media Coverage	5.08 (1.36)	5.26 (1.24)	-0.18	-0.52	0.17	0.18	-0.14
Pride In Place	5.65 (1.05)	5.83 (0.90)	-0.18	-0.44	0.08	0.13	-0.18
Escape	4.86 (1.48)	5.18 (1.35)	-0.32	-0.71	0.03	0.19	-0.23
Esteem	4.90 (1.55)	5.09 (1.41)	-0.19	-0.58	0.19	0.19	-0.13
Nostalgia	5.21 (1.38)	5.34 (1.17)	-0.14	-0.47	0.20	0.17	-0.11
Peer Group*	4.11 (1.60)	4.67 (1.42)	-0.56	-0.94	-0.15	0.20	-0.37
Socialisation*	4.28 (1.45)	4.69 (1.38)	-0.41	-0.79	-0.06	0.19	-0.29
Community Engagement	5.50 (1.04)	5.60 (0.94)	-0.10	-0.38	0.15	0.13	-0.10
Emotions	4.98 (1.50)	5.18 (1.19)	-0.19	-0.55	0.16	0.18	-0.14
Entertainment	5.50 (1.14)	5.72 (0.88)	-0.22	-0.50	0.04	0.14	-0.22
New Opportunities	5.87 (1.03)	5.99 (0.81)	-0.12	-0.37	0.11	0.12	-0.13

\* Denotes significant differences, as the corresponding confidence interval does not encompass zero.

**Table 5.** Comparative analysis of mean brand association scores for men's teams: female vs. Male consumers.

	Female Consumers Mean (SD)	Male Consumers Mean (SD)	Mean Difference	CI (Low)	CI (High)	SE	Effect Size
Success	5.83 (1.12)	5.77 (1.06)	0.06	-0.23	0.34	0.14	0.06
Star Players	5.99 (1.03)	6.07 (0.91)	-0.08	-0.34	0.16	0.13	-0.08
Head Coach	5.71 (1.14)	5.79 (1.12)	-0.09	-0.38	0.21	0.15	-0.08
Management	5.67 (1.27)	5.74 (1.21)	-0.07	-0.40	0.24	0.17	-0.06
Logo and Colors	6.17 (0.98)	6.09 (1.01)	0.08	-0.18	0.34	0.13	0.08
Stadium	6.05 (1.16)	6.01 (1.00)	0.04	-0.25	0.31	0.14	0.04
Product Delivery	6.00 (1.07)	5.96 (0.99)	0.04	-0.24	0.30	0.14	0.04
Tradition	6.07 (1.12)	6.14 (1.01)	-0.07	-0.36	0.21	0.14	-0.06
Culture and Values	5.77 (1.04)	5.99 (0.90)	-0.23	-0.49	0.02	0.13	-0.24
Inclusivity	5.91 (1.11)	6.00 (0.89)	-0.09	-0.36	0.17	0.13	-0.09
Role Models	5.98 (0.99)	6.09 (0.87)	-0.12	-0.37	0.13	0.13	-0.11
Funding	5.57 (1.22)	5.61 (1.27)	-0.04	-0.36	0.27	0.16	-0.03
Media Coverage	5.64 (1.24)	5.71 (1.23)	-0.07	-0.39	0.25	0.16	-0.06
Pride In Place	5.95 (1.02)	6.09 (0.89)	-0.14	-0.39	0.11	0.13	-0.14
Escape	5.19 (1.63)	5.47 (1.29)	-0.27	-0.65	0.11	0.19	-0.19
Esteem	5.09 (1.67)	5.35 (1.48)	-0.26	-0.68	0.16	0.21	-0.17
Nostalgia	6.04 (1.13)	6.06 (0.91)	-0.02	-0.30	0.25	0.14	-0.02
Peer Group	4.89 (1.48)	5.17 (1.32)	-0.28	-0.65	0.08	0.19	-0.20
Socialisation	5.01 (1.40)	5.08 (1.38)	-0.07	-0.44	0.29	0.19	-0.05
Community Engagement	5.94 (0.98)	5.95 (0.98)	-0.01	-0.27	0.23	0.13	-0.01
Emotions	5.36 (1.47)	5.66 (1.15)	-0.29	-0.64	0.05	0.18	-0.23
Entertainment	5.84 (1.26)	6.07 (0.84)	-0.23	-0.53	0.04	0.15	-0.22
New Opportunities	6.04 (1.07)	6.09 (0.82)	-0.06	-0.33	0.18	0.13	-0.06

\*Denotes significant differences, as the corresponding confidence interval does not encompass zero.

Research Question 3 assessed the relative importance of the brand associations across men's and women's sport with respect to attitudinal loyalty. The reliability of the latent variable, attitudinal loyalty, was assessed using Cronbach's Alpha. The results demonstrate satisfactory internal consistency, with Cronbach's Alpha for attitudinal loyalty towards the women's team reported at 0.83 and 0.77 for the men's team. These values indicate that the scale used to measure attitudinal loyalty is reliable for both groups. To assess this, we examined which brand associations played significant roles in the final predictive models. The final trained models had good predictive power for consumers' attitudinal loyalty of men's teams RMSE = 0.71 MAE = 0.53, ( $R^2 = 55\%$ ) and women's teams RMSE = 0.79, MAE = 0.51, ( $R^2 = 51\%$ ) respectively. Variable importance refers to the relative contributions of individual variables to the predictions produced by a model (Breiman, 2001). This measure is particularly useful in the context of decision tree-based models, such as RFs, which are considered complex due to their lack of easily interpretable variable coefficients. By providing a ranking of the relative importance of variables, this measure can facilitate the interpretation of the underlying processes that drive the model's predictions. Regarding consumers' attitudinal loyalty towards their favourite men's team, findings demonstrated that esteem had the highest predictive power, followed by emotions, socialisation, nostalgia, and escape.

The same five brand associations were also the most important to determining the sample's attitudinal loyalty towards their favourite women's sport team, yet the rank order varied. Specifically, emotions were the most important association, followed by esteem, nostalgia, escape, and socialisation. The weighted importance of each of the top ten brand associations influential to attitudinal loyalty across respondents' favourite men's and women's team is reported in Table 6.

**Table 6.** Top 10 Brand association importance.

Women's Team Brand Associations	Women's Team Overall Importance	Men's Team Brand Associations	Men's Team Overall Importance
Emotions	100	Esteem	100
Esteem	75.212	Emotions	84.057
Nostalgia	67.800	Socialisation	70.526
Escape	64.525	Nostalgia	56.806
Socialisation	55.984	Escape	49.198
Logo and Colours	51.027	Peer Group	48.716
Entertainment	48.317	Logo and Colours	35.179
Product Delivery	42.537	Entertainment	32.168
Peer Group	37.379	Community Engagement	30.053
Management	30.802	Inclusivity	29.715

The feature importance values are ranked relative to the most influential feature, which is given a score of 100. All other features are evaluated in comparison to this top feature.

## Discussion

The purpose of this research was to examine the extent to which consumers possess preferences for men's and women's sport teams from the same branded house and to subsequently determine if and how, perceptions and attitudinal loyalty exhibited towards these brands differ. In response to RQ1, we found just over half of our sample (54.3%) possessed consistent league preferences across women's and men's sport evidencing league-level consumption patterns are influenced by brand architecture and

implementation of the branded house approach (Kunkel & Biscaia, 2020). Given the remainder of respondents (45.7%) had favourite men's and women's leagues from different sports, we also support the contention that sport consumers "buy from" a repertoire of brands (Fujak et al., 2018). Both observations support Fujak's (2021) study of Australia's football codes, which found that approximately 50% of sport fans support one sport, with the other half supporting two or more codes. Yet a key differentiator here is that the present research asked individuals about their singular favourite league and team, whereas Fujak (2021) catalogued all the codes supported by the sport fans sampled.

Findings at the team-level further supported brand architecture with 81% of the participants who possessed consistent league preferences across women's and men's sport also following the same team in both women's and men's categories. In this case, the majority of the women's leagues were extensions of an original men's league and in their early years, taking the approach of slowly introducing teams into their competitions. For example, whilst the AFLW (14 teams at the time of this study) was close to achieving numerical parity with the AFL (18 teams); the NRLW (4 teams at the time of this study) only reflected one-quarter of the comparable options within the NRL (16 teams). Yet, despite this lack of choice in terms of available women's teams, consumers demonstrated a tendency to select from the same portfolio of brands. This demonstrates how preferences can transfer to multiple brands in a branded house, supporting tenets of sport brand architecture (Kunkel & Biscaia, 2020) and highlights how consumer decision making can be influenced by an individual's past experiences with, and knowledge about, brands (Anderson, 1990; Su et al., 2020). As such, it is reasonable to forecast that brand architecture effects at the team preference level may become further evident as more teams are introduced to women's leagues.

In addressing RQ2 our findings indicated that the brand association perceptions consumers held towards their favourite men's and women's teams varied, even though these brands were part of the same branded house. Significant differences existed for consumers in the main sample (e.g., before considering respondent gender) between 20 out of the 23 brand associations, with positive effects for the men's team present. Each of the 20 associations were rated higher for the men's team in comparison to the women's team which indicates how direct experiences afforded to the men's team which were not available to the women's teams (e.g., history, ability to consume matches live in person or via media, breadth and depth of media coverage) may have impacted brand association perceptions (Anderson, 1990; Daniels et al., 2019; Ross, 2006). This finding demonstrates how historical, economic, and social advantages surrounding men's sport feed into how consumers perceive men's and women's sport brands, respectively (Delia, 2020).

We further found female respondents evaluated the men's stadium significantly more favourably than the women's stadium. Additionally, female respondents perceived their support of the men's team afforded greater socialisation opportunities than did their support of the women's team. The stadium and socialisation findings are unsurprising given the women's teams typically play in smaller, less modern stadia, while attracting fewer sponsors, and receiving limited media coverage and exposure across society (e.g., Clarke et al., 2022; Delia, 2020). The location and standard of the women's stadiums likely explain their lower evaluations (compared to the men's stadiums); whilst the relative lack of opportunity to consume women's matches (i.e., due to shorter seasons and limited media coverage) conceivably restricted facilitating many social opportunities that are

linked to consuming men's sport. Interestingly, the male respondents did not report significant differences in how they rated any of the 23 brand associations when they were thinking about their favourite men's and women's team from the same branded house. Finally, when accounting for gender at the team level, we found male and female consumers evaluated the men's team brand associations consistently (e.g., there were no significant differences in evaluations that the male and female respondents made regarding the men's team), but in relation to the women's team, male consumers had a higher evaluation of the head coach, peer group acceptance and socialisation brand associations than did the female consumers. The higher evaluations by male consumers may be attributed to a combination of social identity, cultural norms, marketing influences, and differing motivations between genders, and future research should build on the foundational findings provided by the current findings to further examine the underlying reasons for the different scores between male and female consumers.

Findings in relation to RQ3 suggested that a similar proportion of consumers' attitudinal loyalty was explained by the brand association sets across both categories (55% men's teams; 51% women's teams). Notably, we found that the same five brand associations (emotions, socialisation, esteem, nostalgia, and escape) were the top five in terms of importance for both male and female consumers with respect to their attitudinal loyalty across both women's and men's contexts. The most important brand association in the men's team context was esteem, whereas the most important brand association in the women's team context was emotions. The similarity in terms of the importance of these associations as a set, coupled with the nuances in their rankings, provides insights into the subtleties that differentiate consumers' connections with women's and men's professional sport teams. Previous work has demonstrated the utility of brand associations in predicting attitudinal loyalty, yielding similar insights into their collective ability and significant associations. In research comparing consumption of high and low market share men's teams, Doyle et al. (2013) found that brand associations were able to predict on average 58% of the variance in attitudinal loyalty. Moreover, the nostalgia and esteem associations had significant and positive relationships with attitudinal loyalty in this past study, which is consistent with our findings.

### *Theoretical contributions*

The present research findings provide several contributions to theory and build on past enquiries focused on sport consumers. First, we extend past efforts to understand sport fans' preferences for, and perceptions towards, sport brands across both men's and women's sport (James & Ridinger, 2002). We answer calls from scholars for further research on women's sport and women's sport consumers (Delia et al., 2022; Qian et al., 2023). We do so through an innovative study design assessing the consumption of men's and women's sport concurrently while considering the impact of gender as it relates to the athletes and the consumers involved in this exchange (Baker et al., 2022; Wear et al., 2022). Considering multi-gendered sport brands provides new insights informing how related brands impact one another inside the sport brand ecosystem and environment (Baker et al., 2022; Kunkel & Biscaia, 2020) and extends past work that has investigated how men's teams can be introduced into leagues (Davies et al., 2022; Doyle et al., 2017; Lock et al., 2011). Our findings indicate adopting a branded house approach across men's

and women's teams can help the organisation with the adoption of preference across men's and women's product categories. However, our findings demonstrated the transference of association strengths is less pronounced.

Ross (2006) proposed that a sport organisation's marketing efforts, information provided by other market sources, and direct experiences all impact the resultant awareness and strength of associations one may attach to a brand. Our work demonstrates the men's teams provides individuals with associative networks they can apply to the new women's teams (e.g., Anderson, 1990). However, our findings also demonstrate that consumer perceptions of brands within a branded house can vary extensively. This is evidenced by our discovery that 20 of the 23 brand associations measured were rated significantly higher in the men's context than they were in the less established and historically disadvantaged women's context (Delia, 2020). This wide array of differences, each favouring the men's team, persisted despite the men's and women's teams carrying the same brand. This suggests that the spill-over between related sport brands may be effective in activating awareness outcomes, whereas direct experiences with each may be more influential in determining how one perceives and evaluates each brand. Our findings highlight how more established brands can impact consumer relationships with, and perceptions of, newer brands within a portfolio, extending knowledge to demonstrate how, and to what extent, this occurs between multi-gendered sport brands (Cobbs et al., 2016; Cornwell et al., 2023; Thomson et al., 2023).

When including consideration of respondent gender, our findings demonstrated there were no associations perceived significantly different across men's sport. However, differences were observed across three associations (head coach, peer group acceptance, and socialisation) in the women's sport context – with male participants rating each higher than the female participants. Qian et al. (2023) demonstrated male and female consumers possessed different market demands in the women's sport event context, which we support and extend to the professional team environment. Elsewhere, previous work has established that consumers' brand association perceptions are shaped by their interactions with a given brand and that these change and develop over time (Daniels et al., 2019; Davies et al., 2022; Wear et al., 2022). Given the context of the current research was underpinned by the women's teams being created as brand extensions of established men's offerings, we demonstrate how the dissimilar conditions and opportunities to experience women's sport shape the way in which consumers' view men's and women's sport brands, even when they are a part of the same branded house (Delia, 2020). This insight adds to knowledge surrounding how consumers perceive multi-gendered sport brands and extends past work by considering the role of team and respondent gender (e.g., Clarke et al., 2022; Qian et al., 2023; Wear et al., 2022). The focus on understanding how consumers engage with men's and women's sport collectively, rather than individually, provides a further contribution to brand architecture knowledge (Baker et al., 2022; Kunkel & Biscaia, 2020) building towards a more holistic view of sport consumers' preference and perception patterns. This study also reflects an extension of prior work that has considered how sport brands in a vertical hierarchy influence one another (e.g., a league's influence on a team or athlete and vice versa) by considering brands that exist alongside one another, yet are differentiated by gender (Kunkel et al., 2013).

Finally, this research advances scholarship surrounding sport consumers' attitudinal loyalty and the role of brand associations as predictors of consumer loyalty (Gladden &

Funk, 2002; Wear & Heere, 2020). We build on previous research that has compared the role of brand associations in explaining the variance in attitudinal loyalty across large and small market share men's sport teams (Doyle et al., 2013). The present research findings demonstrated a similar proportion of variance was able to be explained across the women's and men's sport contexts, and similarly that this variance was comparable to that uncovered by past research. Moreover, we extend past work by revealing that the same associations (i.e., emotions, esteem, nostalgia, escape, and socialisation) each ranked in the top five in terms of their importance in influencing attitudinal loyalty across men's and women's sport (varying slightly in terms of rank order). Collectively, these insights further support previous claims about the utility of brand associations in consumer-based research (Doyle et al., 2013; Wear & Heere, 2020) and outline how a similar set of key associations underpin and influence consumers' attitudinal loyalty across men's and women's sport.

### *Managerial implications*

The current findings inform sport management practice in three main ways. First, the current research provides guidance for sport organisations on how they may strategically introduce new brands into their portfolios (Manoli, 2024; Thomson et al., 2020). Findings suggest that adopting a branded house approach across men's and women's sport offerings may result in preferences already established across existing offerings (e.g., men's teams) spilling over to the extensions (e.g., women's teams) (e.g., Keller, 2014). Yet we also observed that the brand association perceptions varied in terms of how the consumers' evaluated both brands across 20 of the 23 associations observed. Thus, we propose that when adopting a branded house strategy spanning across men's and women's contexts, sport organisations should take advantage of the existing brand's equity and leverage the awareness attached to it (Keller, 2014). We suggest this as our sample's preference patterns were largely consistent across their favourite men's and women's leagues, despite the lack of choice in terms of the women's options. Thus, adopting market penetration strategies focusing on existing consumers (both men and women) of the men's team represents a logical first step when marketing new women's teams (e.g., Kunkel et al., 2014). Marketing brand extensions, such as an organisation's expansion into women's sport, as a unique opportunity to help the team, and the overall organisation, succeed is encouraged to capitalise on the unique opportunities offered to consumers who become involved with new teams early in their lifecycle (Doyle et al., 2017).

Sport organisations can further adopt market development tactics by focusing on highlighting key aspects that differentiate the women's team from the men's team to individuals who are not currently supporters of either men's or women's sport (Ansoff, 1957). Becoming a sport fan at the same time a new team emerges is a novel experience and provides a unique opportunity to help shape the team's identity (Davies et al., 2022; Doyle et al., 2017), which may appeal to individuals yet to establish a connection with a sport team. Developing a brand narrative designed to elicit feelings of emotional connection may be an effective tactic in promoting women's teams, given we found emotions were the most important brand association in terms of attitudinal loyalty in this context. The relatively low influence of the three positively framed associations (role

models, new opportunities, inclusivity; Doyle et al., 2021) uncovered in research on women's sport suggests that these aspects may be more closely related to justification for the expansion of women's sport (e.g., reasons to create more teams) than influential in driving consumer loyalty once these teams exist. This is particularly interesting as many commercialisation and sponsorship activations related to women's sport leverage messaging focused on these brand associations (e.g., UEFA, 2022).

Second, given the nuances observed in this study, we suggest that ongoing marketing efforts should retain consistency in ways that uphold the overall club identity across both offerings whilst also leveraging the unique characteristics inherent in each. In other words, the men's team is not the master-brand of the women's team. Team executives must therefore visualise their overall club brand as the master brand, and the men's and women's teams as parallel sub-brands that sit within this hierarchy. We suggest this approach will enable sport organisations the dual benefit of leveraging the awareness of their existing brands as well as the opportunity to highlight the unique aspects of each. This approach will also ensure that brand equity is shared across the branded house. This suggestion is underscored by our findings that nostalgia was an important brand association underpinning support of the men's team, which also extended to the women's team, despite these teams being newly created. The importance of the esteem association suggests that team efforts to thank fans for their support and involve them in co-creational activities will further help consumers feel an affinity to the team. Likewise, the importance of the escape, socialisation, and emotions associations mean that organisations should place an emphasis on creating safe, relaxing, and interactive spaces where their fans can interact and consume games.

Many teams have invested heavily in updating women's stadiums to create authentic experiences at women's games, yet the lower evaluations indicate that continued investments in infrastructure are required to close the gap to the men's teams. This can involve augmenting stadium spaces, so they are comfortable and conducive to fans interacting with one another and extending their time at the venue. Efforts should also be made to ensure online spaces where fans interact are kept safe and can build a sense of community that spans across all the teams in an organisation's offerings. The effort to ensure safety and security can be positioned as an organisational-wide priority and encompass external partners, as illustrated in a recent sponsorship agreement between Angel City FC in the NWSL and tech safety partner GoBubble to combat online abuse aimed at players (Medow, 2022).

Finally, findings demonstrate how sport managers can themselves engage in the continuous assessment of consumer-based brand equity. We demonstrate the utility of single-item brand associations (Kunkel et al., 2022) and encourage managers to regularly conduct research across brands in their portfolios. Within the present research, we demonstrate how a short survey can help brand managers understand how consumers perceive their brands and determine key associations linked to attitudinal loyalty. Whilst our research approach assessed consumers' perception of a variety of men's and women's teams collectively, there is an opportunity for managers of individual teams to employ this knowledge within their organisations. For example, the marketing manager of the Adelaide Crows could periodically assess consumer perceptions of the AFL and AFLW teams, noting if, and how, different elements of the teams' brand perceptions are changing over time. This may be particularly valuable during times where one team is enjoying

on-field success, and the other is not, as was the case in the 2023 season (AFLW team finished 1<sup>st</sup>, AFL team finished 10<sup>th</sup>). Such information could then be used to advance communications leveraging the respective men's/women's team's stronger brand associations (e.g., Crows' AFLW success) whilst also crafting communications to improve those which are perceived not as strongly.

### Limitations & future research

The current research has limitations which may guide future research. First, whilst our work was innovative in design by assessing consumers' who supported a men's and women's team from the same branded house, there were contextual limitations governing our data collection period. Specifically, the market characteristics of the time offered limited consumption options across the women's sport context. For example, only 4 NRLW teams existed whereas 16 NRL teams were established at the time of the research. Given many sport consumers have their main point of attachment at the team-level, it is possible some respondents in our sample may have selected a favourite women's league based on the teams – or lack thereof – in it. For example, an NRL fan may have chosen the AFLW as their favourite league because the NRLW only possessed 25% of the available NRL teams and had not yet expanded to include their favourite team. As women's leagues continue to expand further research is needed to understand how consumers establish, maintain, and develop enduring connections to sport teams (Davies et al., 2022). Longitudinal research will be valuable in this respect and in identifying how consumers' attitudes and behaviours towards women's sport brands change over time as they mature and develop their own histories and traditions.

Second, scholars should examine brand portfolios that extend beyond men's and women's teams playing a single sport or originating from the same branded house. Researchers should explore cross-code consumption patterns where a branded house is used, as well as instances of cross-over between traditional and esports, whilst also considering other categories such as gyms, education, retail, travel, or childcare. Whilst this practice is not yet common, there are instances whereby clubs have pursued a strategy of diversification and invested into new revenue streams (Kunkel et al., 2014). This strategy is set to grow, with increasing innovation entering the sector with the influx of private equity ownership and the globalisation of sporting brands to new markets. For example, the Greater Western Sydney Giants not only field AFL and AFLW teams but have also invested in the women's only Super Netball competition. Sport organisations in Australia, Europe, and the USA have also added esports teams to their portfolios in recent years, with these endeavours experiencing mixed levels of success. Thus, research canvassing if and how consumer preferences and perceptions translate across sports and into the digital context and new sectors would prove valuable. Similar research studying men's and women's brands that do not utilise the branded house strategy (e.g., NBA and WNBA teams from the same cities are managed as separate brands) would also provide an interesting comparison point to the current research. Researchers should also endeavour to measure respondents' overall perceptions towards men's and women's sport to provide further nuance to their interpretations of data. Overall, further studies are needed to

explore the relative drawbacks and benefits of employing the branded house and house of brands strategies within the sport context.

Third, scholars can build on this research by further assessing the bi-directional impacts which may exist across multi-gendered sport brands, and through further understanding the impact which brands within a branded house exert influence on one another. The present work utilised brand architecture as a lens to identify and observe how consumers evaluate sport brands, using a context where men's brands pre-date the establishment of the newer women's brands. This allowed us to determine brand selection patterns, and to compare how the brand associations attached to each differed, but we did not specifically ask individuals about how either brand exerted influence on the other. Hence, the present study should be considered preliminary research which provides a foundation for further work. Thus, future research should be conducted over time to also better account for and track the bi-directional and potentially symbiotic relationship which exists between established brands and their extensions. Future research may also inform sponsorship strategy in relation to bundling and valuating men's and women's sports brands, providing insights into whether a house of brands or branded house approach will provide the greatest commercial return.

Fourth, whilst this research provides an initial profile of consumer preferences and perceptions across multi-gendered branded house sport portfolios, further work is needed to understand how this impacts behaviour. Analysing attendance and membership data could provide insights to consumer behaviour patterns, whilst field experiments would prove valuable to test ways to incentivise and encourage consumers to engage with multiple brands across a team's portfolio. This could be achieved through tracking initiatives employed at selected men's games aimed at promoting their women's team and teasing out the effect of the different promotion strategies by treating attendees of another game as a control group. Such work could contribute to understanding ways to prevent season ticket holder turnover and maximise member engagement across multiple brands a given sport organisation offers to market. Finally, multi-year panel studies are needed to examine how changes in team and environmental circumstances may impact how consumers perceive and engage with their favourite men's and women's team, or both.

### Disclosure statement

No potential conflict of interest was reported by the author(s).

### Funding

The work was supported by the Griffith Business School.

### ORCID

Jason P. Doyle  <http://orcid.org/0000-0002-5049-9407>

Yiran Su  <http://orcid.org/0000-0002-9650-2798>

Sarah Jane Kelly  <http://orcid.org/0000-0002-4664-5248>

Kevin Filo  <http://orcid.org/0000-0002-1607-0148>

Thilo Kunkel  <http://orcid.org/0000-0001-6442-3166>

## References

- Aaker, D. A., & Joachimsthaler, E. (2000). The brand relationship spectrum: The key to the brand architecture challenge. *California Management Review*, 42(4), 8–23. <https://doi.org/10.2307/41166051>
- Anderson, J. R. (1990). *The adaptive character of thought*. Psychology Press.
- Ansoff, H. I. (1957). Strategies for diversification. *Harvard business review*, 35(5), 113–124.
- Baker, B. J., Kunkel, T., Doyle, J. P., Su, Y., Bredikhina, N., & Biscaia, R. (2022). Remapping the sport brandscape: A structured review and future direction for sport brand research. *Journal of Sport Management*, 36(3), 251–264. <https://doi.org/10.1123/jsm.2021-0231>
- Baker, B. J., McDonald, H., & Funk, D. C. (2016). The uniqueness of sport: Testing against marketing's empirical laws. *Sport Management Review*, 19(4), 378–390. <https://doi.org/10.1016/j.smr.2016.02.002>
- Banjanovic, E. S., & Osborne, J. W. (2019). Confidence intervals for effect sizes: Applying bootstrap resampling. *Practical Assessment, Research & Evaluation*, 21(1), 5.
- Bauer, H. H., Stokburger-Sauer, N. E., & Exler, S. (2008). Brand image and fan loyalty in professional team sport: A refined model and empirical assessment. *Journal of Sport Management*, 22(2), 205–226. <https://doi.org/10.1123/jsm.22.2.205>
- Biau, G. (2012). Analysis of a random forests model. *Journal of Machine Learning Research*, 13(1), 1063–1095.
- Breiman, L. (2001). Random forests. *Machine Learning*, 45(1), 5–32. <https://doi.org/10.1023/A:1010933404324>
- Brennan, C. (2022). *England-Germany final breaks Euros attendance record*. Just Women's Sports. <https://justwomenssports.com/reads/england-germany-final-break-euros-attendance-record/>
- The Business Research Company. (2022). *Sports global market report*. <https://www.researchandmarkets.com/reports/5550013/sports-global-market-report-2022-by-type?>
- Cialdini, R. B., Borden, R. J., Thorne, A., Walker, M. R., Freeman, S., & Sloan, L. R. (1976). Basking in reflected glory: Three (football) field studies. *Journal of Personality & Social Psychology*, 34(3), 366. <https://doi.org/10.1037/0022-3514.34.3.366>
- Cieśliński, I., Gierczuk, D., Sadowski, J., & Muyor, J. M. (2021). Identification of success factors in elite wrestlers—An exploratory study. *PLOS ONE*, 16(3), e0247565. <https://doi.org/10.1371/journal.pone.0247565>
- Clarke, E., Geurin, A. N., & Burch, L. M. (2022). Team identification, motives, and behaviour: A comparative analysis of fans of men's and women's sport. *Managing Sport and Leisure*, 29(3), 445–468. <https://doi.org/10.1080/23750472.2022.2049455>
- Cobbs, J., Groza, M., & Rich, G. (2016). Brand spillover effects within a sponsor portfolio: The interaction of image congruence and portfolio size. *Marketing Management Journal*, 25(2), 107–122.
- Cornwell, T. B., Humphreys, M. S., & Kwon, Y. (2023). Shared brand equity. *Journal of Advertising*, 52(3), 311–329. <https://doi.org/10.1080/00913367.2022.2131656>
- Cumming, G. (2014). The new statistics: Why and how. *Psychological Science*, 25(1), 7–29. <https://doi.org/10.1177/0956797613504966>
- Daniels, J., Kunkel, T., & Karg, A. (2019). New brands: Contextual differences and development of brand associations over time. *Journal of Sport Management*, 33(2), 133–147. <https://doi.org/10.1123/jsm.2018-0218>
- Davies, M., Armstrong, C., & Blaszcza, M. (2022). No name, no logo, no problem?: Examining early fan connections to NHL Seattle. *Sport Management Review*, 25(3), 406–427. <https://doi.org/10.1080/14413523.2021.1937894>
- Delia, E. B. (2020). The psychological meaning of team among fans of women's sport. *Journal of Sport Management*, 34(6), 579–590. <https://doi.org/10.1123/jsm.2019-0404>

- Delia, E. B., Katz, M., & Armstrong, C. G. (2021). Understanding the lack of team identification research in women's sport. *Sport Marketing Quarterly*, 30(1), 58–68. <https://doi.org/10.32731/smq.291.032021.05>
- Delia, E. B., Melton, E. N., Sveinson, K., Cunningham, G. B., & Lock, D. (2022). Understanding the lack of diversity in sport consumer behavior research. *Journal of Sport Management*, 36(3), 265–276. <https://doi.org/10.1123/jsm.2021-0227>
- DiStefano, J. (2004). A confidence interval approach to data analysis. *Forest Ecology & Management*, 187(2–3), 173–183. [https://doi.org/10.1016/S0378-1127\(03\)00331-1](https://doi.org/10.1016/S0378-1127(03)00331-1)
- Doyle, J., Kunkel, T., Su, Y., Biscaia, R., & Baker, B. J. (2023). Advancing understanding of individual-level brand management in sport. *European Sport Management Quarterly*, 23(6), 1631–1642.
- Doyle, J. P., Filo, K., McDonald, H., & Funk, D. C. (2013). Exploring sport brand double jeopardy: The link between team market share and attitudinal loyalty. *Sport Management Review*, 16(3), 285–297. <https://doi.org/10.1016/j.smr.2012.11.001>
- Doyle, J. P., Kunkel, T., Kelly, S. J., Filo, K., & Cuskelly, G. (2021). Seeing the same things differently: Exploring the unique brand associations linked to women's professional sport teams. *Journal of Strategic Marketing*, 1–15. <https://doi.org/10.1080/0965254X.2021.1922489>
- Doyle, J. P., Lock, D., Funk, D. C., Filo, K., & McDonald, H. (2017). 'I was there from the start': The identity-maintenance strategies used by fans to combat the threat of losing. *Sport Management Review*, 20(2), 184–197. <https://doi.org/10.1016/j.smr.2016.04.006>
- Dragicevic, P. (2016). Fair statistical communication in HCI. In J. Robertson & M. Kaptein (Eds.), *Modern statistical methods for HCI* (pp. 291–330). Chapter 13. Springer International Publishing.
- Fenton, A., Gillooly, L., & Vasilica, C. M. (2023). Female fans and social media: Micro-communities and the formation of social capital. *European Sport Management Quarterly*, 23(2), 370–390. <https://doi.org/10.1080/16184742.2020.1868546>
- Fujak, H. (2021). *Code wars - The battle for Fans, dollars and survival*. <https://www.booktopia.com.au/code-wars-dr-hunter-fujak/book/9781925914153.html>
- Fujak, H., Frawley, S., McDonald, H., & Bush, S. (2018). Are sport consumers unique? Consumer behavior within crowded sport markets. *Journal of Sport Management*, 32(4), 362–375. <https://doi.org/10.1123/jsm.2017-0318>
- Funk, D. C., & James, J. (2001). The psychological continuum model: A conceptual framework for understanding an individual's psychological connection to sport. *Sport Management Review*, 4(2), 119–150. [https://doi.org/10.1016/S1441-3523\(01\)70072-1](https://doi.org/10.1016/S1441-3523(01)70072-1)
- Gladden, J. M., & Funk, D. C. (2001). Understanding brand loyalty in professional sport: Examining the link between brand associations and brand loyalty. *International Journal of Sports Marketing & Sponsorship*, 3(1), 54–81. <https://doi.org/10.1108/IJMS-03-01-2001-B006>
- Gladden, J. M., & Funk, D. C. (2002). Developing an understanding of brand associations in team sport: Empirical evidence from consumers of professional sport. *Journal of Sport Management*, 16(1), 54–81. <https://doi.org/10.1123/jsm.16.1.54>
- Grömping, U. (2015). Variable importance in regression models. *Wiley Interdisciplinary Reviews Computational Statistics*, 7(2), 137–152. <https://doi.org/10.1002/wics.1346>
- Hasaan, A., Kerem, K., Biscaia, R., & Agyemang, K. J. (2018). A conceptual framework to understand the creation of athlete brand and its implications. *International Journal of Sport Management and Marketing*, 18(3), 169–198. <https://doi.org/10.1504/IJSM.2018.091753>
- Heere, B., James, J., Yoshida, M., & Scremin, G. (2011). The effect of associated group identities on team identity. *Journal of Sport Management*, 25(6), 606–621. <https://doi.org/10.1123/jsm.25.6.606>
- Hothorn, T., & Zeileis, A. (2015). Partykit: A modular toolkit for recursive partitioning in R. *Journal of Machine Learning Research*, 16(1), 3905–3909.
- Hyndman, R. J., & Koehler, A. B. (2006). Another look at measures of forecast accuracy. *International Journal of Forecasting*, 22(4), 679–688. <https://doi.org/10.1016/j.ijforecast.2006.03.001>
- James, J. D., & Ridinger, L. L. (2002). Female and male sport fans: A comparison of sport consumption motives. *Journal of Sport Behavior*, 25(3), 260–273.
- Janitzka, S., Tutz, G., & Boulesteix, A. L. (2016). Random forest for ordinal responses: Prediction and variable selection. *Computational Statistics & Data Analysis*, 96, 57–73. <https://doi.org/10.1016/j.csda.2015.10.005>

- Katz, M., & Heere, B. (2016). New team, new fans: A longitudinal examination of team identification as a driver of university identification. *Journal of Sport Management*, 30(2), 135–148. <https://doi.org/10.1123/jsm.2014-0258>
- Keller, K. L. (2014). Designing and implementing brand architecture strategies. *Journal of Brand Management*, 21(9), 702–715. <https://doi.org/10.1057/bm.2014.38>
- Kirby, K. N., & Gerlanc, D. (2013). BootES: An R package for bootstrap confidence intervals on effect sizes. *Behavior Research Methods*, 45(4), 905–927. <https://doi.org/10.3758/s13428-013-0330-5>
- Kuhn, M. (2008). Building predictive models in R using the caret package. *Journal of Statistical Software*, 28(5), 1–26. <https://doi.org/10.18637/jss.v028.i05>
- Kunkel, T., & Biscaia, R. (2020). Sport brands: Brand relationships and consumer behavior. *Sport Marketing Quarterly*, 29(1), 3–17. <https://doi.org/10.32731/smq.291.032020.01>
- Kunkel, T., Doyle, J. P., & Funk, D. C. (2014). Exploring sport brand development strategies to strengthen consumer involvement with the product – the case of the Australian A-League. *Sport Management Review*, 17(4), 470–483. <https://doi.org/10.1016/j.smr.2014.01.004>
- Kunkel, T., Doyle, J. P., Funk, D. C., Du, J., & McDonald, H. (2016). The development and change of brand associations and their influence on team loyalty over time. *Journal of Sport Management*, 30(2), 117–134. <https://doi.org/10.1123/jsm.2015-0129>
- Kunkel, T., Funk, D. C., & Lock, D. (2017). The effect of league brand on the relationship between the team brand and behavioral intentions: A formative approach examining brand associations and brand relationships. *Journal of Sport Management*, 31(4), 317–332. <https://doi.org/10.1123/jsm.2016-0166>
- Kunkel, T., Funk, D., & Hill, B. (2013). Brand architecture, drivers of consumer involvement, and brand loyalty with professional sport leagues and teams. *Journal of Sport Management*, 27(3), 177–192. <https://doi.org/10.1123/jsm.27.3.177>
- Kunkel, T., Karg, A., & McDonald, H. (2022). The utility of a single-item self-perception fandom measure for sport consumer segmentation and predicting behavior. *Sport Marketing Quarterly*, 31(2), 141–156. <https://doi.org/10.32731/smq.312.0622.05>
- Lock, D., Taylor, T., & Darcy, S. (2011). In the absence of achievement: The formation of new team identification. *European Sport Management Quarterly*, 11(2), 171–192. <https://doi.org/10.1080/16184742.2011.559135>
- Manoli, A. E. (2018). Sport marketing's past, present and future; an introduction to the special issue on contemporary issues in sports marketing. *Journal of Strategic Marketing*, 26(1), 1–5. <https://doi.org/10.1080/0965254X.2018.1389492>
- Manoli, A. E. (2024). Strategic brand management in and through sport. *Journal of Strategic Marketing*, 32(6), 814–821.
- Medow, S. (2022). *Angel city FC's off-field successes provide model for future*. <https://www.sportbusiness.com/2022/10/angel-city-fcs-off-field-successes-provide-model-for-future/#:~:text=The%20club%20has%20helped%20players,with%20links%20to%20purchase%20tickets>
- Needelman, J. (2023). *2023 world cup smashes attendance record with 1.98 million fans*. <https://justwomenssports.com/reads/2023-world-cup-attendance-record-australia-new-zealand/>
- Nimon, K. F., & Oswald, F. L. (2013). Understanding the results of multiple linear regression: Beyond standardized regression coefficients. *Organizational Research Methods*, 16(4), 650–674. <https://doi.org/10.1177/1094428113493929>
- Petrescu, M. (2013). Marketing research using single-item indicators in structural equation models. *Journal of Marketing Analytics*, 1(2), 99–117. <https://doi.org/10.1057/jma.2013.7>
- Qian, T. Y., Matz, R., Luo, L., & Zvosec, C. C. (2023). Toward a better understanding of core and peripheral market demand for women's spectator sports: An importance-performance map analysis approach based on gender. *Sport Management Review*, 26(1), 114–134. <https://doi.org/10.1080/14413523.2022.2038922>
- Ross, S. D. (2006). A conceptual framework for understanding spectator-based brand equity. *Journal of Sport Management*, 20(1), 22–38. <https://doi.org/10.1123/jsm.20.1.22>
- Ross, S. D., James, J. D., & Vargas, P. (2006). Development of a scale to measure team brand associations in professional sport. *Journal of Sport Management*, 20(2), 260–279. <https://doi.org/10.1123/jsm.20.2.260>

- Rossiter, J. R. (2002). The C-OAR-SE procedure for scale development in marketing. *International Journal of Research in Marketing*, 19(4), 305–335. [https://doi.org/10.1016/S0167-8116\(02\)00097-6](https://doi.org/10.1016/S0167-8116(02)00097-6)
- Shapiro, S. L., DeSchraver, T. D., & Rascher, D. A. (2017). The Beckham effect: Examining the longitudinal impact of a star performer on league marketing, novelty, and scarcity. *European Sport Management Quarterly*, 17(5), 610–634. <https://doi.org/10.1080/16184742.2017.1329331>
- Simsekler, M. C. E., Alhashmi, N. H., Azar, E., King, N., Luqman, R. A. M. A., & Al Mulla, A. (2021). Exploring drivers of patient satisfaction using a random forest algorithm. *BMC Medical Informatics & Decision Making*, 21(1), 157. <https://doi.org/10.1186/s12911-021-01519-5>
- Stewart, B., Smith, A., & Nicholson, M. (2003). Sport consumer typologies: A critical review. *Sport Marketing Quarterly*, 12(4), 206–216.
- Su, Y., Baker, B. J., Doyle, J. P., & Kunkel, T. (2020). The rise of an athlete brand: Factors influencing the social media following of athletes. *Sport Marketing Quarterly*, 29(1), 33–46. <https://doi.org/10.32731/smq.291.302020.03>
- Sveinson, K., & Hoerber, L. (2016). Female sport fans' experiences of marginalization and empowerment. *Journal of Sport Management*, 30(1), 8–21. <https://doi.org/10.1123/jsm.2014-0221>
- Thomson, A., Hayes, M., Hanlon, C., Toohey, K., & Taylor, T. (2023). Women's professional sport leagues: A systematic review and future directions for research. *Sport Management Review*, 26(1), 48–71.
- Tyler, B. D., & Cobbs, J. (2017). All rivals are not equal: Clarifying misrepresentations and discerning three core properties of rivalry. *Journal of Sport Management*, 31(1), 1–14. <https://doi.org/10.1123/jsm.2015-0371>
- UEFA. (2022). *The business case for women's football*. [https://editorial.uefa.com/resources/0278-15e121074702-c9be7dcd0a29-1000/business\\_case\\_for\\_women\\_s\\_football-external\\_report\\_1\\_.pdf](https://editorial.uefa.com/resources/0278-15e121074702-c9be7dcd0a29-1000/business_case_for_women_s_football-external_report_1_.pdf)
- Vabalas, A., Gowen, E., Poliakoff, E., Casson, A. J., & Hernandez-Lemus, E. (2019). Machine learning algorithm validation with a limited sample size. *PLOS ONE*, 14(11), e0224365. <https://doi.org/10.1371/journal.pone.0224365>
- Verikas, A., Gelzinis, A., & Bacauskiene, M. (2011). Mining data with random forests: A survey and results of new tests. *Pattern Recognition*, 44(2), 330–349. <https://doi.org/10.1016/j.patcog.2010.08.011>
- Wann, D. L., Tucker, K. B., & Schrader, M. P. (1996). An exploratory examination of the factors influencing the origination, continuation, and cessation of identification with sports teams. *Perceptual and Motor Skills*, 82(3), 995–1001. <https://doi.org/10.2466/pms.1996.82.3.995>
- Wear, H., & Heere, B. (2020). Brand new: A longitudinal investigation of brand associations as drivers of team identity among fans of a new sport team. *Journal of Sport Management*, 34(5), 475–487. <https://doi.org/10.1123/jsm.2018-0204>
- Wear, H., Naraine, M. L., & Bakhsh, J. (2022). It's about time: A longitudinal examination of attitudes and brand associations of a women's professional sport team. *Sport Marketing Quarterly*, 31(2), 128–140. <https://doi.org/10.32731/smq.312.0622.04>